

INVESTMENT ASSIGNMENT

SUBMISSION

Name: Gajendra Shravan Mali

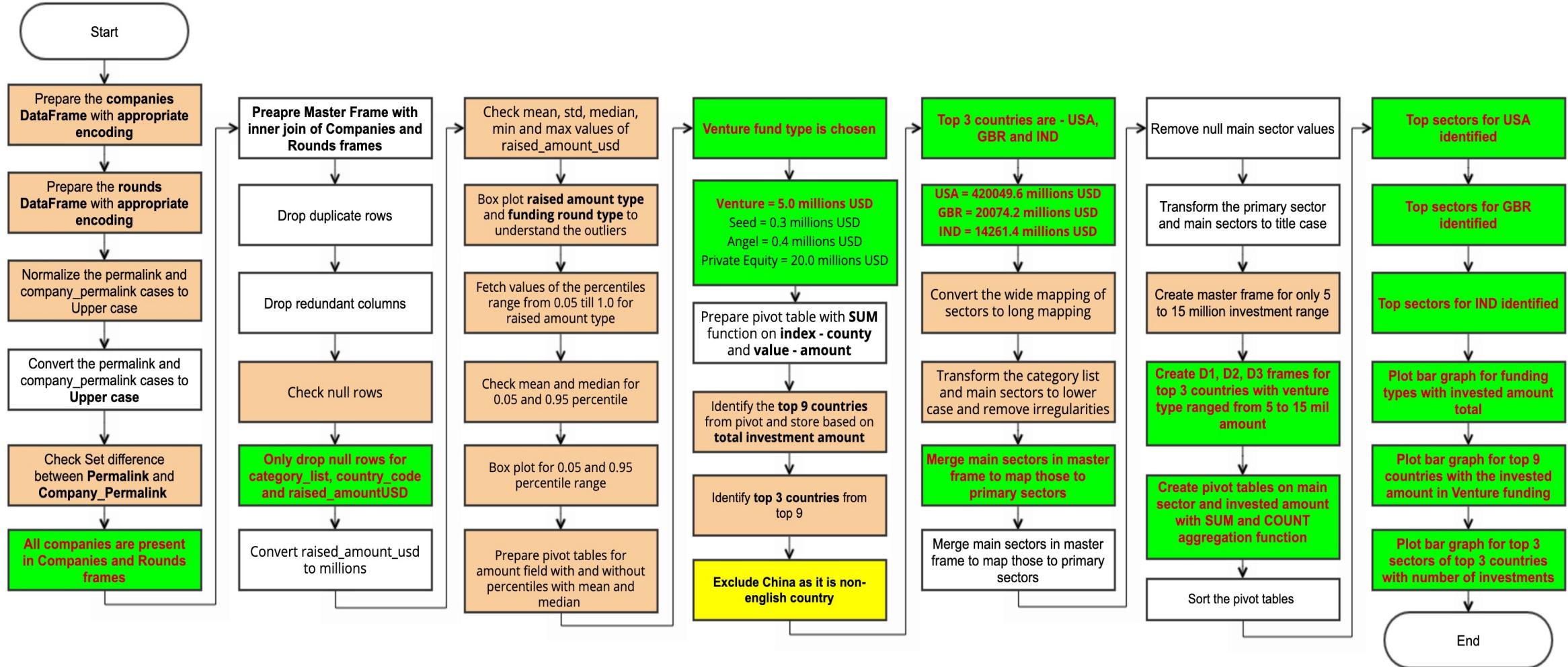
Investment assessment - Abstract

Business Objective

- The objective is to identify the best sectors with suitable funding type in countries where English is an official/widely used language.
- The strategy is to identify the countries where most of the investments are done and then identify the top 3 sectors where higher number of investments are done.

Goals of data analysis

- Investment type analysis – Compare the investment amount for each of the funding types and provide detailed analysis to ease the decision-making process to choose most suitable funding type.
- Country analysis – Identify the top 3 countries which are getting heavy investments and have English as an official language or widely used.
- Sector analysis – Identify the top 3 main sectors which are getting the greatest number of investments in the respective top 3 countries. This will further narrow the options and enhance the decision-making process choose the investment avenues.



Approach to perform the analysis

Understand the Data Set

Sl. No	Questions	Answer
1	How many unique companies are present in rounds2?	66368
2	How many unique companies are present in the companies file?	66368
3	In the <i>companies</i> data frame, which column can be used as the unique key for each company? Write the name of the column .	"permalink"
4	Are there any companies in the rounds2 file which are not present in <i>companies</i> ? Answer Y/N.	No
5	Merge the two data frames so that all variables (columns) in the <i>companies</i> frame are added to the <i>rounds2</i> data frame. Name the merged frame <i>master_frame</i> . How many observations are present in <i>master_frame</i> ?	114949

Assumptions:

- The point 5 in above table is to put the numbers after join and before clean up
- For point 4, the assumption is to consider the companies after normalizing case of the values in companies and rounds data frame.
- For point 2 and 1, the assumption is that the unique number of companies present in respective datasets rounds 2 and companies

Check point 1

Representative Values of Investments for Each of these Funding Types		
Sl.No	Questions	Answer
1	Representative funding amount of venture type	5.0 million USD
2	Representative funding amount of angel type	0.4 million USD
3	Representative funding amount of seed type	0.3 million USD
4	Representative funding amount of private equity type	20 million USD
5	Considering that Spark Funds wants to invest between 5 to 15 million USD per investment round, which investment type is the most suitable for them?	Venture type

Assumptions:

- All representative values are median values for each of the funding types.
- While analyzing the data, 2 sets were experimented with – one whole data set and one between 0.05 percentile and 0.95 percentile of invested amount. The percentile range was leading to discarding half of the entries for almost all of the funding types. Hence consider all values of investment amount to come up with the median value.

Check point 2

Analysing the Top 3 English-Speaking Countries

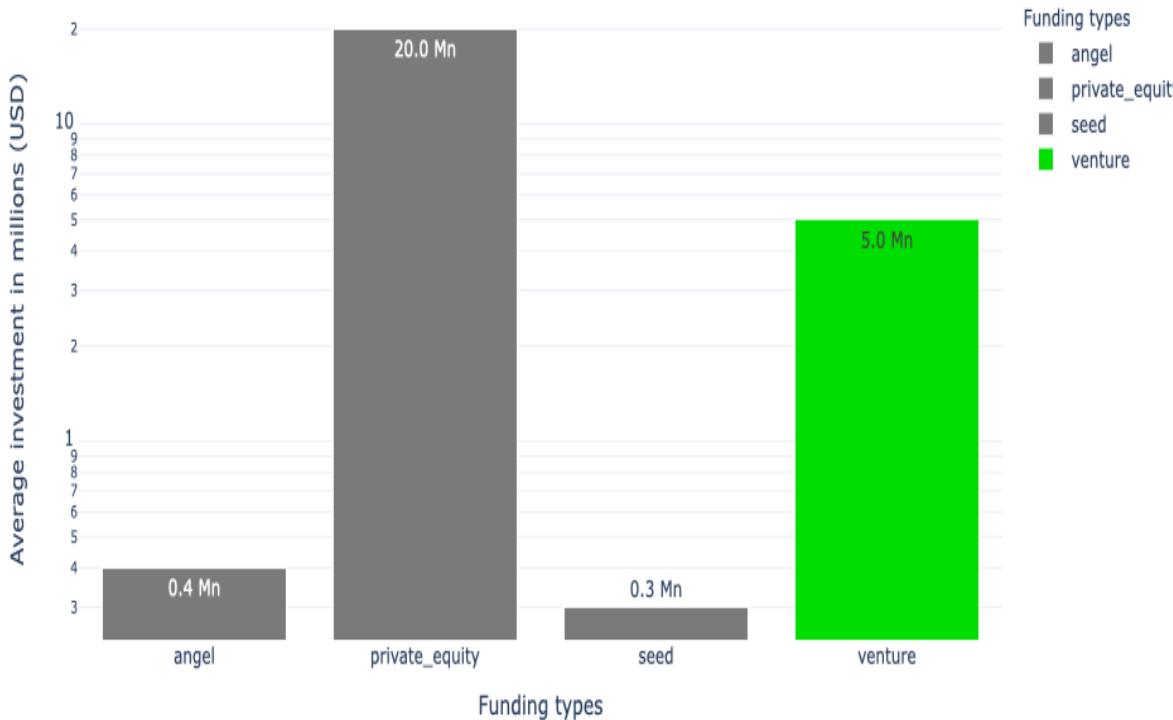
Sl.No	Questions	Answers
1	Top English speaking country	USA
2	Second English speaking country	GBR
3	Third English speaking country	IND

Check point 3

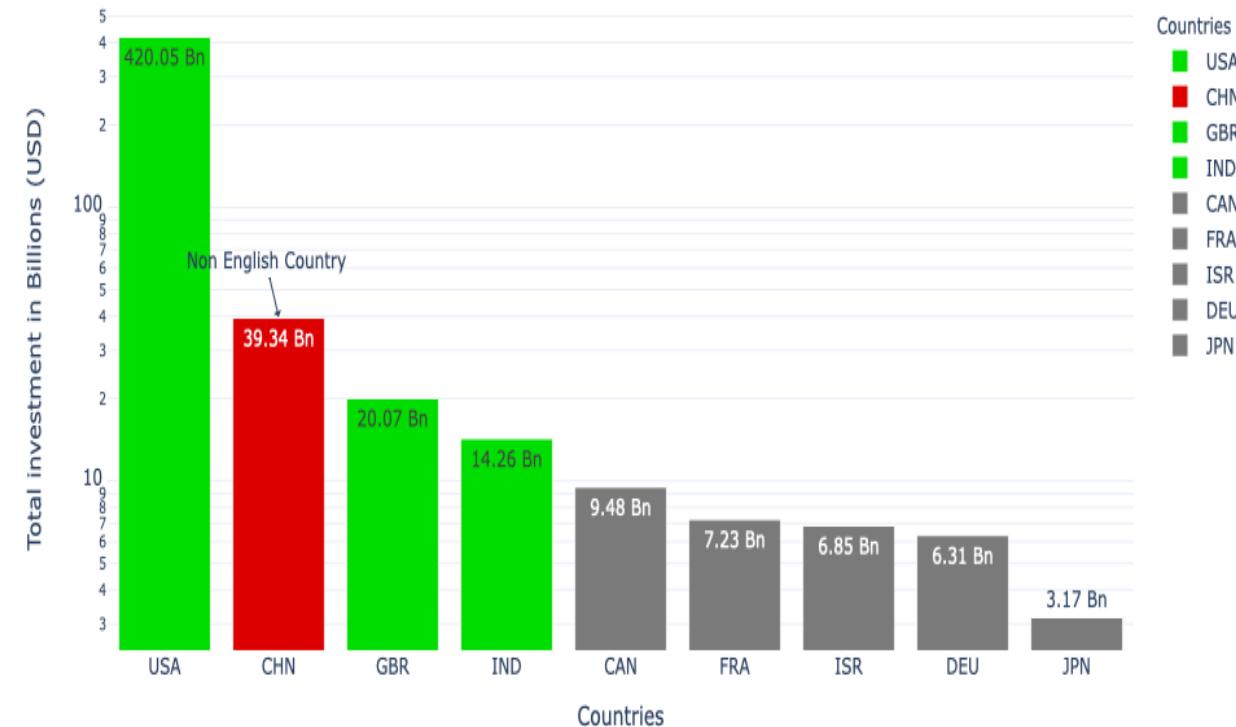
Sector-wise Investment Analysis				
Sl.no	Questions	C1	C2	C3
1	Total number of Investments (count)	12071	622	329
2	Total amount of investment (USD)	107810.3	5390.3	2954.7
3	Top Sector name (no. of investment-wise)	Others	Others	Others
4	Second Sector name (no. of investment-wise)	Social, Finance, Analytics, Advertising	Social, Finance, Analytics, Advertising	Social, Finance, Analytics, Advertising
5	Third Sector name (no. of investment-wise)	Cleantech / Semiconductors	Cleantech / Semiconductors	News, Search and Messaging
6	Number of investments in top sector (3)	2961	149	110
7	Number of investments in second sector (4)	2723	133	60
8	Number of investments in third sector (5)	2314	129	53
9	For point 3 (top sector count-wise), which company received the highest investment?	Virtustream	Electric Cloud	FirstCry.com
10	For point 4 (second best sector count-wise), which company received the highest investment?	SST Inc. (Formerly ShotSpotter)	Celltick Technologies	Manthan Systems

Check point 4 and 5

Funding Type Analysis



Top 9 countries for venture fund investments

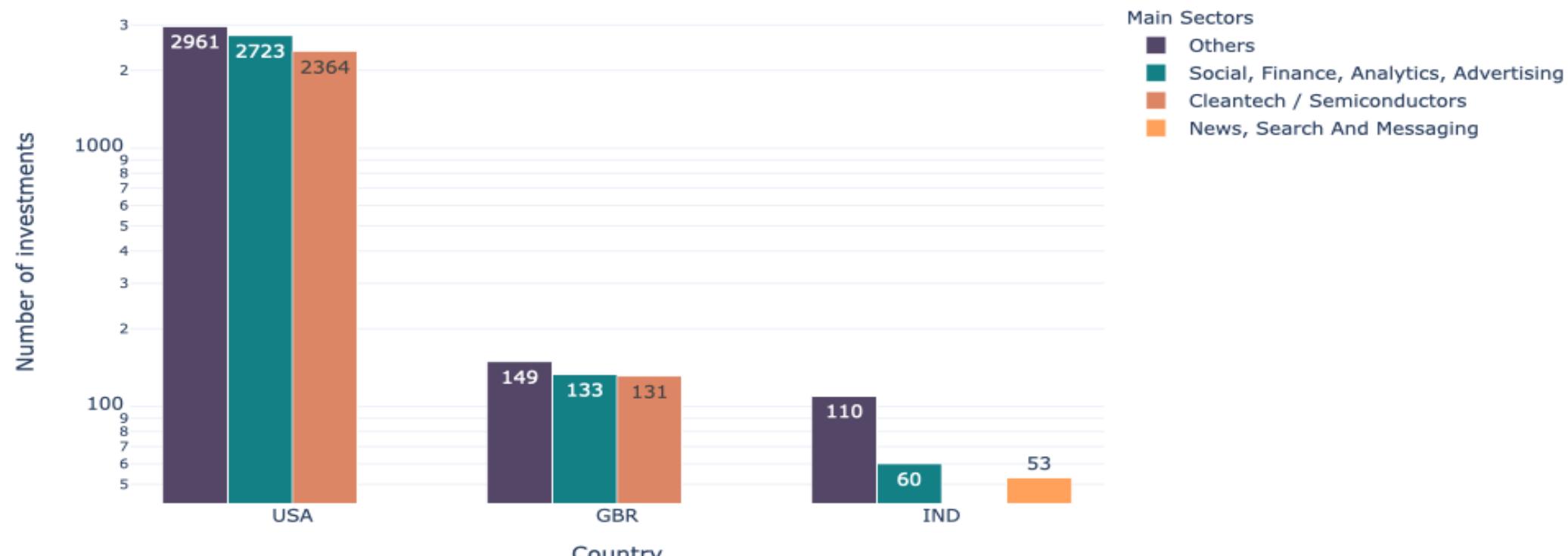


Assumptions:

- I used log scale for Y axis to enhance the perspective of data interpretation.

Fund type and country analysis

Top 3 sectors of top 3 countries with number of investments for Venture fund type



Assumptions:

- I used log scale for Y axis to enhance the perspective of data interpretation.

Top 3 sector of top 3 countries for Venture fund

Conclusions

- Venture fund is the best fund type to invest the amount with allotted budget of 5 to 15 millions USD per round.
- USA, GBR and IND are the best options to invest in.
- Best sectors for investments are **others** and **Social, Finance, Analytics, Advertising** across all the top 3 countries.
- Top companies for these sectors are **“Virtustream”, “SST Inc” in USA, Electric cloud, Celltick technologies in GBR and Firstcry.com, Manthan Systems in IND** to invest