

INVESTMENT ASSIGNMENT SUBMISSION

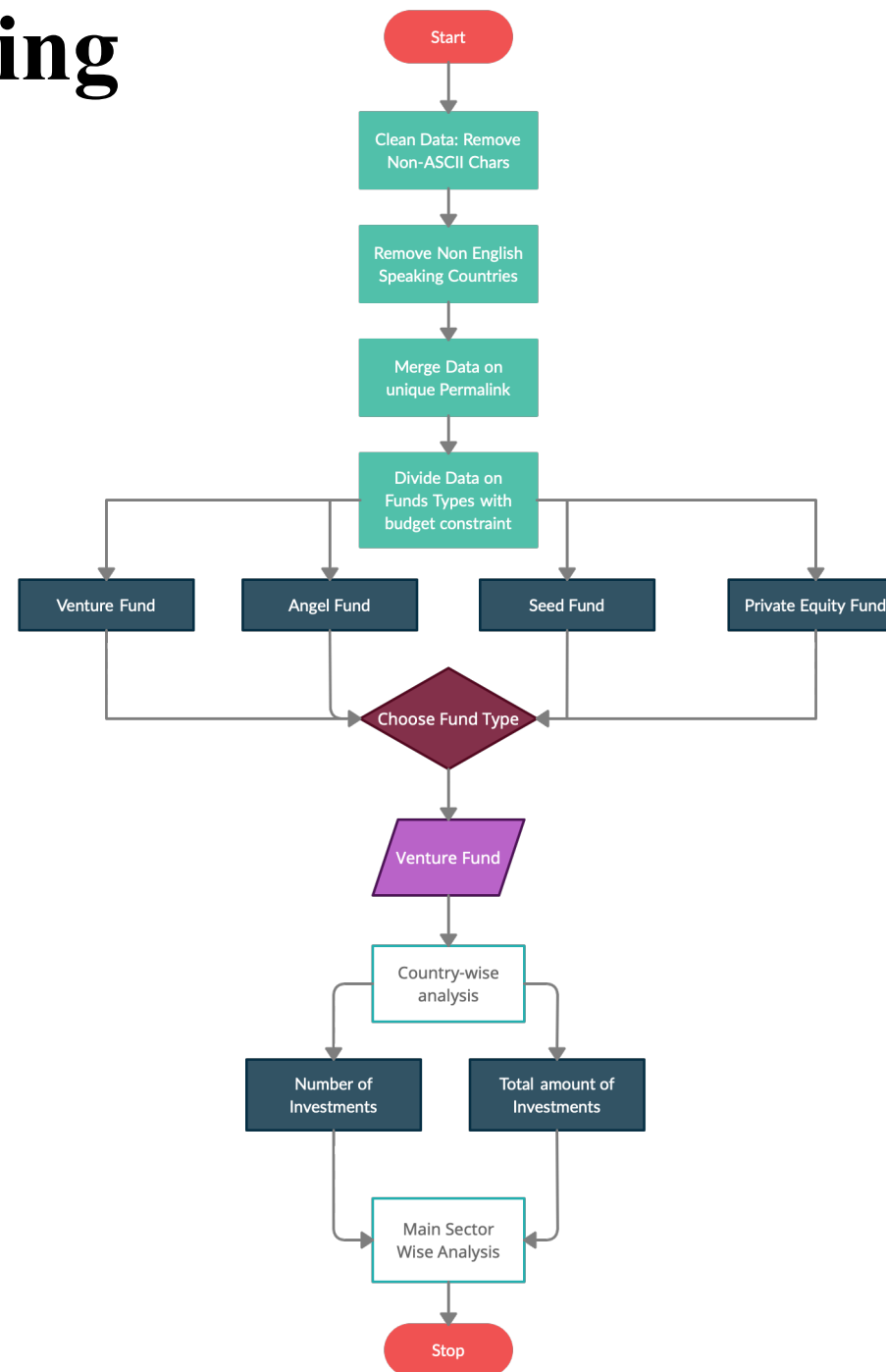
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Abstract

This work aims to throw light on the global trends in investments so that Spark Funds can take an effective business decision for itself. Two constraints have been considered while making recommendations: only English Speaking countries have been considered and funds between 5 Million USD and 15 Million USD have been considered.

Four different types of funds have been considered: Venture, Seed, Angel and Private Equity. The analysis has been done on Top three countries by the frequency of investments counts and total amount of investments in eight main sectors.

The correct fund type has been recognised and then top countries in that fund have been filtered to provide Spark Funds with the best available, data-driven decision for their investment.



| | |
|-----------------------|-------|
| venture | 41053 |
| seed | 15967 |
| debt_financing | 6288 |
| angel | 3125 |
| private_equity | 1527 |
| grant | 1433 |
| convertible_note | 1118 |
| equity_crowdfunding | 1065 |
| undisclosed | 968 |
| post_ipo_equity | 529 |
| product_crowdfunding | 258 |
| post_ipo_debt | 143 |
| non_equity_assistance | 41 |
| secondary_market | 26 |

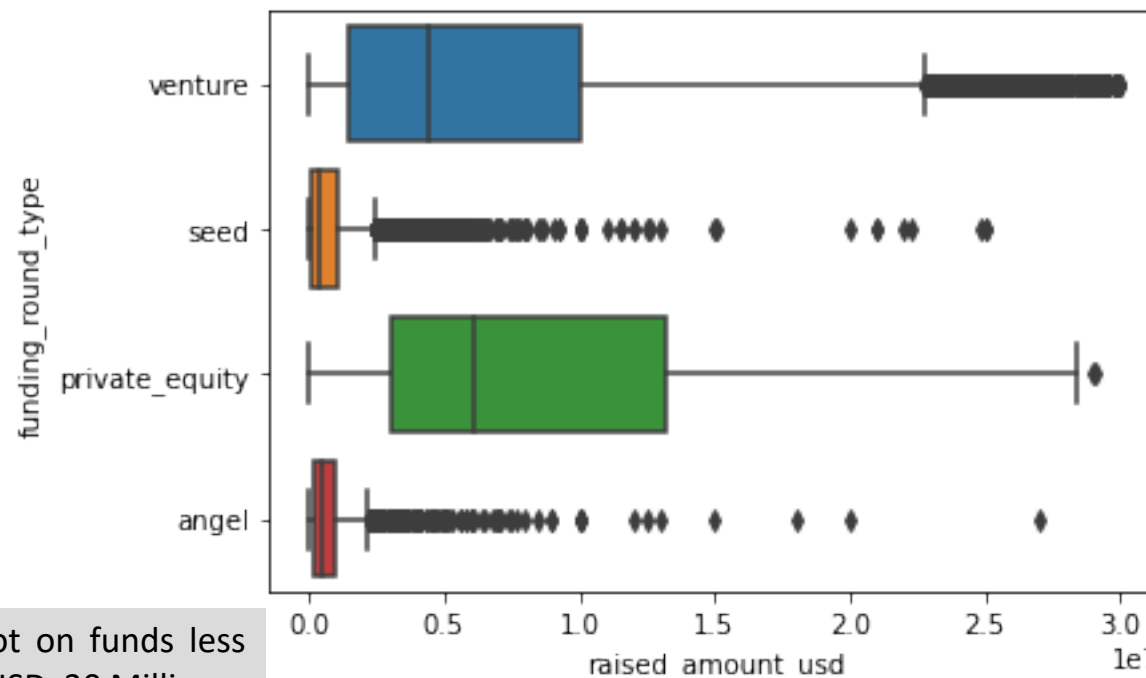
Table 1: Total Number of Investments

| | |
|-----------------------|--------------|
| venture | 4.737831e+11 |
| debt_financing | 1.011215e+11 |
| private_equity | 9.518168e+10 |
| post_ipo_equity | 3.280452e+10 |
| post_ipo_debt | 1.891193e+10 |
| undisclosed | 1.360361e+10 |
| seed | 1.310972e+10 |
| grant | 7.941819e+09 |
| angel | 2.672109e+09 |
| secondary_market | 2.247089e+09 |
| convertible_note | 1.677235e+09 |
| equity_crowdfunding | 5.480132e+08 |
| product_crowdfunding | 4.437003e+08 |
| non_equity_assistance | 2.770198e+07 |

Table 2: Total Amount of Investments

Table 1 and Table 2 show that Venture Funds not only receive the highest number of investments, but they have the highest total amount of investments. But the average investment amount for private equity is the highest among Venture, Seed, Angel and Private Equity.

It is also worth noting that venture and private equity funds have wider range as they have very high standard deviation than others.



raised_amount_usd

country_code

| | |
|-----|--------------|
| USA | 4.225108e+11 |
| GBR | 2.024563e+10 |
| IND | 1.439186e+10 |
| CAN | 9.583332e+09 |
| SGP | 2.793918e+09 |
| IRL | 1.676131e+09 |
| AUS | 1.322935e+09 |
| NZL | 4.483164e+08 |
| NGA | 2.454400e+08 |

Table 3: Countries with highest total investment in Venture Funds

Table 3 shows that USA, Great Britain and India enjoy the highest total amount of investments in venture capital.

This table shows the number of venture fund investments and total amount of investment in main eight sectors in **USA**

category_list

main_sector

| | |
|---|------|
| Others | 2923 |
| Cleantech / Semiconductors | 2297 |
| Social, Finance, Analytics, Advertising | 1912 |
| News, Search and Messaging | 1563 |
| Health | 908 |
| Manufacturing | 799 |
| Entertainment | 580 |
| Automotive & Sports | 167 |

raised_amount_usd

main_sector

| | |
|---|--------------|
| Others | 2.608928e+10 |
| Cleantech / Semiconductors | 2.118100e+10 |
| Social, Finance, Analytics, Advertising | 1.668070e+10 |
| News, Search and Messaging | 1.379682e+10 |
| Health | 8.200859e+09 |
| Manufacturing | 7.258553e+09 |
| Entertainment | 5.000213e+09 |
| Automotive & Sports | 1.454104e+09 |

| main_sector | |
|---|-----|
| Others | 109 |
| News, Search and Messaging | 52 |
| Entertainment | 33 |
| Social, Finance, Analytics, Advertising | 32 |
| Manufacturing | 21 |
| Cleantech / Semiconductors | 20 |
| Health | 19 |
| Automotive & Sports | 13 |

| main_sector | |
|---|--------------|
| Others | 1.007410e+09 |
| News, Search and Messaging | 4.338345e+08 |
| Social, Finance, Analytics, Advertising | 2.905435e+08 |
| Entertainment | 2.808300e+08 |
| Manufacturing | 2.009000e+08 |
| Health | 1.677400e+08 |
| Cleantech / Semiconductors | 1.653800e+08 |
| Automotive & Sports | 1.369000e+08 |

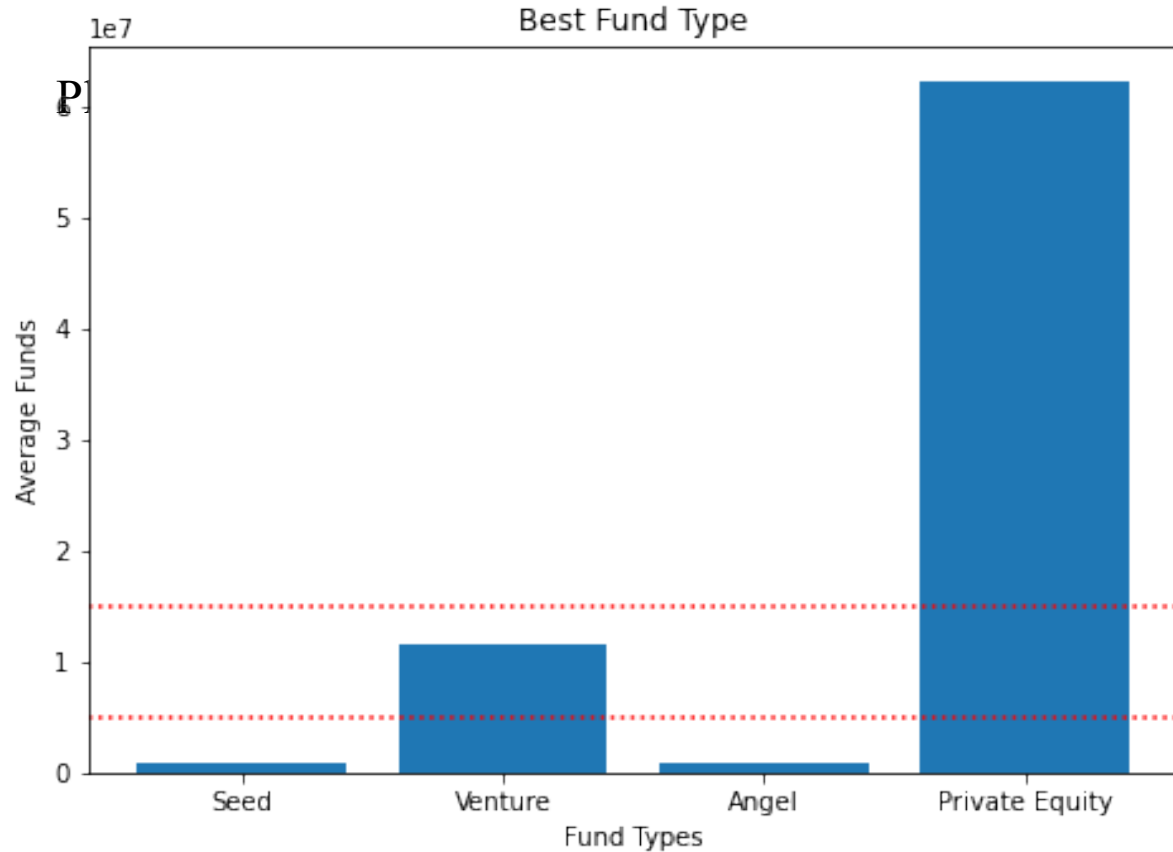
This table shows the number of venture fund investments and total amount of investment in main eight sectors in **India**

This table shows the number of venture fund investments and total amount of investment in main eight sectors in **Britain**

| category_list | |
|---|-----|
| main_sector | |
| Others | 143 |
| Cleantech / Semiconductors | 127 |
| Social, Finance, Analytics, Advertising | 98 |
| News, Search and Messaging | 73 |
| Entertainment | 54 |
| Manufacturing | 42 |
| Health | 24 |
| Automotive & Sports | 16 |

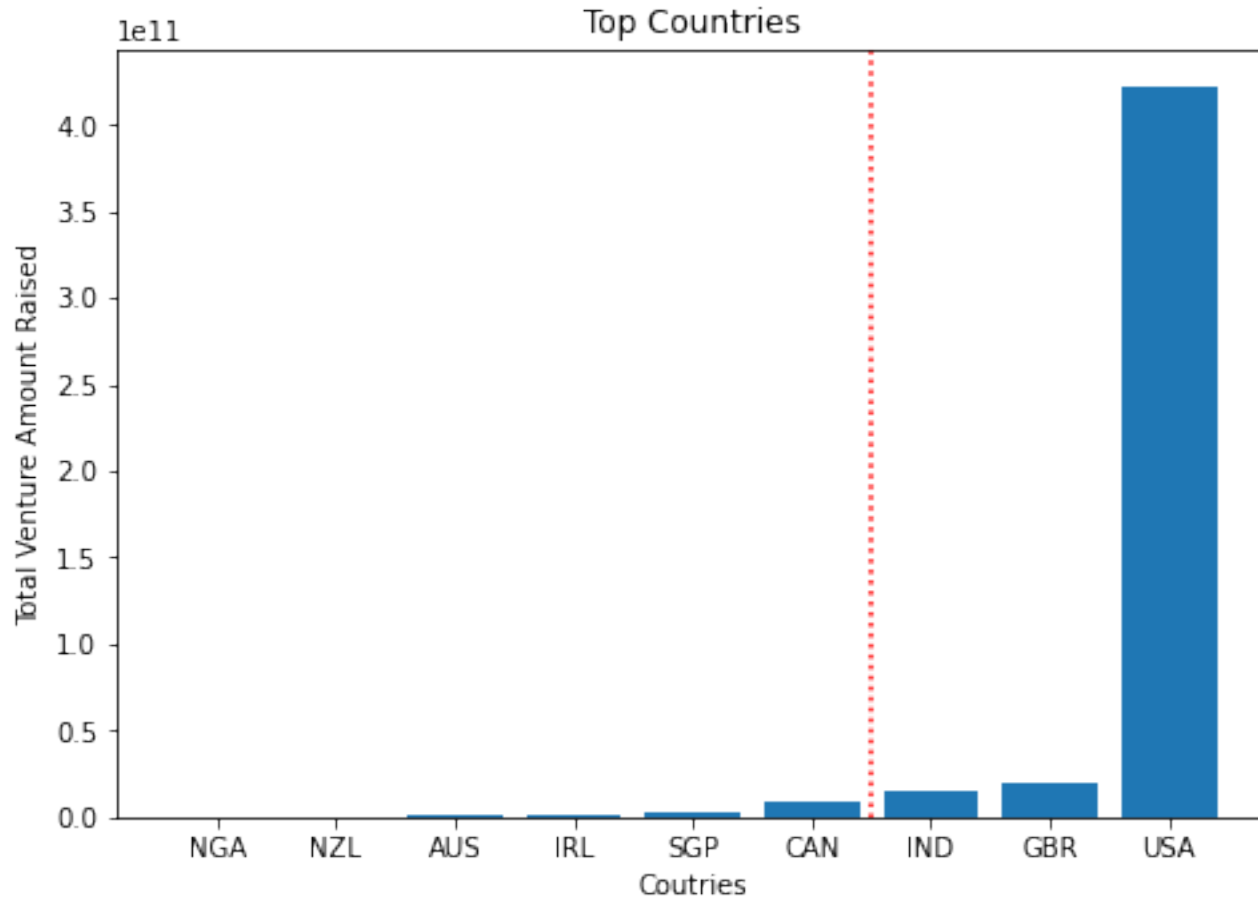
| raised_amount_usd | |
|---|--------------|
| main_sector | |
| Others | 1.249124e+09 |
| Cleantech / Semiconductors | 1.136905e+09 |
| Social, Finance, Analytics, Advertising | 8.218884e+08 |
| News, Search and Messaging | 6.157462e+08 |
| Entertainment | 4.615111e+08 |
| Manufacturing | 3.619403e+08 |
| Health | 2.145375e+08 |
| Automotive & Sports | 1.670516e+08 |

Results



Since our budget is limited within the range of 5 Million USD to 15 Million USD, it is suggested to explore Venture Funds only as the mean investment of Venture Funds is 11.54 Million Dollar, and is the only fund type whose average investment lies within our budget constraint.

Results

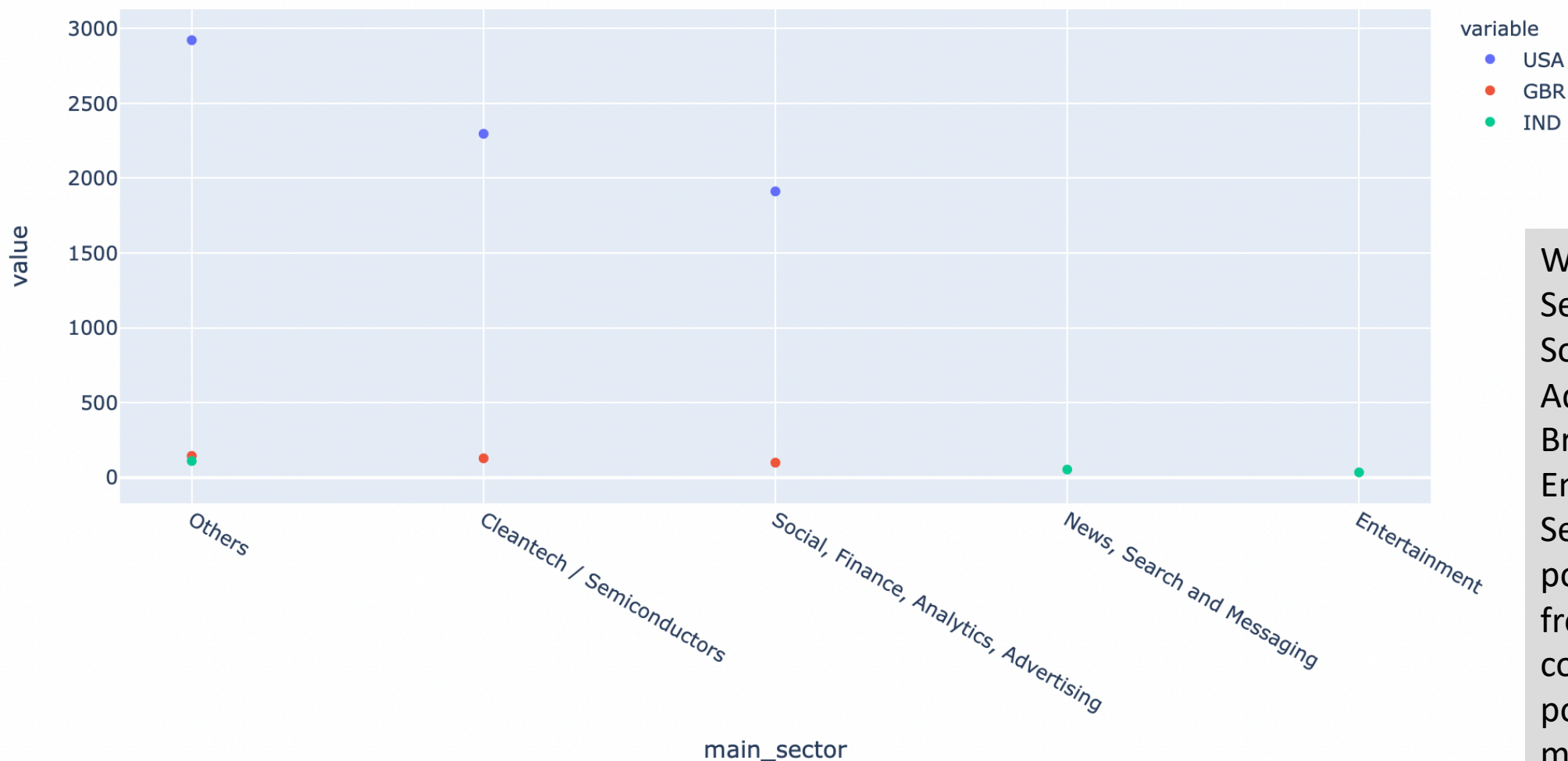


USA, Great Britain and India are the top countries for venture funds as they enjoy the most venture investments.

| | country_code | raised_amount_usd |
|---|--------------|-------------------|
| 8 | IND | 1.746585e+07 |
| 3 | USA | 1.169127e+07 |
| 0 | GBR | 9.851887e+06 |

But from the table above, we can see that India has the highest average venture fund investment.

Results



We see that Semiconductors and Social, Finance, Analytics, Advertising are popular in Britain and USA while Entertainment and News, Search and messaging are popular in India. Apart from USA, other two countries show consistent popularity in its top three main sectors

Conclusion

1. With investments in the range 5 Million USD to 15 Million USD, it is best to invest in Venture funds.
2. USA, Great Britain and India are the top three countries for venture fund investments.
3. USA has the highest number of venture funds investment and the most total venture fund investments. Semiconductors and Social, Finance, Analytics, Advertising very popular sectors to invest in.
4. But India has the highest average venture fund investments and unlike USA and Britain who see investments in Social, Finance, Analytics, Advertising and Semiconductors, India sees highest venture fund investments in Entertainment and News, Search and Messaging.
5. With the current trend and backlash faced by WhatsApp for privacy issues, Spark Funds should invest in India for News, Search and Messaging sector as users are looking for WhatsApp alternative.