

INVESTMENT CASE STUDY

SUBMISSION

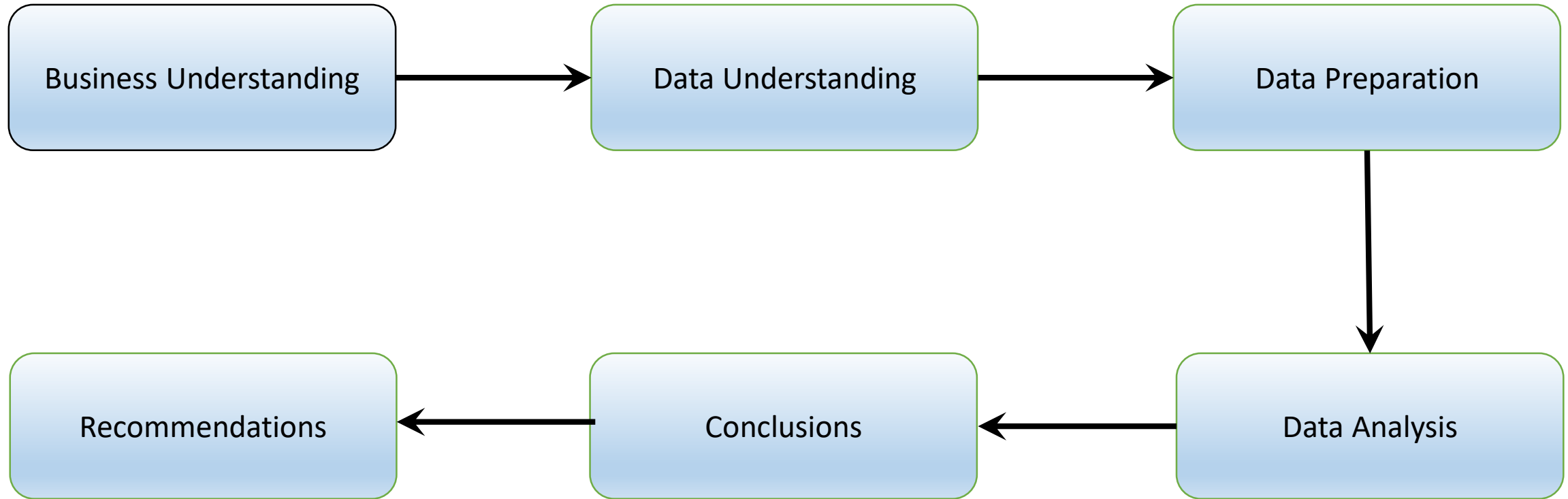
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Key Objectives

- Identify the best sectors, countries and suitable investment type for making investments
- Provide recommendations to the CEO of Spark Funds on the best sectors, countries and companies that Spark Funds should invest in
- Ensure that the recommendations are aligned with the following constraints
 - Investment round should be in the range of \$5 to \$15 million
 - Companies should be in English-speaking countries
 - Investments should be in where others are also investing

Process Workflow



Business Understanding

Business Objective

- Provide insights to the CEO of Spark Funds on the current global trends in investments across sectors
- Provide recommendations to the CEO on the sectors, countries and companies that are best suited for making investments
- Recommendations should be aligned with the following constraints
 - Investments should be in the range of \$5 to \$15 million per round
 - Investments should be only in English-speaking countries
- Recommendations should be aligned with Spark Funds strategy of investing where others are also investing

Data Understanding

Data Sources

- **companies** –Contains details of the companies for which investments are made
- **rounds2** - Details of investment funding rounds for companies by the investors
- **mapping** - Sector classification that maps the various investment categories into 8 broad sectors

High level view of data

- No. of unique companies in rounds2: 66368
- No. of unique companies in companies: 66368
- Unique key for each company in companies data : permalink
- rounds2 and companies do not contain any unmatched companies
- Merged data (round2 + companies) contains 114949 observations

Data Quality

- Encoding issues exist in permalink & names column of companies data source and company_permalink column of rounds2 data source
- Few categories in mapping data source had 0 instead of the string 'na'
- Some categories in the companies data source were not there in the mapping data source

Data Preparation

Missing value treatment

- *raised_amount_usd* column in the rounds2 data, which is required in the analysis, had a lot of null values
- Following two approaches were analysed
 1. Dropping rows with null values
 2. Imputing the null values with the 75% percentile value
- Decided to go with the option of dropping rows with null values for following reasons
 - Percentage of null values (17.39%) is not very significant
 - > 80% of rows will be available even after dropping rows with null values
 - Outcome of 2nd approach shows “Undisclosed” as one of the preferred investment types which not make business sense practically speaking

Mapping of unmatched sectors in mappings

- All unmatched primary sectors are mapped to Others main sector

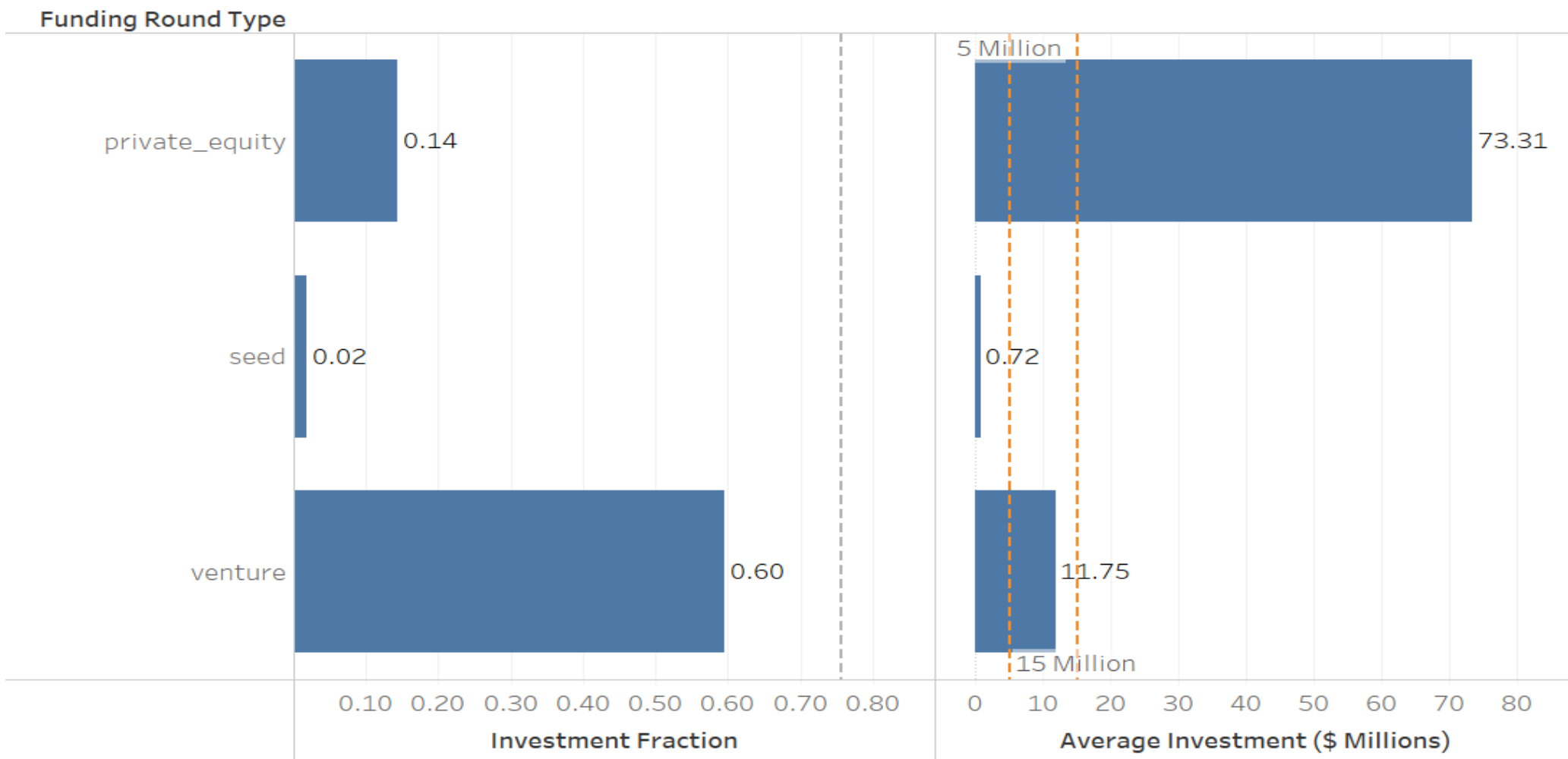
Data Analysis - Outcome

- Status of companies
 - Closed status of companies are not excluded from the analysis as goal is to understand the overall investment pattern by sectors and countries and not by individual companies
- Average funding amount for 4 funding types:
 - **Venture Funding – \$11.75 million** ← Falls in \$5 - \$15 million range
 - Angel Funding – \$0.96 million
 - Seed Funding - \$0.72 million
 - Private Equity - \$73.31 million
- Funding type most suitable for investment by Sparks Fund – Venture Funding
- Top 3 English speaking countries suitable for investment
 - United States (USA)
 - United Kingdom (GBR)
 - India (IND)

Data Analysis - Outcome

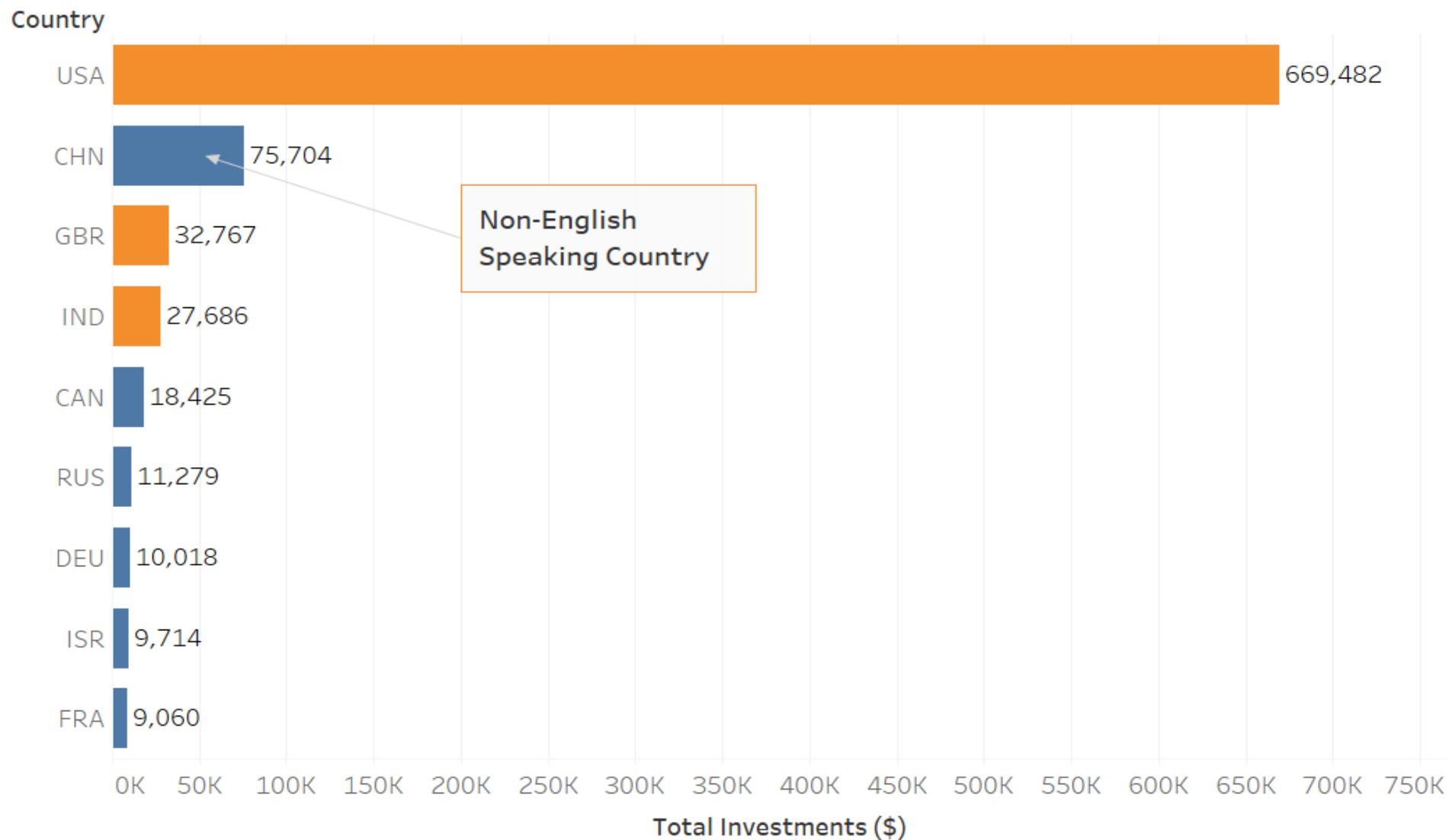
	USA	GBR	IND
# of Investments	12150	628	330
Total investments (USD millions)	\$108,531.35	\$5,436.84	\$2,976.54
Top sector (By # of investments)	Others (2951)	Others (147)	Others (110)
Second sector (By # of investments)	Social, Finance, Analytics, Advertising (2714)	Social, Finance, Analytics, Advertising (133)	Social, Finance, Analytics, Advertising (60)
Third sector (By # of investments)	Cleantech / Semiconductors (2350)	Cleantech / Semiconductors (130)	News, Search and Messaging (52)
Company receiving highest investment (Top Sector)	Kasenna <u>Sector: Others</u>	Tribold <u>Sector: Others</u>	LimeRoad <u>Sector: Others</u>
Company receiving highest investment (2 nd best Sector)	DataTorrent <u>Sector: Social, Finance, Analytics, Advertising</u>	SimilarWeb <u>Sector: Social, Finance, Analytics, Advertising</u>	Financial Information Network & Operations Pvt <u>Sector: Social, Finance, Analytics, Advertising</u>

Investments across select funding types



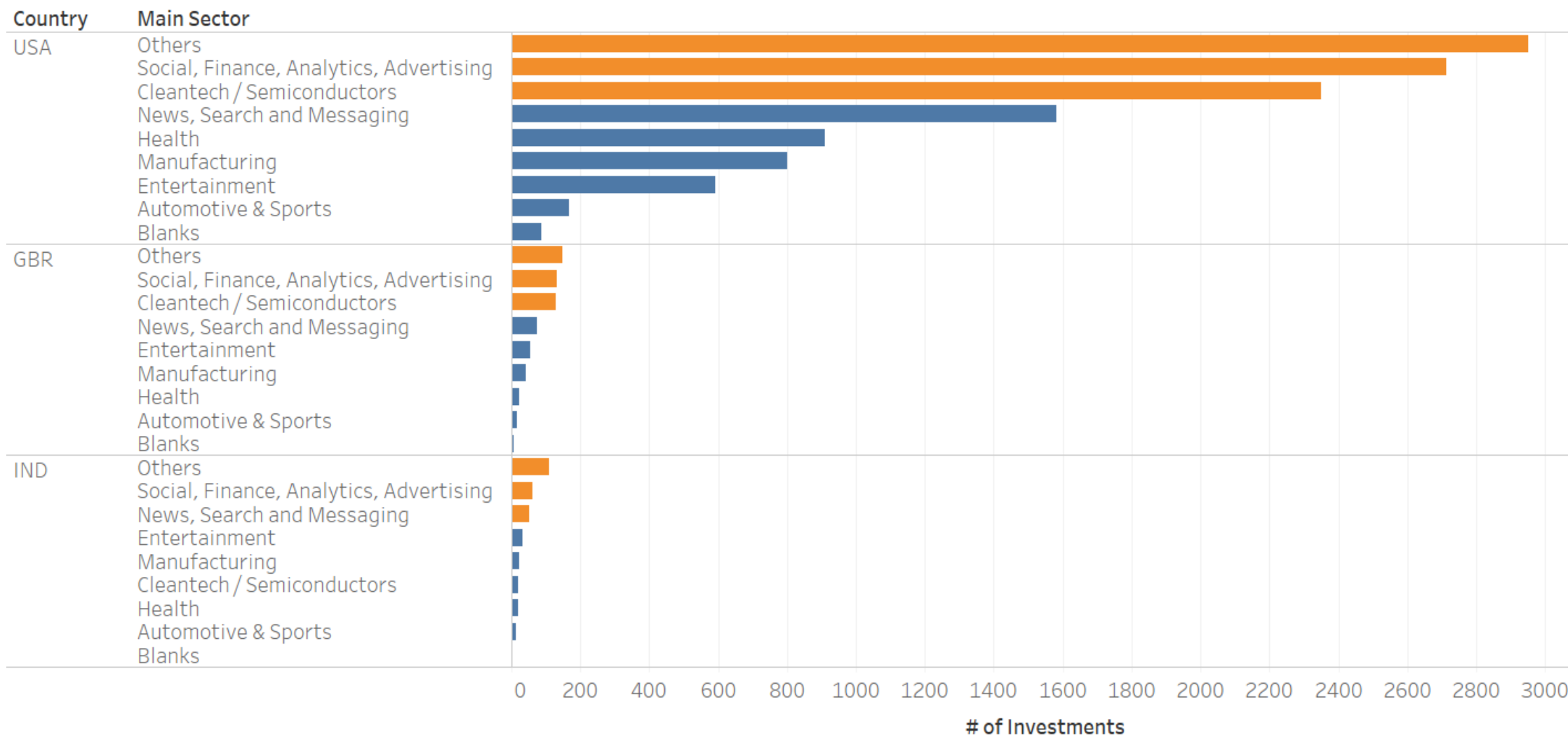
Sum of Investment Fraction and sum of Average Investment for each Funding Round Type. The view is filtered on Funding Round Type, which keeps private_equity, seed and venture.

Total Investments in Venture Funding across countries



Sum of Raised Amount Usd for each Country. Color shows details about Top 3.

of Investments in venture funding by Countries & Sectors



Sum of # of Investments for each Main Sector broken down by Country. Color shows details about Top 3.

Conclusions

Key Observations

- Venture funding is most suitable funding type for Spark Funds
- USA, UK & India are the top 3 English-speaking countries where most others are investing
- **Others** sector attracts the maximum no. of investments in all the 3 countries (USA, UK, India)
- **Social, Finance, Analytics, Advertising** sector attracts the second most no. of investments in all the 3 countries (USA, UK, India)

Recommendations

Although Others sector attracts the maximum # of investments across all the 3 countries it does not make business sense to invest in Others sector due to lack of domain focus. Hence our recommendation is that Sparks Funds should invest in Social, Finance, Analytics , Advertising sector, which is a close 2nd to Others sector in terms of # of investments, in all the 3 English speaking countries (USA, UK, India)

Top 5 recommended active Companies to invest in Social, Finance, Analytics , Advertising sector

USA	GBR	IND
DataTorrent	SimilarWeb	TravelGuru*
Tongal	Zopa	ShopClues.com
Origami Logic	myThings	Shiram Credit
MediaVast	OpenGamma	ApnaPaisa
Damballa	SportPursuit	Manthan Systems

** Even though Financial Information Network & Operations Pvt is the top invested Indian company it is no longer operational. TravelGuru is the second best company.*