

The Great Indian Start-Up Story

An exploratory data analysis report on the funding of Indian Start-ups between 2015 and 2019

Submitted to:

PRAxis BUSINESS SCHOOL



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Introduction

A descriptive analysis of the funding of Indian Start-ups

The Vibrant Indian Subcontinent has always been the hustling centre of entrepreneurship & trade since times immemorial. The legacy continues even today when India stands 3rd in the world in terms of number of "Start-ups" or budding businesses in the world. The most recent data reveals that there around 72,993 start-ups registered officially in India as of July ,2022. There are an estimated 1.3 million start-ups all over the world, out of which 73,000 exists only in India (and the number continues to grow as this report is being documented). The advancement in technology, the power of internet in the hands of common people, a massive improvement in ease of doing business (India is currently ranked 63 in 190 economies) along with mega government initiatives like Start-Up India, make in India etc. are the driving forces behind the staggering growth in the entrepreneurial lifestyle & business growth like never before.

For any Start-up, Cash is the blood of the business as without running cash, it is simply impossible to sustain or grow the venture. There are various routes which entrepreneur take to gather funds for the company, a big chunk of it being raising funds from Investors apart from putting in their own capital.

An investor can be anyone who supplies funds to the business within a particular contract on terms negotiated between two parties. It can be an individual, a group of individuals or an organization. There are 4 basic stages of any start-up -

- Ideation - Building an MVP (minimum viable product) along with a go to market strategy
- Launch - Testing/Taking your product to the relevant markets to validate the business model
- Scaling up - Growing the organization in terms of resources, revenue, customer base & access to larger market
- Maturity - When a business reaches consistent revenue over a long period of time with returning loyal customers

To facilitate this 4-stage process, companies raise funds via different routes which are mainly of 2 broad types - Debt and Equity. Debt is loan agreement instrument between two parties (the Founders & Lenders) under which the Lenders loan a particular amount of funds to the company at a certain rate with contingencies as per a mutual contract.

Equity investors are the ones who invest in the company in exchange for a certain number of shares (advisory or otherwise) along with contingencies as per the contract. The funding process is carried in multiple rounds starting with a Pre-series round which can be a group of individuals or an organization and is generally the first outside influx of cash in the company (apart from the founder's capital) during the ideation, launch or scaling phase depending upon the nature of the venture and other factors. This is followed by Seed round which is a very early investment aimed at helping a new business set up for long-term growth. The seed funding stage is the first equity funding stage for start-ups. Seed funding is usually the first capital that a business raise. Investors who put capital in a business venture at this stage are hoping that the founders can navigate the business world and develop a profitable, high-growth business. This is followed by various rounds like Series A, Series B, Series C etc during expansion, growth & early maturity phase to support the business to scale up & optimise. These rounds might be either debt or equity funds depending upon both parties.

Data Collection & Methodology

The study is primarily based on secondary data collected via online sources for funding of Indian startups from the year 2015 to 2019.
The study is a descriptive & inferential study of the structure of capital funding for Indian Startups during the aforementioned time period

Source: <https://startuptalky.com/>

Structure of the data obtained:

Startup Name	Industry Vertical	SubVertical	Investment Type	City	Investors Name	Sum of Amount in USD
eShakti	ECommerce	"Women's Fashion Clothing Online Platform"	Debt Funding	Chennai	IDG Ventures	2300000
3Dexter	Technology	3D Printing Solutions for Edu space	Seed	New Delhi	Newbie Promoters	150000
MEngage	Healthcare	A Doctor-Patient Engagement Platform	Seed/ Angel Funding	Jaipur	Siddharth Agarwal, Mahavir Sharma, Amit Singal, 100 Co-founders Lab and others.	175000
Digio	Technology	Aadhar based Document Signing platform	Private Equity	Bengaluru	Rainmatter	375000
AdUrCup	Consumer Internet	Ad Network	Seed	New Delhi	Green House Ventures (GHV)	100000
Simility	Technology	Adaptive Fraud Intelligence Platform	Private Equity	Hyderabad	Accel Partners	17500000
IMbesharam	ECommerce	Adult Products Etailers	Private Equity	United States	Undisclosed US Based Investors	4000000
Proximit	Technology	Advertising Technology	Seed	Pune	Funding through 1Crowd platform	150000
Affordplan	Technology	Affordable non-emergency medical service health plans	Seed	New Delhi	Kalaari Capital Accelerator Program	500000
Bizongo	Consumer Internet	Aggregator For Packaging Material	Private Equity	Mumbai	B Capital, International Finance Corporation (IFC), Accel Partners and IDG Ventures	22000000
RML Agtech	Technology	Agri Decision Support Solution for farmers	Private Equity	Pune	IvyCap Ventures	4000000
Samunnati	Finance	Agricultural Loan	Private Equity	Chennai	responsAbility, Elevar Equity and Accel Partners	23500000
Crofarm	Technology	Agriculture Supply Chain solutions	Seed	Gurgaon	Factor[e] Ventures	783000
GoldFarm	Food & Beverage	Agriculture Technology	Private Equity	Coimbatore	Mahindra & Mahindra and Infuse Ventures	2000000
CropIn	Technology	Agriculture Technology Solutions	Private Equity	Bengaluru	Sophia Investment ApS	2000000
Agricxlab	Agriculture	Agri-tech	Seed/ Angel Funding	Mumbai	Ankur Capital	500000
Earth Food	Consumer Internet	Agri-tech	Seed/ Angel Funding	Pune	Rairah Corporation	949000
Gramophone	Technology	Agri-tech	Seed/ Angel Funding	Indore	InfoEdge	1000000
Crofarm	Technology	Agri-Tech supply chain Solution provider	Private Equity	Gurgaon	Mukul Singh, Rohit Jain, Himanshu Aggrawal, Sunil	1500000
Total						21498906467



```
import numpy as np # linear algebra
import pandas as pd # data processing, CSV file I/O (e.g. pd.read_csv)
%matplotlib inline
import matplotlib.pyplot as plt
import seaborn as sns
import dateutil
# import squarify
import os
import io

fund_data = pd.read_csv('/content/startup_funding_data.csv')
```

```
fund_data.head()
```

	Date	Startup Name	Industry Vertical	SubVertical	City Location	Investors Name	InvestmentnType	Amount in USD	Remarks	Unnamed: 9
0	01-08-2019	CarDekho	E-Commerce	Automotive	Gurgaon	SC GG India Mobility Holdings LLC	Series C	\$2,00,00,000.00	NaN	#DIV/0!
1	01-08-2019	Progcap	Finance	Supply Chain Management	New Delhi	Sequoia India	Series A	\$50,00,000.00	NaN	NaN
2	01-08-2019	Alteria Capital	Finance	VC Funds	Mumbai	Azim Premji, Binny Bansal	Single Venture	\$14,00,00,000.00	NaN	NaN
3	01-08-2019	Pine Labs	Information Technology	Last-mile retail transaction technology	Noida	Pine Labs Pte Ltd	Corporate Round	\$3,80,80,000.00	NaN	NaN
4	12-08-2019	Meesho	E-Commerce	Social Commerce	Bengaluru	Naspers	Series D	\$12,50,00,000.00	NaN	NaN



```
fund_data.drop(['Remarks'],axis=1,inplace=True)
```

```
fund_data.drop(['Unnamed: 9'],axis=1,inplace=True)
```

```
fund_data.replace("nan",np.nan)
```

	Date	Startup Name	Industry Vertical	SubVertical	City Location	Investors Name	Investment Type	Amount in USD
0	01-08-2019	CarDekho	E-Commerce	Automotive	Gurgaon	SC GG India Mobility Holdings LLC	Series C	\$2,00,00,000.00
1	01-08-2019	Progcap	Finance	Supply Chain Management	New Delhi	Sequoia India	Series A	\$50,00,000.00
2	01-08-2019	Alteria Capital	Finance	VC Funds	Mumbai	Azim Premji, Binny Bansal	Single Venture	\$14,00,00,000.00
3	01-08-2019	Pine Labs	Information Technology	Last-mile retail transaction technology	Noida	Pine Labs Pte Ltd	Corporate Round	\$3,80,80,000.00
4	12-08-2019	Meesho	E-Commerce	Social Commerce	Bengaluru	Naspers	Series D	\$12,50,00,000.00
...
1754	25-01-2015	Thrill App	NaN	NaN	NaN	People Group (Shaadi.com)	Private Equity	\$10,00,000.00

```
fund_data['Date']=fund_data['Date'].replace({"12/05.2015":"12/05/2015"})
fund_data['Date']=fund_data['Date'].replace({"13/04.2015":"13/04/2015"})
fund_data['Date']=fund_data['Date'].replace({"15/01.2015":"15/01/2015"})
fund_data['Date']=fund_data['Date'].replace({"22/01//2015":"22/01/2015"})
fund_data['Startup Name'] = fund_data['Startup Name'].replace({"Flipkart.com":"Flipkart"})
fund_data['Industry Vertical']=fund_data['Industry Vertical'].replace({"ECommerce":"eCommerce"})
fund_data['Industry Vertical']=fund_data['Industry Vertical'].replace({"ecommerce":"eCommerce"})
fund_data['Industry Vertical']=fund_data['Industry Vertical'].replace({"Ecommerce":"eCommerce"})
fund_data['Investment Type']=fund_data['Investment Type'].replace({"Crowd funding":"Crowd Funding"})
fund_data['Investment Type']=fund_data['Investment Type'].replace({"SeedFunding":"Seed Funding"})
fund_data['Investment Type']=fund_data['Investment Type'].replace({"PrivateEquity":"Private Equity"})
fund_data['Startup Name']=fund_data['Startup Name'].replace({"practo":"Practo"})
fund_data['Startup Name']=fund_data['Startup Name'].replace({"couponmachine.in":"Couponmachine"})
fund_data['Startup Name']=fund_data['Startup Name'].replace({"Olacabs":"Ola Cabs"})
fund_data['Startup Name']=fund_data['Startup Name'].replace({"Ola":"Ola Cabs"})
fund_data['Date']=fund_data['Date'].replace({"/":"-"})
fund_data['Amount in USD']=fund_data['Amount in USD'].replace({"$":""})
fund_data['Amount in USD']=fund_data['Amount in USD'].replace({","":""})
```



```
fund_data['Amount in USD'] = fund_data['Amount in USD'].apply(lambda x:str(x).replace("$",""))
fund_data['Amount in USD'] = fund_data['Amount in USD'].apply(lambda x:str(x).replace("+",""))
fund_data['Amount in USD'] = fund_data['Amount in USD'].apply(lambda x:str(x).strip())
fund_data['Amount in USD'] = fund_data['Amount in USD'].apply(lambda x:str(x).replace(",",""))
```

```
fund_data['Amount in USD'].fillna(0, inplace = True)
```

```
fund_data['Amount in USD']=fund_data['Amount in USD'].astype(float)
```

```
fund_data.info()
```

```
<class 'pandas.core.frame.DataFrame'>
Int64Index: 1759 entries, 0 to 1758
Data columns (total 8 columns):
 #   Column           Non-Null Count  Dtype  
---  --  
 0   Date             1759 non-null    object 
 1   Startup Name     1759 non-null    object 
 2   Industry Vertical 1661 non-null    object 
 3   SubVertical      1373 non-null    object 
 4   City Location    1660 non-null    object 
 5   Investors Name   1745 non-null    object 
 6   Investment Type  1759 non-null    object 
 7   Amount in USD    1759 non-null    float64
dtypes: float64(1), object(7)
memory usage: 188.2+ KB
```

```
fund_data['Date']=pd.to_datetime(fund_data['Date'])
```

```
fund_data.Date.dtypes
```

```
dtype('M8[ns]')
```



Number of Rounds of funding b/w 2015-19

1371

Total amount disbursed b/w 2015-19

21bn

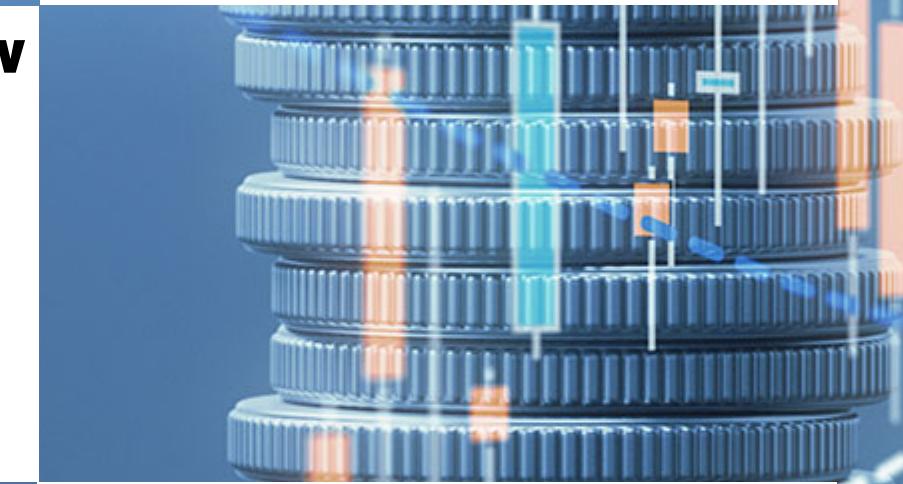
Minimum Amount disbursed in a round b/w 2015-19

18K



An Average round of Funding b/w 2015-2019

15.98M

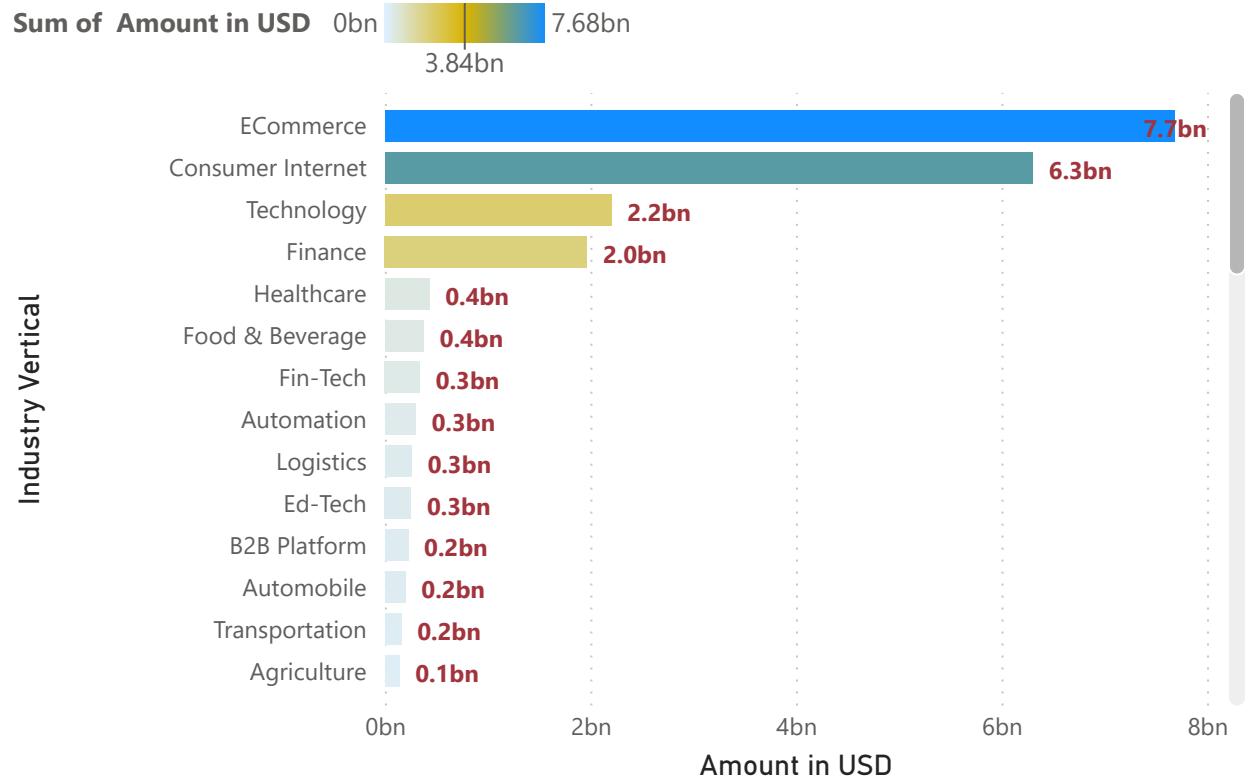


Maximum Amount disbursed in a round b/w 2015-19

2.5bn



Investment by Industry Vertical



At \$7.7B, ECommerce had the highest Amount funded and was 53,71,163.54 % higher than Online Marketplace, which had the lowest amount invested in USD at \$143K.

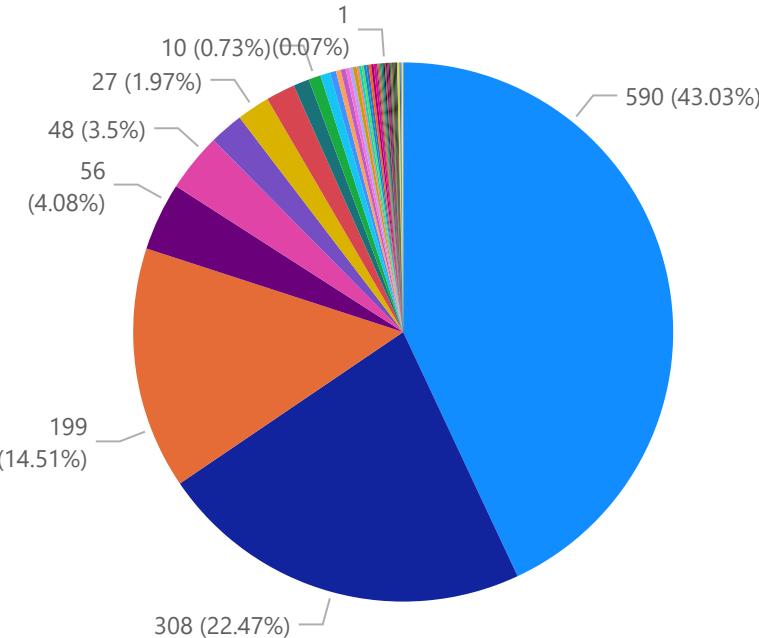
ECommerce is followed by Consumer Internet and Technology.

Online Marketplace had the lowest Sum of Amount in USD at \$143K.

ECommerce accounted for 35.73% of Amount disbursed.

Across all 47 Industry Vertical, Amount disbursed ranged from \$143K to \$7.7.

Number of Investment rounds Vertical wise



The Top Verticals in terms of number of rounds of funding are:

- 1.Consumer Internet [590]
- 2.Technology [308]
- 3.ECommerce [199]
- 4.Finance [56]
- 5.Healthcare [48]

Consumer Internet accounted for 43.03% of Number of investment rounds overall.

- Industry Vertical
- Consumer Internet
 - Technology
 - ECommerce
 - Finance
 - Healthcare
 - Food & Beverage
 - Ed-Tech
 - Logistics
 - Fin-Tech
 - IT
 - Education
 - Transportation
 - Automobile
 - Others

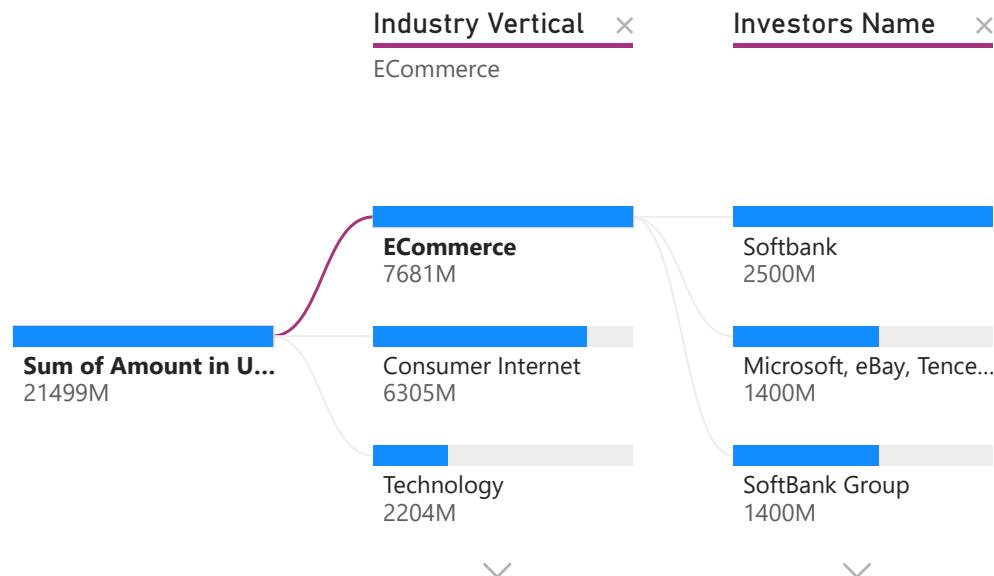
Sum of Amount in USD by SubVertical



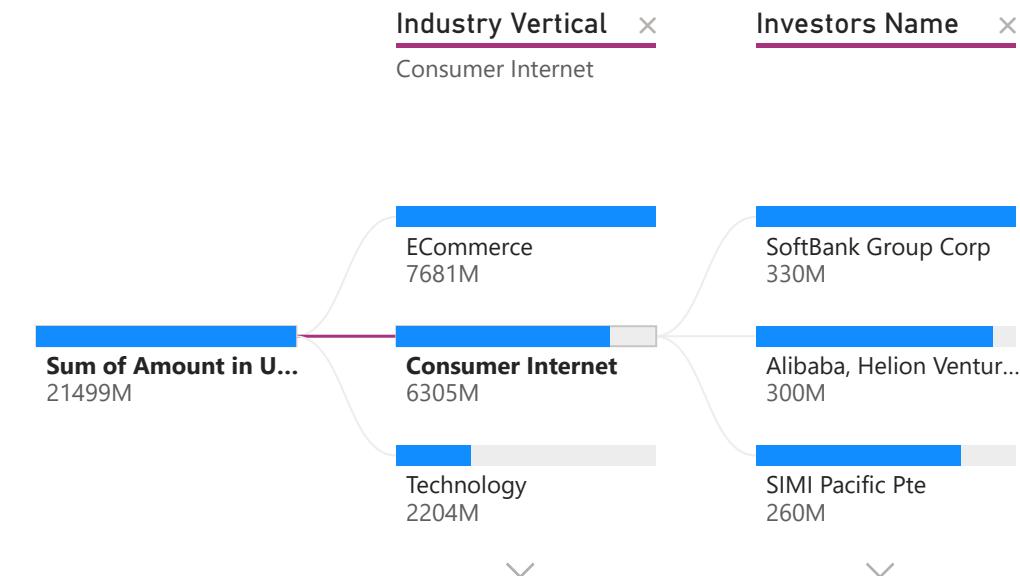
From the above tree Map we see that the most invested in Sub-Verticals throughout are:

- 1.Online Marketplaces
- 2.E-Commerce Marketplaces
3. Mobile Wallets
4. Private equity Firms
5. App Based Cab Category

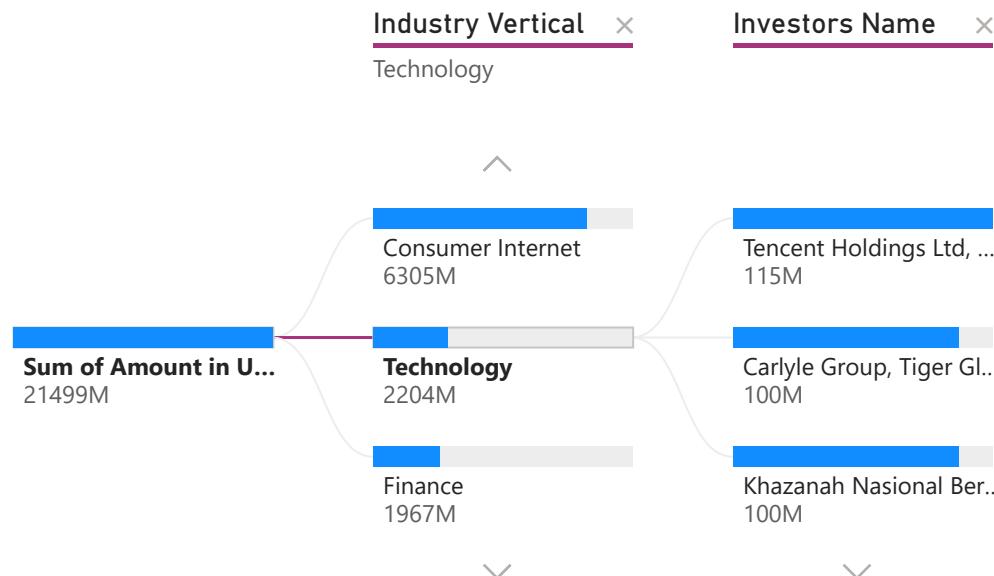
Amount invested by Top investors in E-Commerce



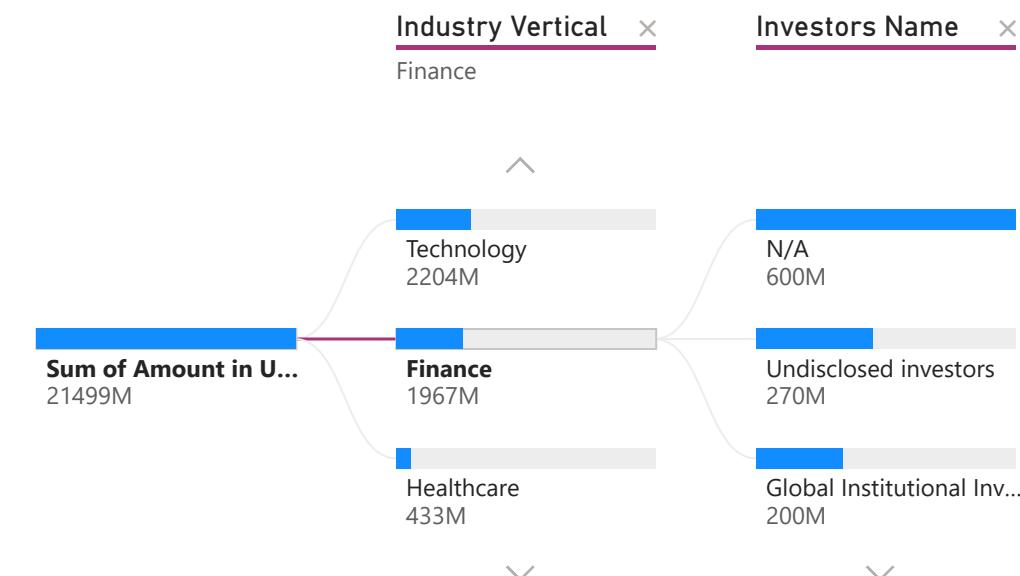
Amount invested by Top investors in Consumer Internet



Amount invested by Top investors in Technology



Amount invested by Top investors in Finance



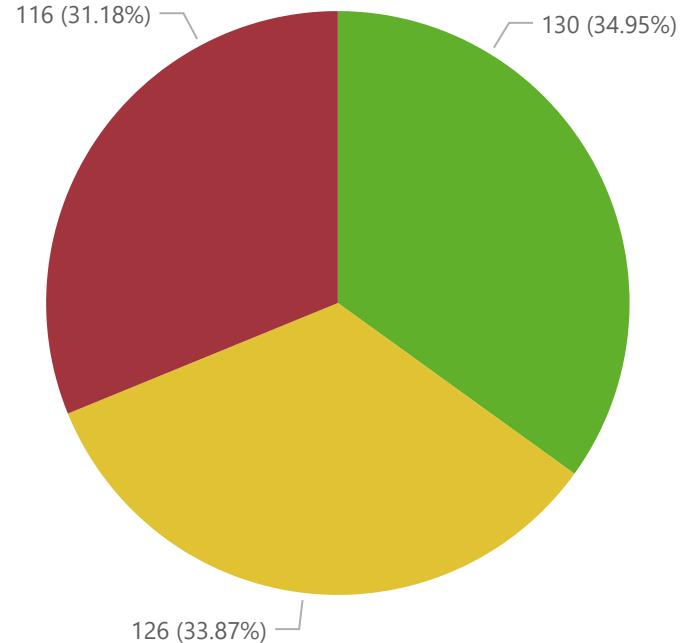
Insights

We observe that the investors that have invested the most in the top 4 categories (industry verticals) are:

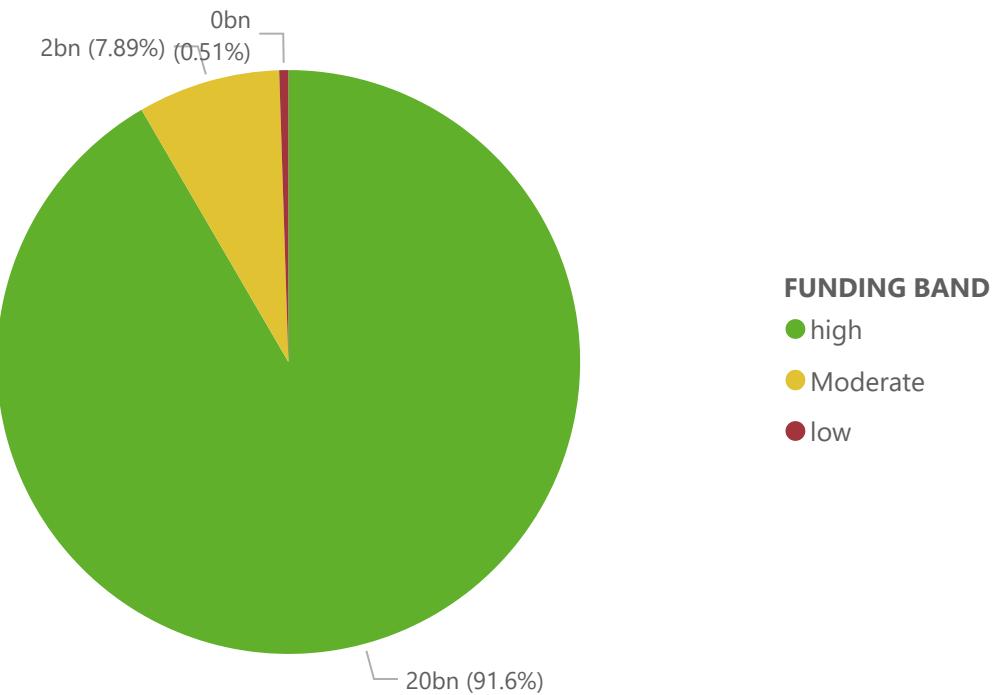
- Ecommerce:
 - a. Softbank **[\$2500Mn]**
 - b. Microsoft, eBay and Tencent **[\$1400Mn]**
- Consumer Internet:
 - a. Softbank **[\$330Mn]**
 - b. Alibaba, Helion Venture Partners, Bessemer Venture Partners, Ascent Capital **[\$300Mn]**
 - c. SIMI Pacific partners **[\$260Mn]**
 - d. Softbank, Sequoia, Light Speed Venture Partners, ,Greenoaks Capitals, Hero Enterprises**[\$250Mn]**
- Technology:
 - a. Tencent Holdings, Times Internet **[\$115Mn]**
 - b. Carlyle Group, Tiger Global **[\$100Mn]**
 - c. Khazana Nasional, Berhad **[\$100Mn]**
 - d. Accel Partners **[\$84Mn]**
- Finance:
 - a. Undisclosed Investors **[\$870Mn]**
 - b. Global Institutional Investors **[\$200Mn]**
 - c. Azim Premji, Binny Bansal **[\$140Mn]**



Number of Investments across Funding bands



Investment across Funding Bands



The funding amount has been categorized into 3 bands:

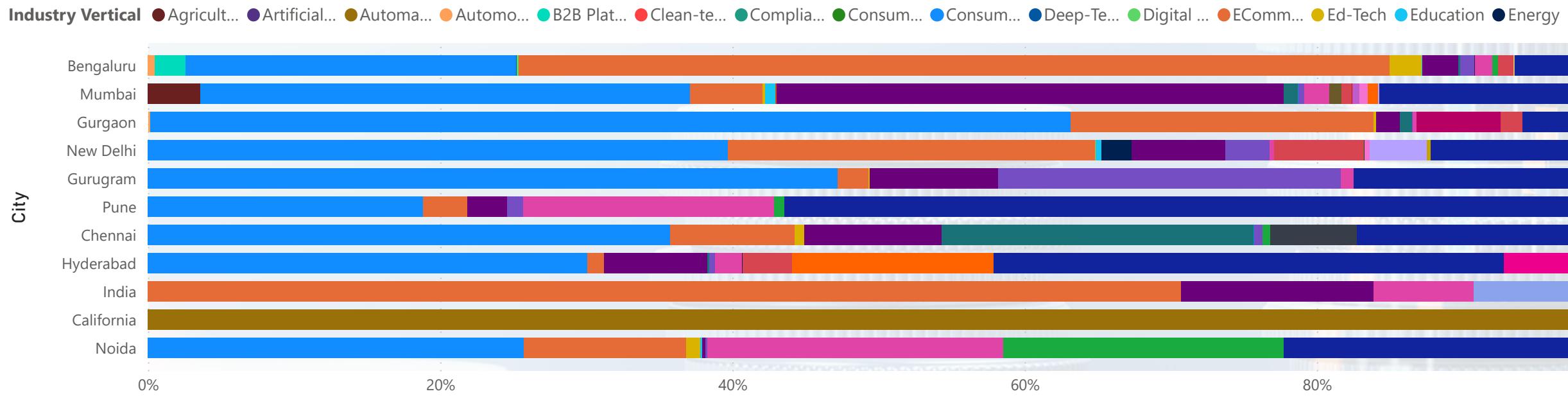
1.High > 75th Percentile of the data in Amount ($X > \$7600000$)

2.Moderate - Between 25th Percentile & 75th Percentile in Amount ($\$500000 < X < \7600000)

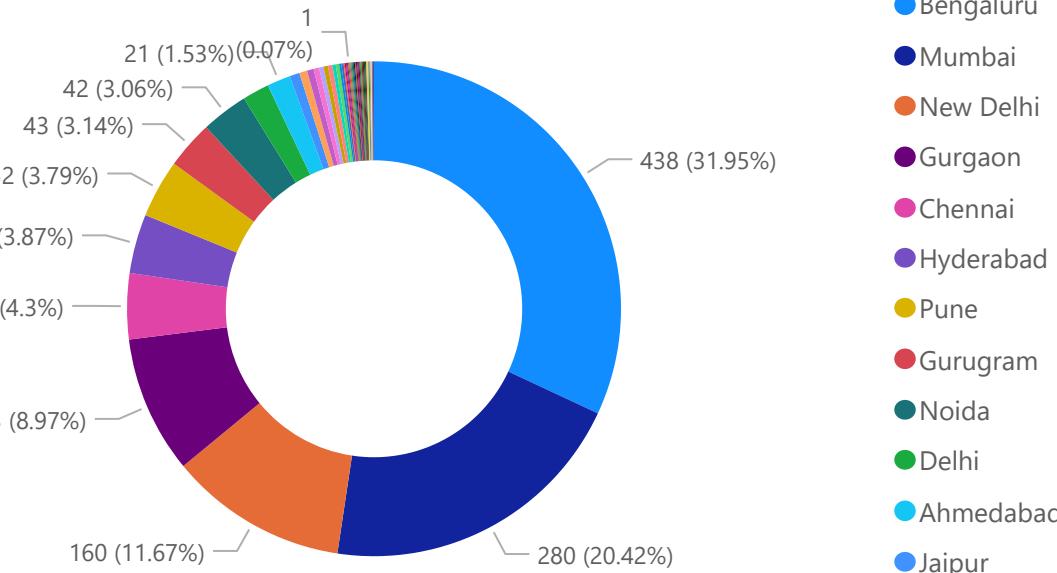
3.Low - < 25th Percentile of data in Amount ($X < \$500000$)

This shows that the number of investments across bands is almost evenly distributed whereas if we consider the amount a huge portion (91.6%) of the capital investment is in the high category.

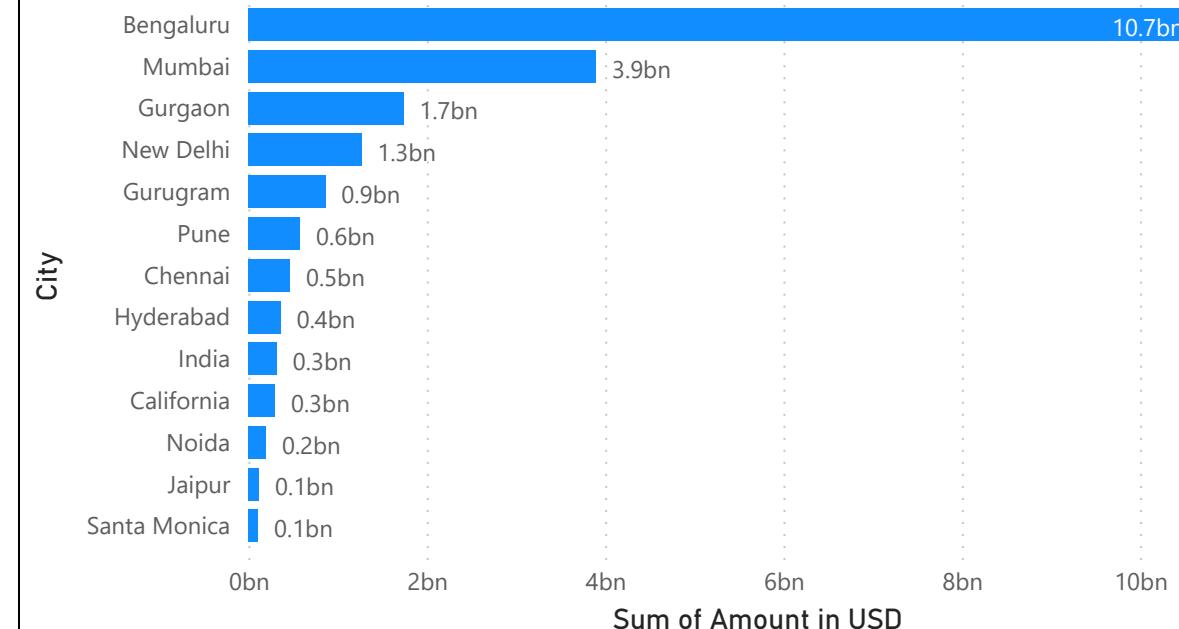
Amount disbursed city wise



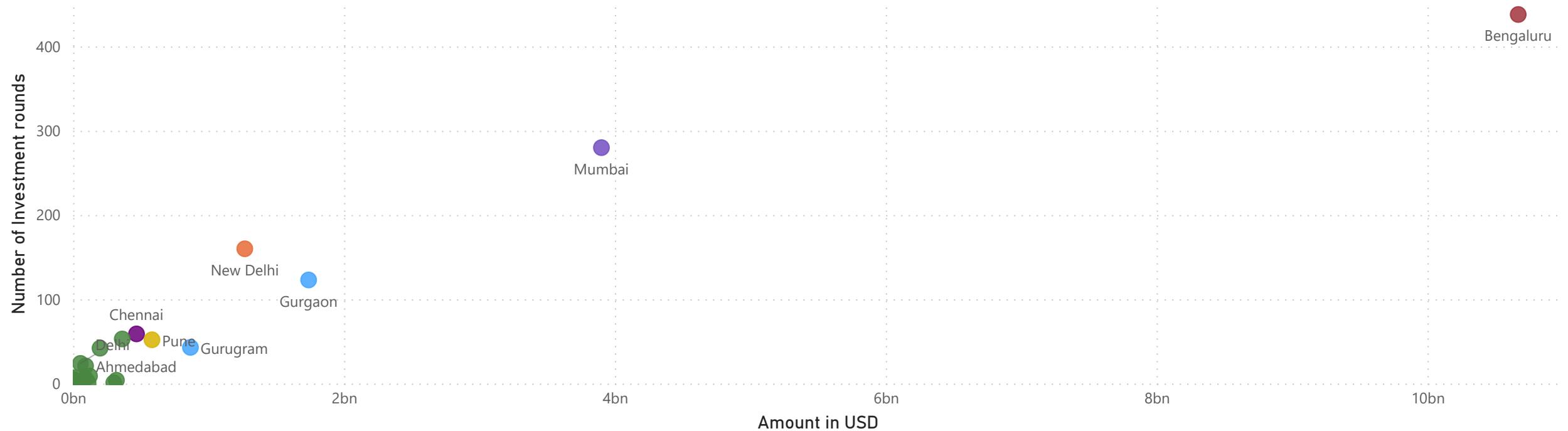
Number of Investment rounds across Cities



Amount invested across cities



Amount and number of rounds for cities



The top 5 Cities in terms of number of investment rounds are:

1. **Bengaluru** - Is the outlier as it has both the highest amount of funds received and the number of rounds and is differentiated by a huge margin in comparison to other cities

Amount & rounds [\$10.6B, 438]

2. **Mumbai** - It is the next in line with quite some margin on others as well

Amount & rounds [\$3.9B, 280]

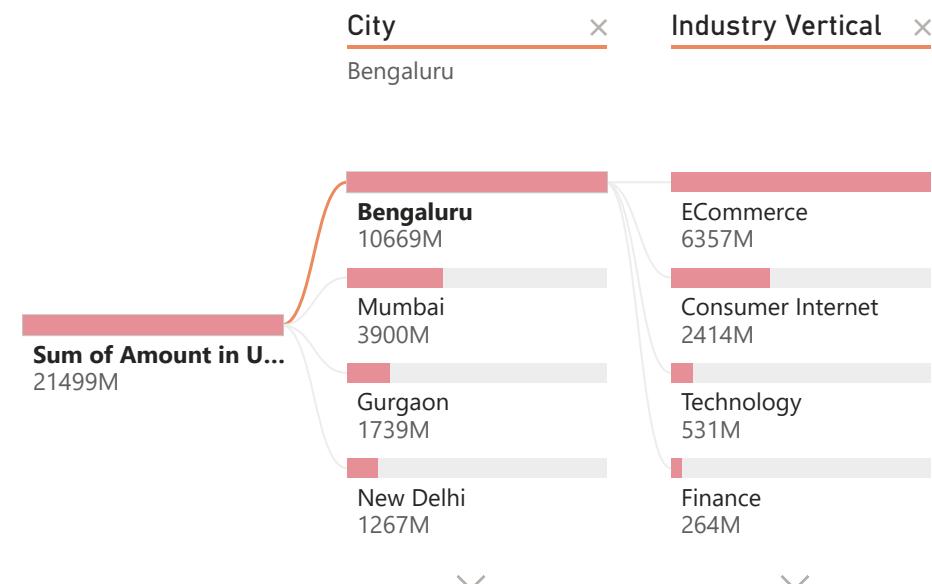
3. **Gurgaon/GuruGram** - The new player in the market has even surpassed the country capital in terms of both amount & rounds

Amount & rounds [\$2.5B, 166]

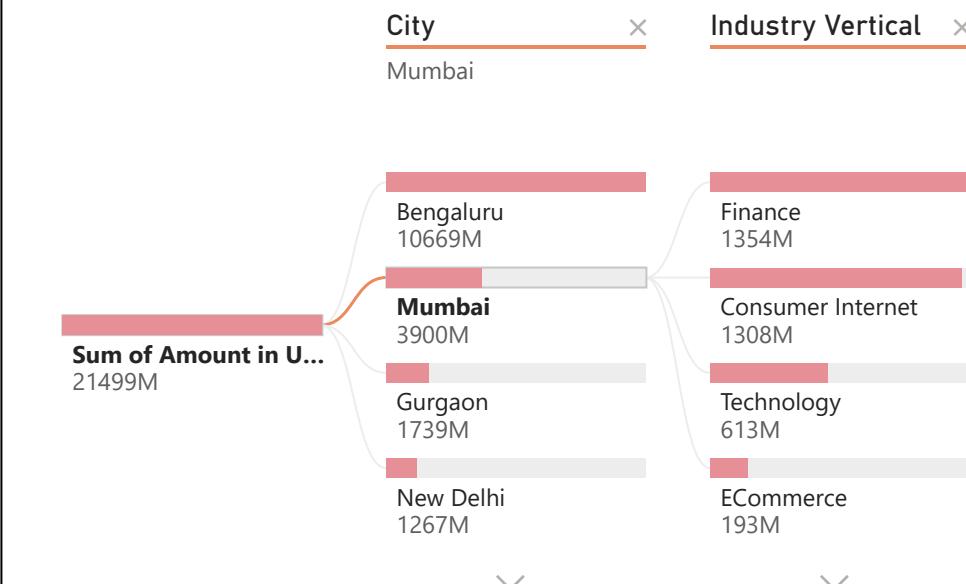
4. **New Delhi** - The country capital does make its mark in the top 5 spots for start-up hubs with **Amount & rounds [\$1.26B, 160]**

5. **Chennai & Pune** are close for the 5th position with **Amount & rounds [\$467M, 59] | Amount & rounds [\$581Mn, 59]**

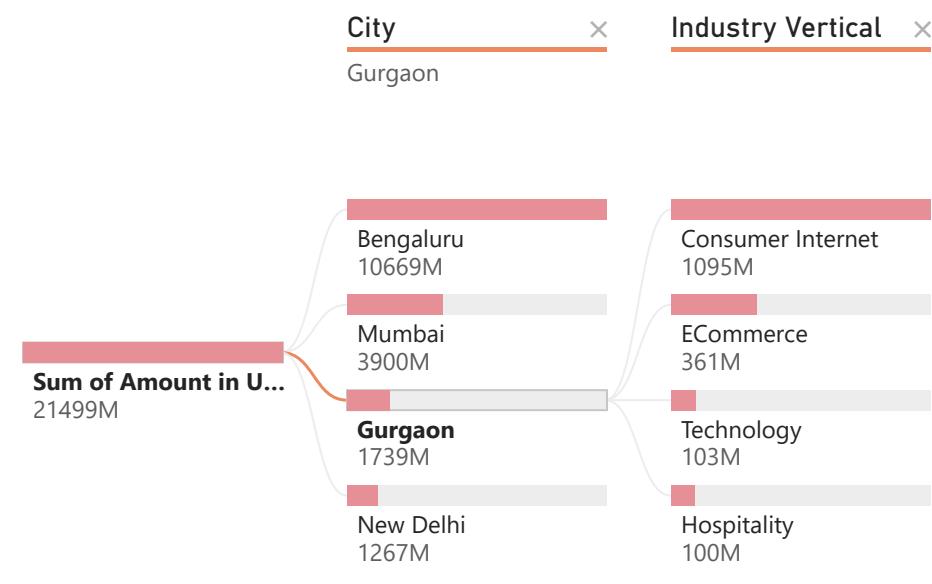
Amount Invested by Vertical for Bangalore



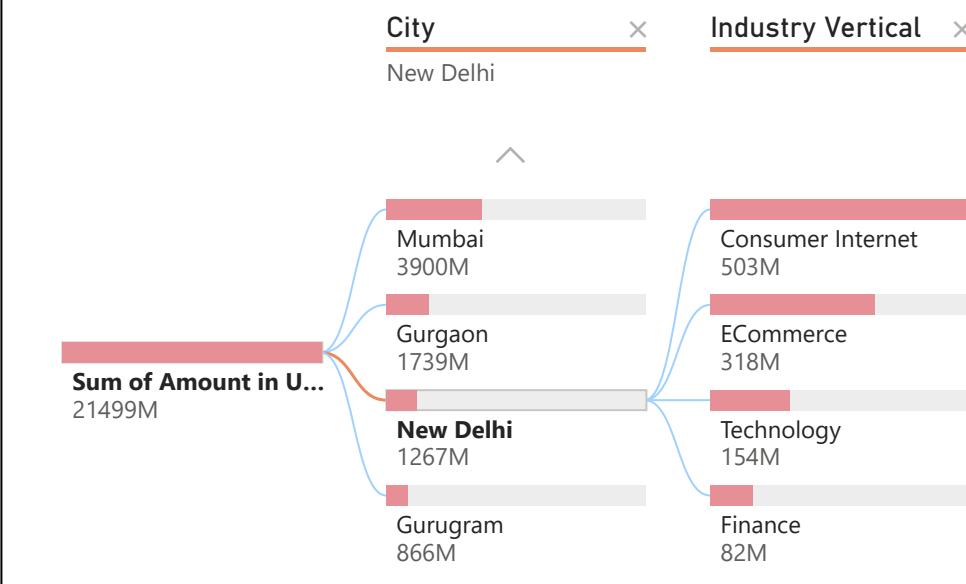
Amount Invested by Vertical for Mumbai



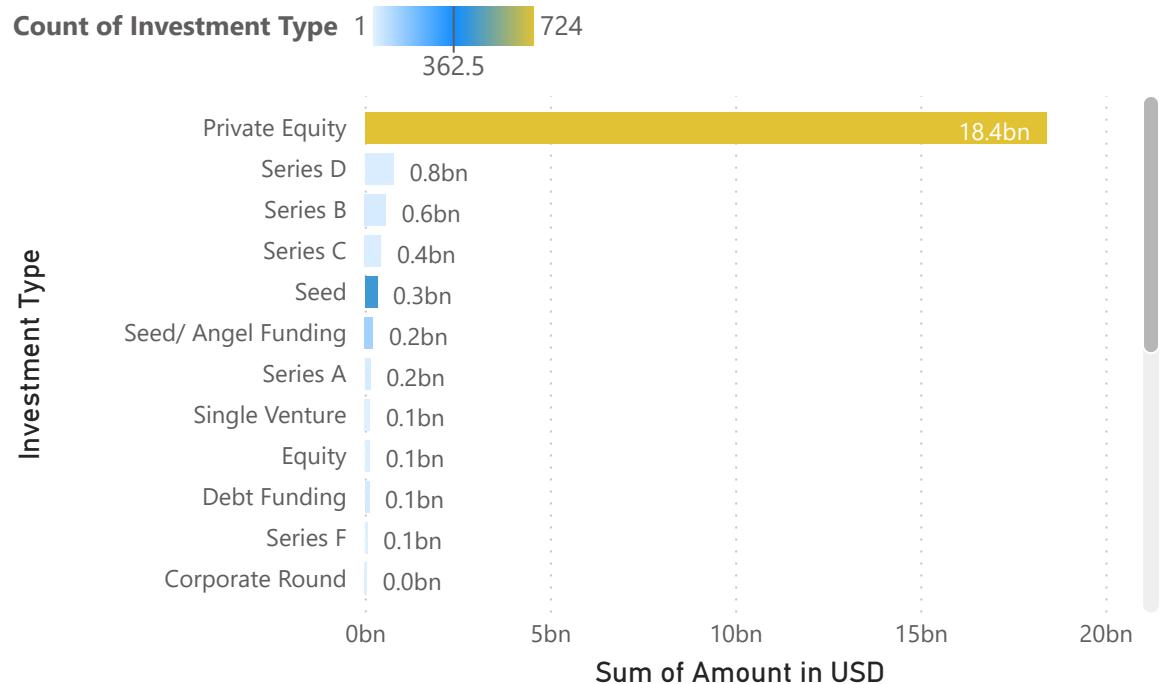
Amount Invested by Vertical for Gurgaon



Amount Invested by Vertical for New Delhi



Amount by investment type

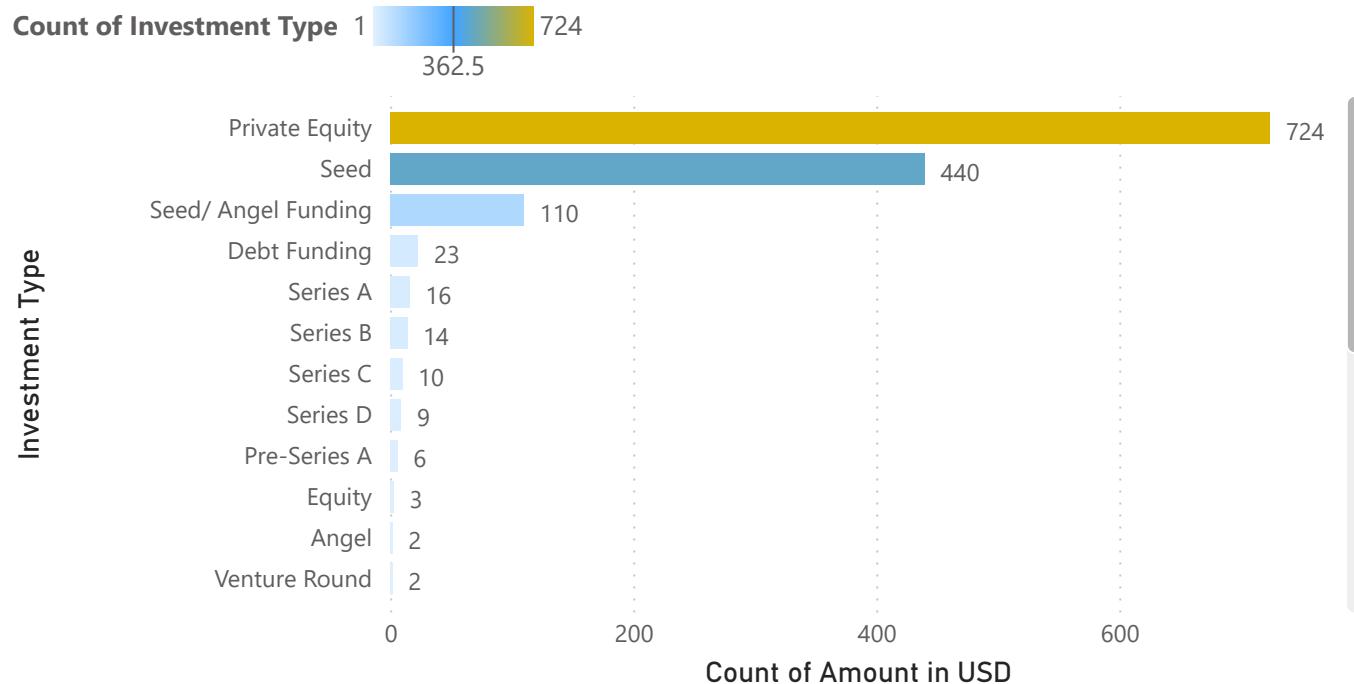


At \$18B, Private Equity had the highest Amount and was 39,60,885 % higher than Angel, which had the lowest Sum of Amount in USD at \$0.4Mn.

Private Equity had the highest Amount at \$18,40,29,33,165, followed by Series D and Series B. Angel had the lowest Sum of Amount in USD at \$0.4Mn.

Private Equity accounted for 85.60% of Amount disbursed. Across all 24 Investment Type, Sum of Amount in USD ranged from \$0.4Mn to \$1.8B.

Number of investment rounds by Investment type

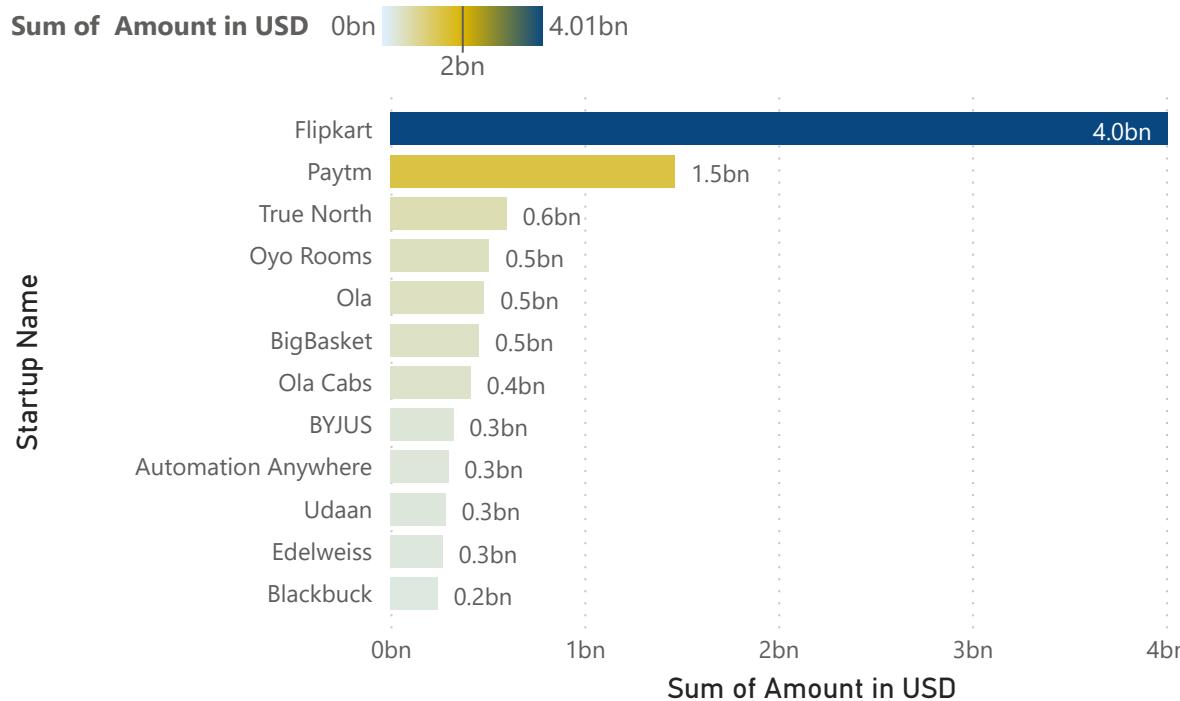


Number of Investment rounds was highest for Private Equity at 724, followed by Seed and Seed/ Angel Funding.

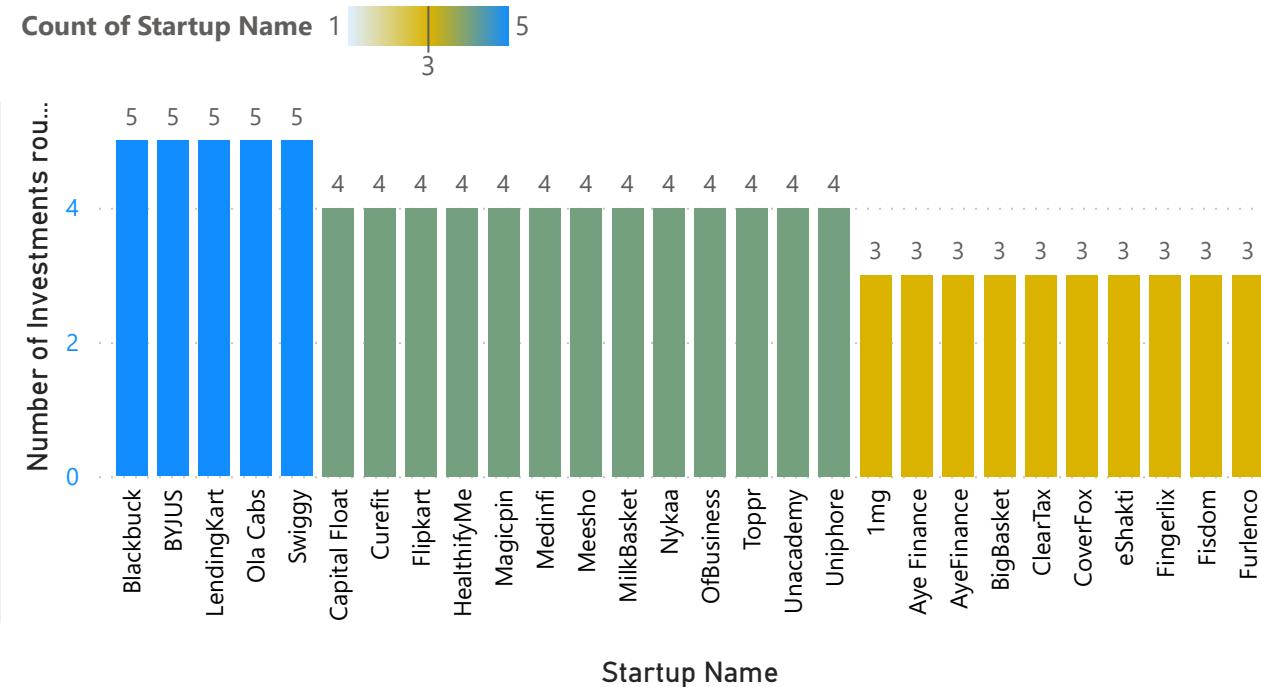
Private Equity accounted for 52.81% of Number of Investment rounds.

Across all 24 Investment Type, Number of Investment rounds in USD ranged from 1 to 724.

Start ups which received the most amount of funding

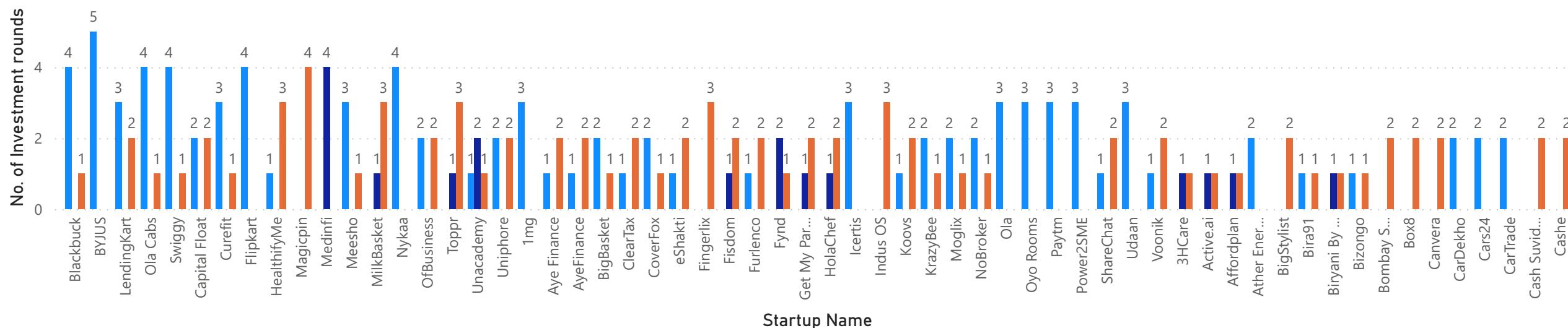


Startups who received the most rounds of funding

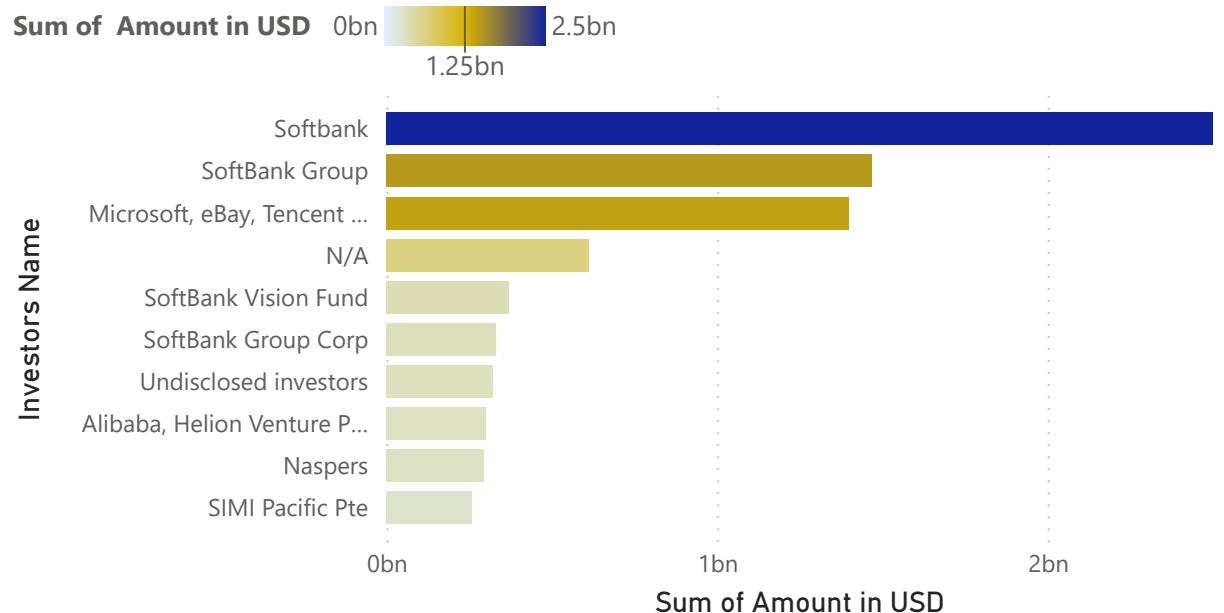


Number of Investment rounds by Funding Bands across start-ups

FUNDING BAND ● high ● low ● Moderate



Top Investors by Amount



Number of Investment rounds was highest for Undisclosed investors at 81 followed by Kalaari Capitals & Brand capitals

Undisclosed investors accounted for 5.9% of all investment rounds.

Across all 1,106 Investors Name, Number of Investment rounds ranged from 1 to 52.

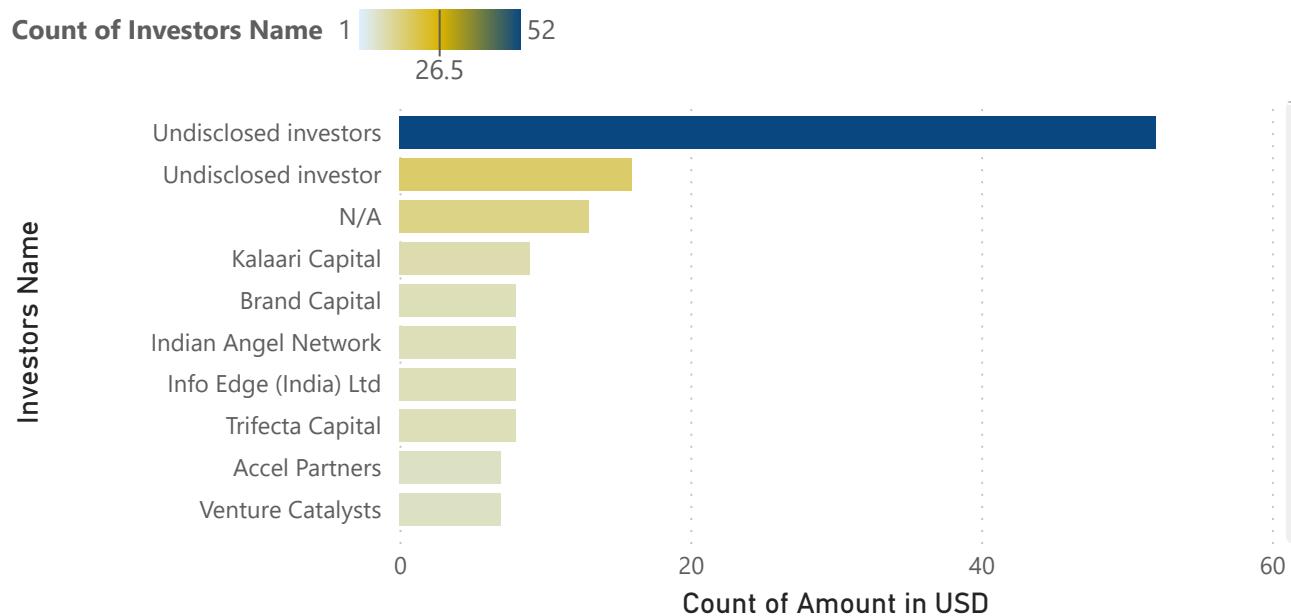
At \$2.5B, Softbank is the largest investor in Indian Start-ups and was 92,59,159.26% higher than Promatus Group, which had the lowest Amount invested of around \$27K.

Softbank had the highest Funding amount invested at \$2.5B, followed by SoftBank Group and Microsoft, eBay, Tencent Holdings.

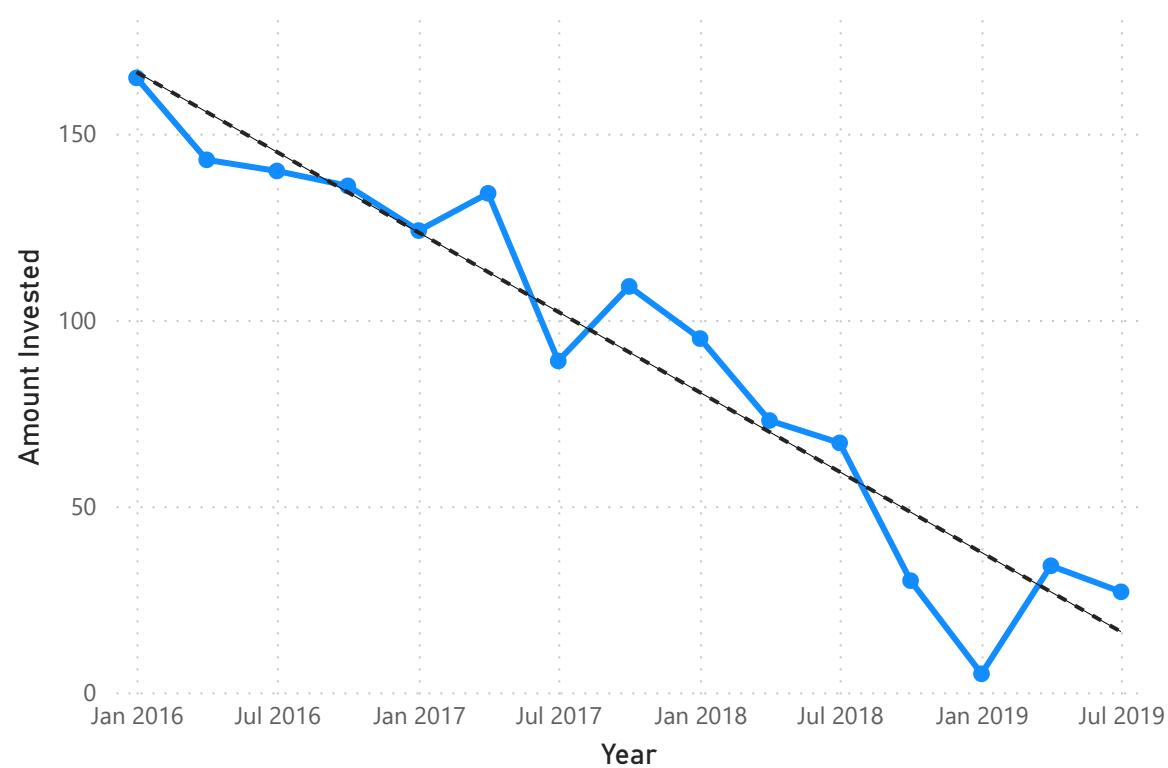
Softbank accounted for 11.63% of of all investments in terms of amount disbursed.

Across all 1,106 Investors Name, Sum of Amount in USD ranged from \$27k to \$2.5B.

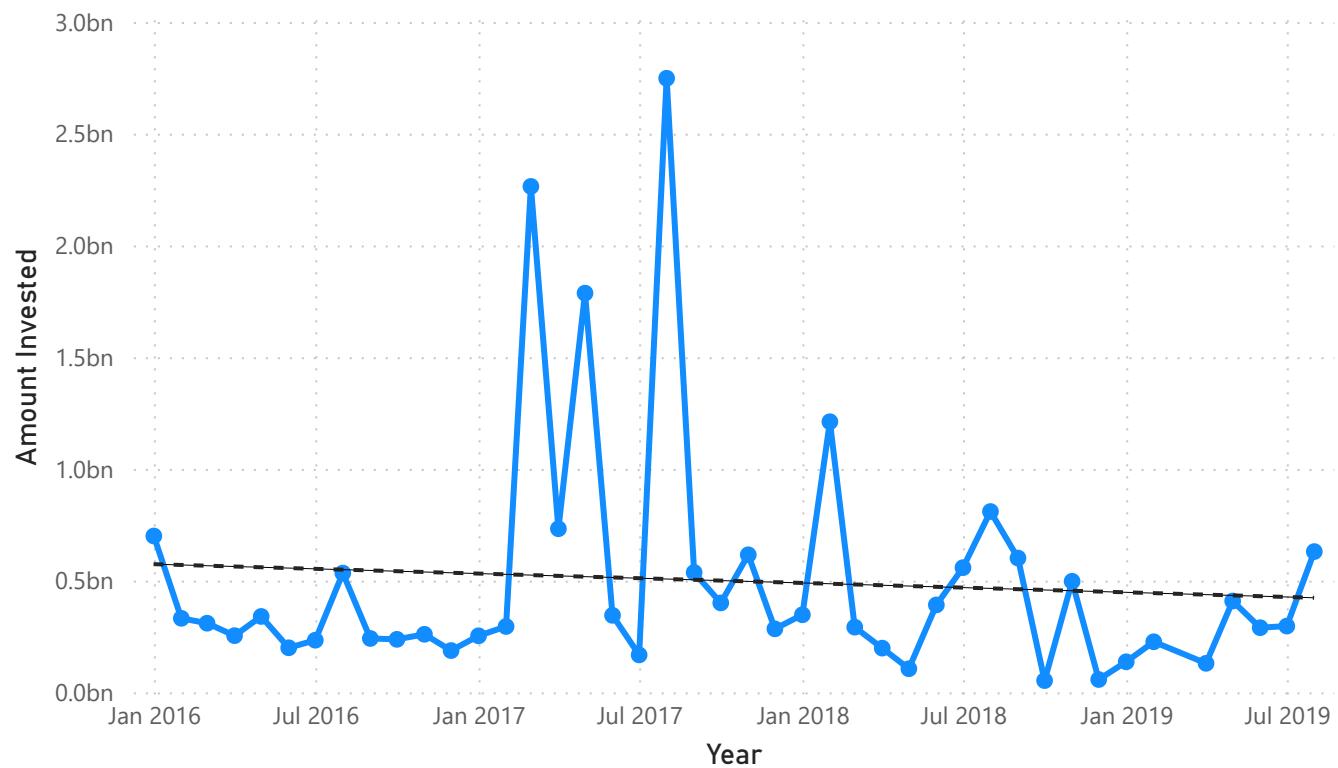
Top Invest by number of investment



Number of Investment rounds by Year and Quarter



Amount by Year, Quarter and Month



The plot of number of investment rounds against year of investments gives us a few interesting insights:

- 1.The overall number has seen a downward trend over the years with the year 2016 having the highest count as 584 & the lowest count being for 2019 at 66
- 2.A lot of startups got funded in 2016 due to Start Up India Initiative of Government of India declared in August 2015 giving a boost to the entrepreneurial spirit
- 3.However the number of funding rounds being highest does not imply the same about the amount of capital being the highest in that year. As we can see from the next chart of Amount invested across years. We see that we have a peak in capital investment around

Conclusions

The money invested between 2015-2019 in the Indian Start-up economy is \$21B & average is \$15.98Mn. The total number of rounds of investments received is 1371.

The minimum investment is \$18K for the start-up MAPTAGS from The Ten Minute Million E-Summit and the maximum being \$2.5B for Flipkart by Softbank.

The most funded vertical in the span of 2015-2019 is E-commerce (\$7.7B) followed by Consumer Internet(\$6.3B) and Technology(\$2.2B).

ECommerce accounted for a whopping 35.73% of all Amount invested.

Top verticals and their top investors:

- 1.Ecommerce – Softbank (\$2.5B)
- 2.Consumer Internet – Softbank Group Corp (\$330M)
- 3.Technology – Tencent Holdings & Times Internet (\$115M)
- 4.Finance – Undisclosed Investors (\$870M) and Global Institutional Investors (\$200M)

The top sub-verticals are:

- 1.Online Marketplaces
- 2.E-Commerce Marketplaces
- 3.Mobile Wallets
- 4.Private equity Firms

The number of investments across bands is almost evenly distributed whereas if we consider the amount a huge portion (91.6%) of the capital investment is in the high category.

Bangalore is leading in terms of both number of investments (31.95% of all investment rounds) & the amount disbursed (\$10.7B) followed by Mumbai (Amount & rounds [\$3.9B, 280]), Gurgaon (Amount & rounds [\$2.5B, 166]) & New Delhi (Amount & rounds [\$1.26B, 160]).

For Bangalore – Ecommerce Dominates the funding market

For Mumbai - Finance, proving the old label of the financial capital of India

For Gurgaon & New Delhi – Consumer Internet is the vertical with the highest amount of funding received

Private Equity (724) & Seed funding (440) are investors' most preferred type of investment. Seed funding mainly caters to product development and market research of start-ups.

If we consider the amount disbursed, Private equity leads with a huge margin with \$18B disbursed as Private Equity investment which implies that traditional approach of a cash flow focused mindset, optimizing the balance sheet, cost structure and utilizing financial engineering is still the priority for institutional investors & HNI individuals over growth & Market share approach of Start-ups

Flipkart has received the highest amount over this span of around \$4B followed by Paytm \$1.5B

BlackBuck, BYJUS, LendingKart, Ola & Swiggy have received the highest number of rounds of investments

We see that barring a few, most start-ups which received more than 1 round of funding have got a mix of high, low and moderate bands with a higher portion of high funding from different investors implying that with time generally start-ups diversify their investor portfolio

Softbank is the biggest investor in terms of the amount invested around \$2.5B followed by Microsoft, Tencent

The maximum number of investments have been done by Undisclosed investors (Highest in the Finance domain) followed by Kalaari capital & Brand capital

The overall number has seen a downward trend over the years with the year 2016 having the highest count as 584 & the lowest count being for 2019 at 66

A lot of start-ups got funded in 2016 due to Start Up India Initiative of Government of India declared in August 2015 giving a boost to the entrepreneurial spirit

Suggestions

Geography – Bangalore seems to be miles ahead in terms of providing the right environment for a start-up followed by Mumbai, Gurgaon & New Delhi. So, it is advisable to base your start-up in these cities

Investors – Founders should reach out to Private equity firms as they have invested the largest amount but this at the same time means that founders will have focus on cash flow

For Growth, Start-up founders can reach out to Angel Investors for Seed round of funding as it helps in terms of Mentorship in all aspects of the organization apart from Finance

Vertical – Ecommerce seems to be the hot button for Investment firms, and such is the vertical where one can expect funding with the least difficult but while means more competition in the field. The subvertical which has been highest funded is an online market place suggesting Investors are looking for more companies building market places

Thank you.

IB 63021052

John W. Snow
Secretary of the Treasury



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Frances E. Kammel
Treasurer of the United States.

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