



# INVESTMENT CASE STUDY

Submitted by:  
Shayak Roy

## Highlights and Objective of the Business Problem

This presentation deck contains the details of the work done by me as part of the Spark Funds investment case study

### **Objective:**

Use the data provided in the form of customer information and funding amount and gain meaningful insights into the data to propose. Investment type, country and the sector where the Spark Funds should invest for maximum returns.

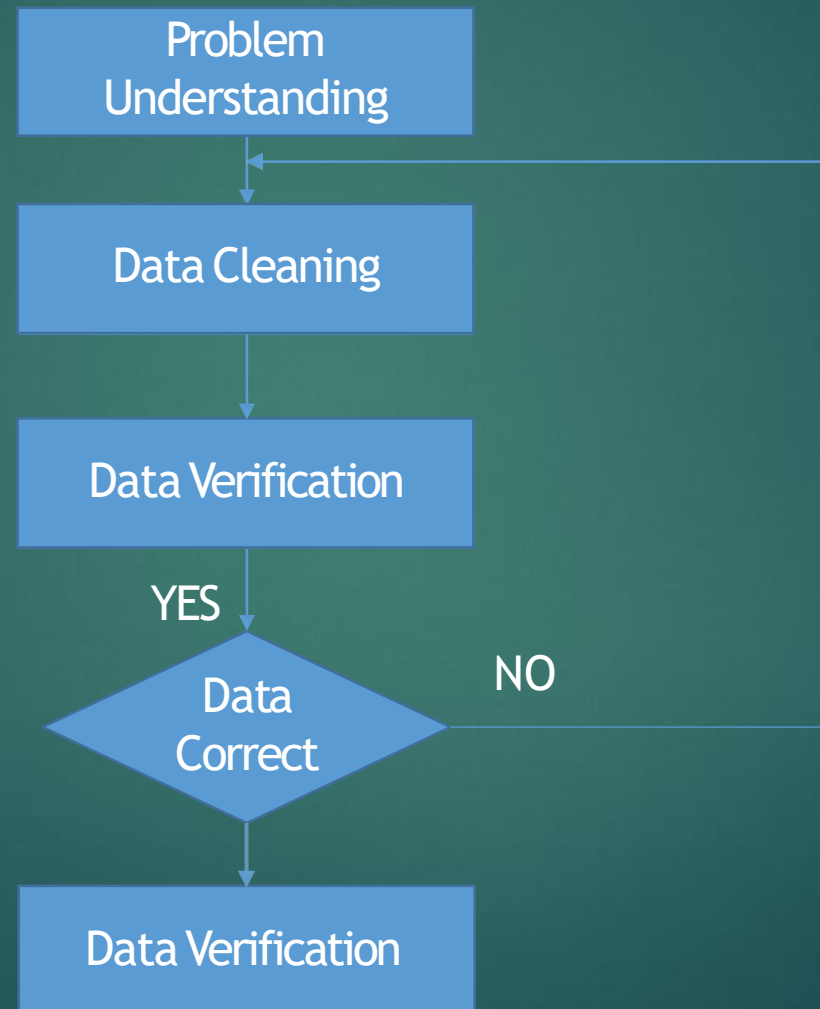
### **Input Data:**

- Customer information with details like url link, name, region, state, country, sector etc.
- Funding information with details like customer url, funding amount raised.
- Sub-sector to main sector mapping

### **Deliverables:**

- Highlights of the dataset captured in the form of a questionnaire in the excel sheet attached.
- Recommendation to the Spark Funds about the right sector
- Tableau plots

## Flow Chart of Problem Understanding to Analysis



## Basic Understanding

### Tools used:

- R for data cleaning and analysis
- Tableau for data visualization.
- Excel for data verification.

### Data cleaning steps:

- Normalize the data by converting the interested columns to a unified case
- Ignore the companies which do not have a country code, since the absence of the country code will not help to attribute that funding to any specific country
- Pick up the first sector as the main sector where an individual company is associated with multiple sectors.
- Replaced “0” by “na” from the **category\_list** in the mapping table. (like : **0notechnology** replaced to **nanotechnology**)

### Assumptions used in cleaning/preparing the dataset of analysis:

(\*) Ignore the sector “**others**” in the analysis, as no meaningful decision can be based on this category. **Others** is combination of multiple sub-sectors and no decision can be made with confidence.

## Overview

### **Investment Type :**

Based on the data analysis, majority of the investments in terms of average funding has happened in the funding round “private\_equity”. But the additional constraint of fund availability with Spark Funds being 5 to 15M USD would mean that “private\_equity” is not a viable option.

So my recommendation to Spark Funds would be to go with “**venture**” funding.

### **Top 3 English speaking countries :**

The top 3 English speaking countries in the order of total investments received are:

- **United States/USA**
- **United Kingdom/GBR**
- **India/IND**

Our recommendation to Spark Funds would be to invest in any of the above 3 countries.

Reference for countries list :

[http://www.emmir.org/fileadmin/user\\_upload/admission/Countries\\_where\\_English\\_is\\_an\\_official\\_language.pdf](http://www.emmir.org/fileadmin/user_upload/admission/Countries_where_English_is_an_official_language.pdf)

# Business Analysis

## Investment Sectors :

Analysis of the above data shows that in each of the 3 countries, the highest amount of investments was received in the “others” sectors. But the other sector is very much fragmented and no informed decision with confidence can be made with the current available data. There are two possibilities in this situation: To gather more data about the other sector to do a more better categorization or to go with the next highest investment sector.

My decision is to go with the next highest sector for investments. It will be more like an informed decision backed by data.

The top 3 sectors in the particular order for suggested countries are:

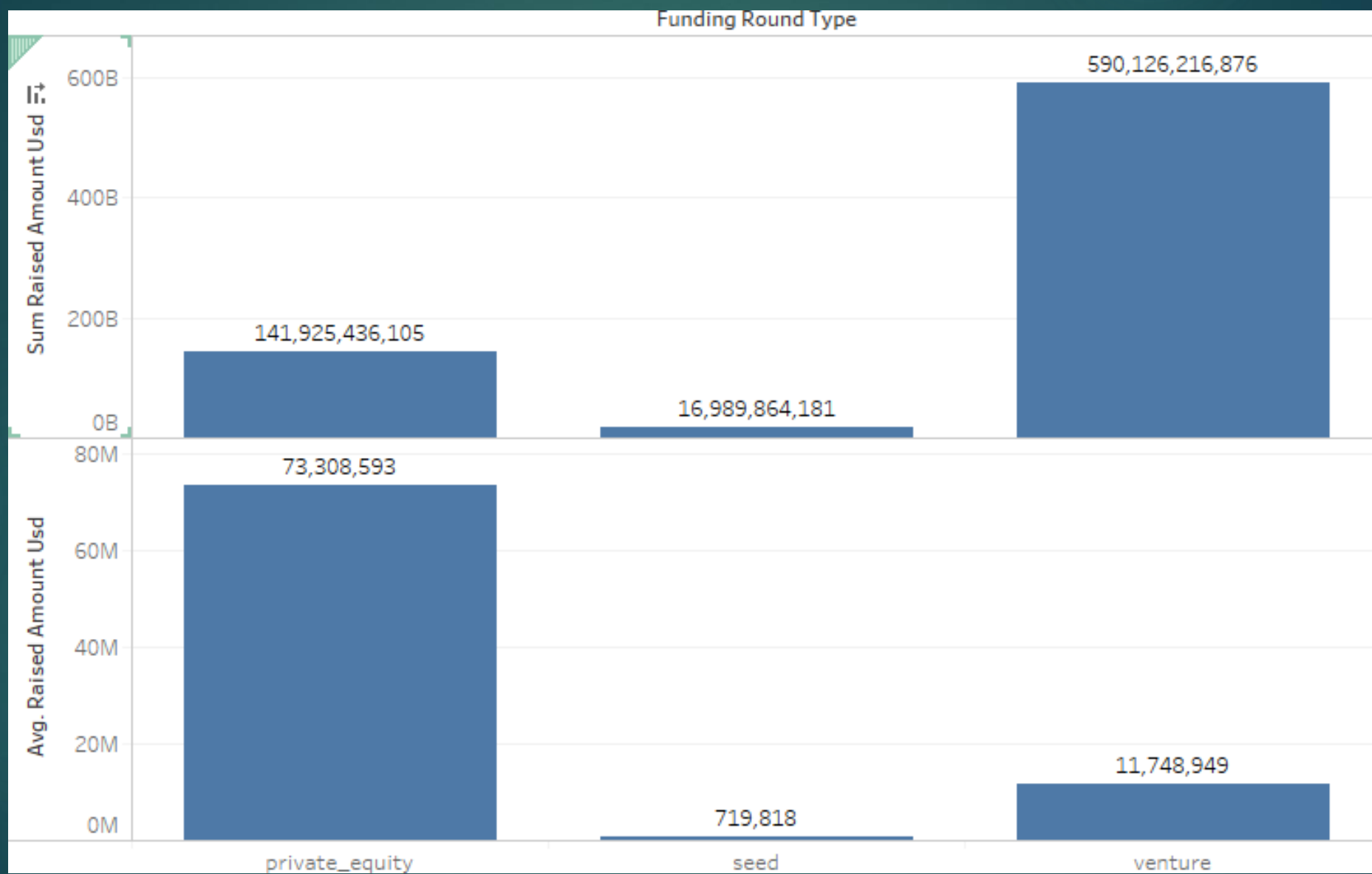
**USA and GBR: “Social, Finance, Analytics, Advertising”, “Cleantech / Semiconductors” and “News, Search and Messaging”**

**India: ““Social, Finance, Analytics, Advertising” , News, Search and Messaging” and “Entertainment”**

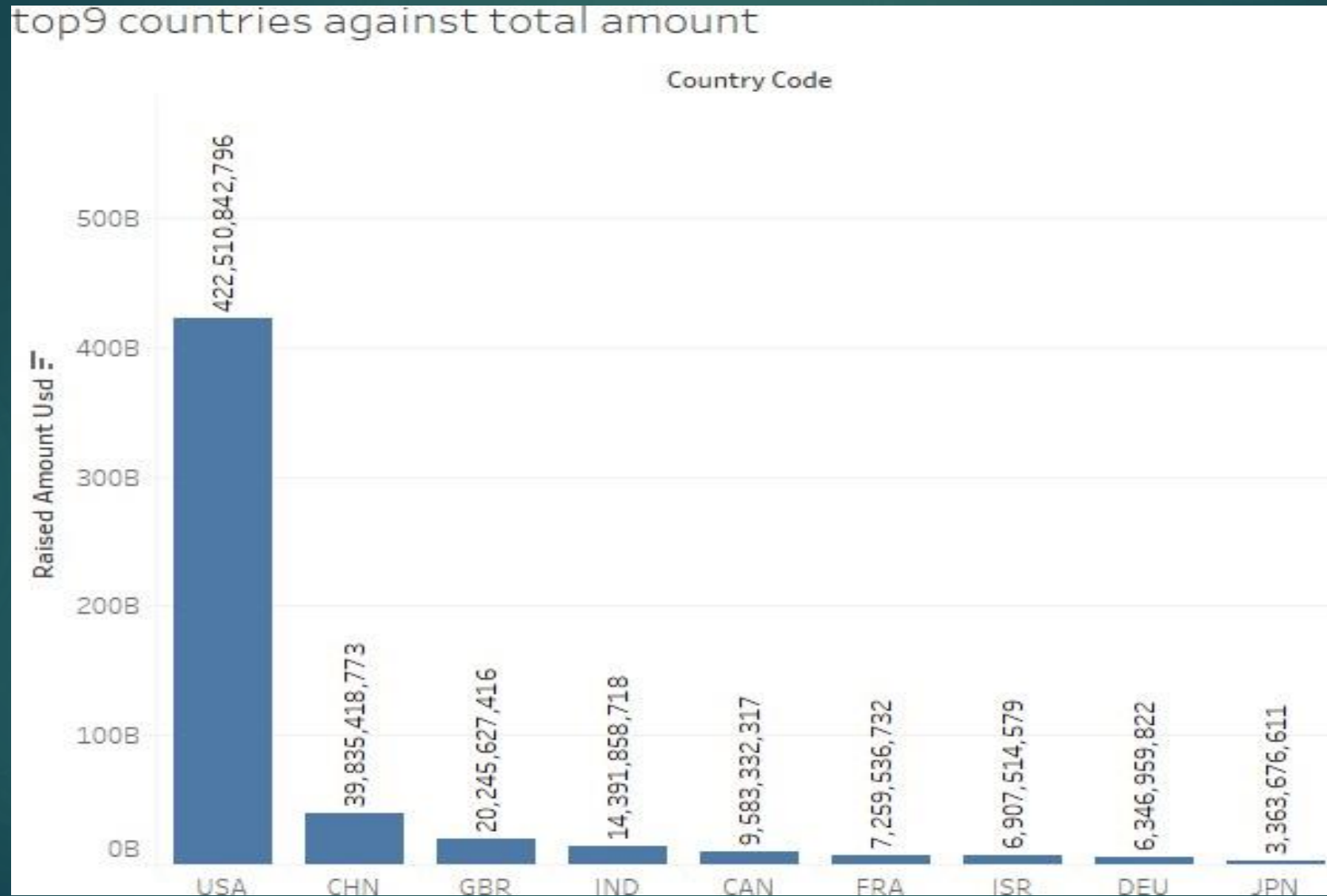
Note:

1. Data substantiating the above statements is available in the excel sheet and also in the plots in the subsequent slides.
2. Sector “**Others**” contains the maximum investment, but decision cannot be made on it and needs further classification of what “**Others**” consists of, hence we have ignored Sector “**Others**”.\*.

Plot 1

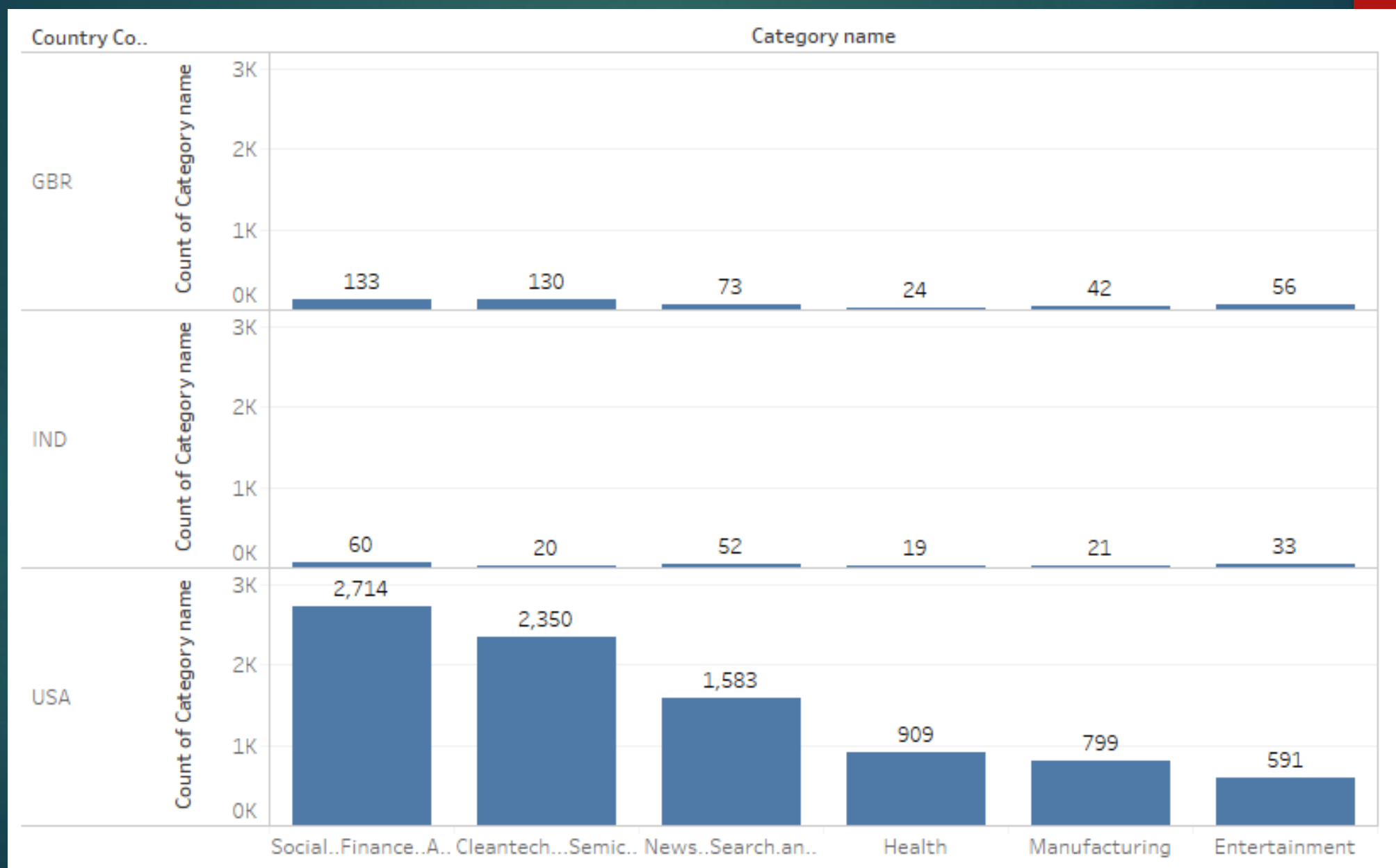


Plot 2





Plot 3





I would recommend Spark Funds to invest in  
**USA**  
and in particular  
**“Social..Finance..Analytics..Advertising”\***  
sector.