

Indus Valley Annual Report 2022

Sajith Pai

Pune International Centre
11th May 2022



Section I: Understanding India

Section II: Understanding Indus Valley

Section III: State of the Valley 2021



India in one tweet

QR codes for traffic signal shopping



Nishchay
@agNishchay

Guy selling pens at signals using Gpay to accept payments.. [@peakbengaluru](#)



4:50 PM · Oct 3, 2020 · Twitter for Android

11 Retweets 90 Likes

UPI merchant payments accounted for 43% of POS digital payments in FY21, overtaking credit and debit cards in FY20.

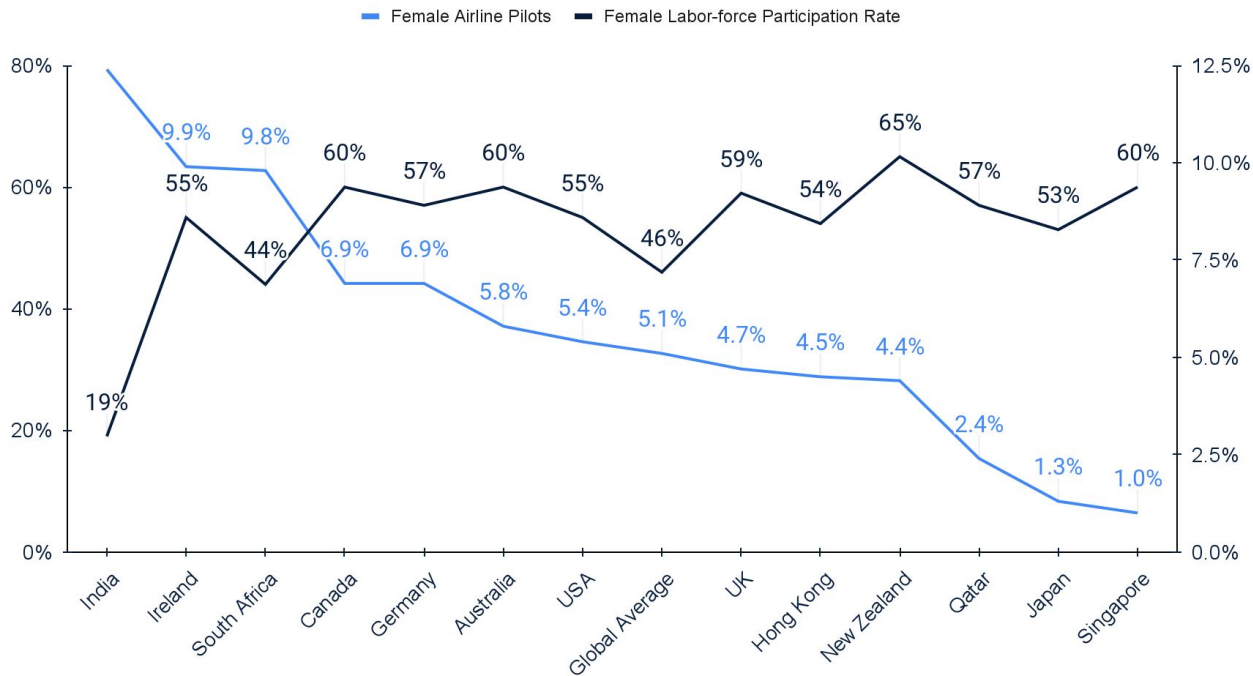
It is now the most universal mode of payments either Peer to Peer or Peer to Merchant. So much so that street and traffic vendors have adopted it.

The pic is a great example of two contradictions in one picture - a world class state of the art payment system, married with a traditional format of commerce - that of a street vendor.

A country of contradictions: women

India has the highest % of women pilots (of total pilots) globally but also a low & declining female labour participation rate.

Female Airline Pilots and Female Labor-force Participation Rate

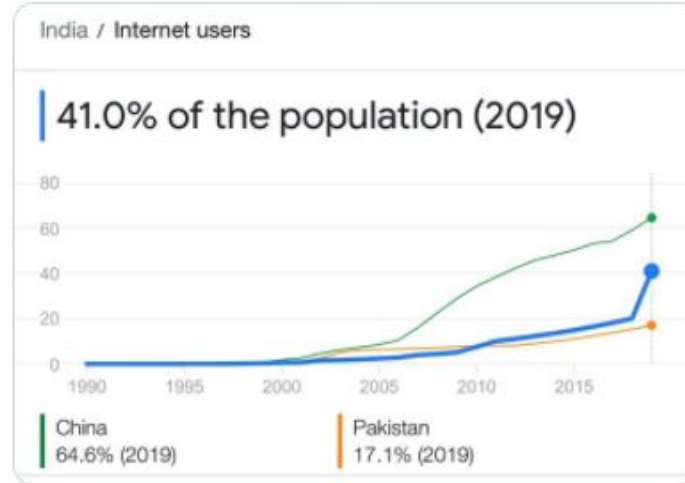


'Give me a single chart to explain Indus Valley's rise'

Jio's entry into telephony through a 4G data first network in '17 expanded Internet access in India dramatically



Balaji Srinivasan @balajis · Dec 18, 2021
One of the most important graphs in the world.



115 583 4,791 Tip



Benedict Evans @benedictevans

Replying to @balajis and @Seb_Vaessen

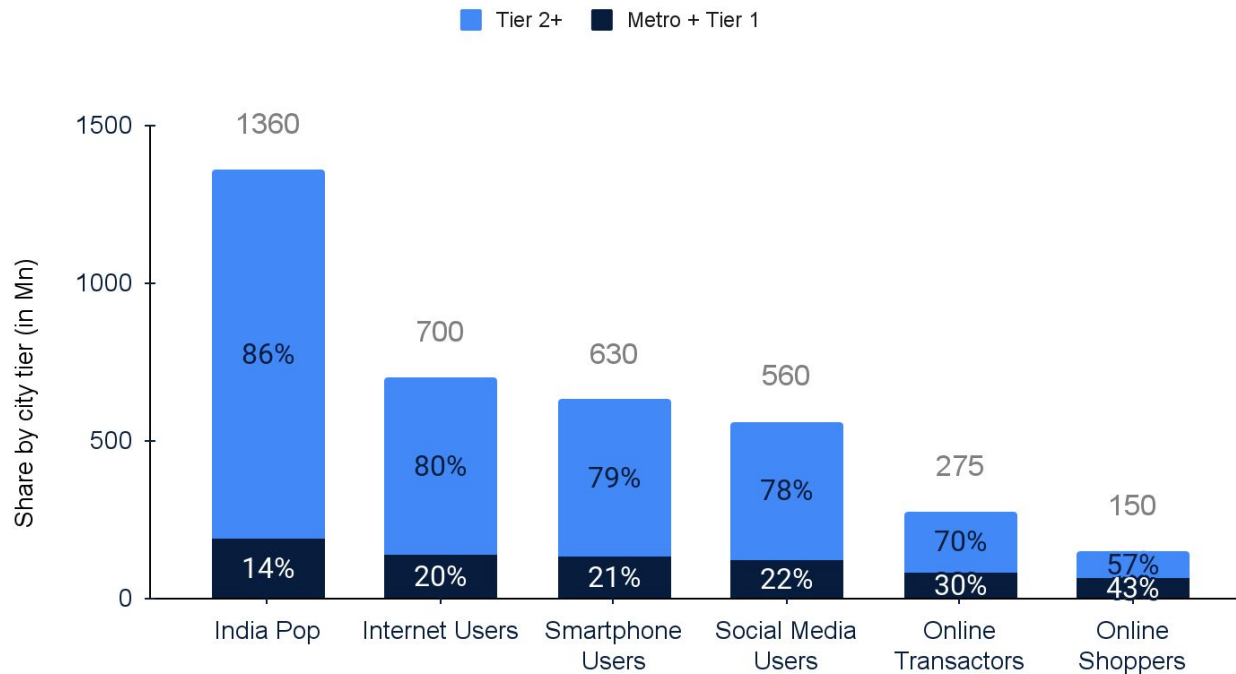
Amazing what a fight between two brothers straight out of a daytime soap opera can do for humanity ;)

8:23 PM · Dec 18, 2021 · Twiterrific for iOS

Not all internet users are alike, though

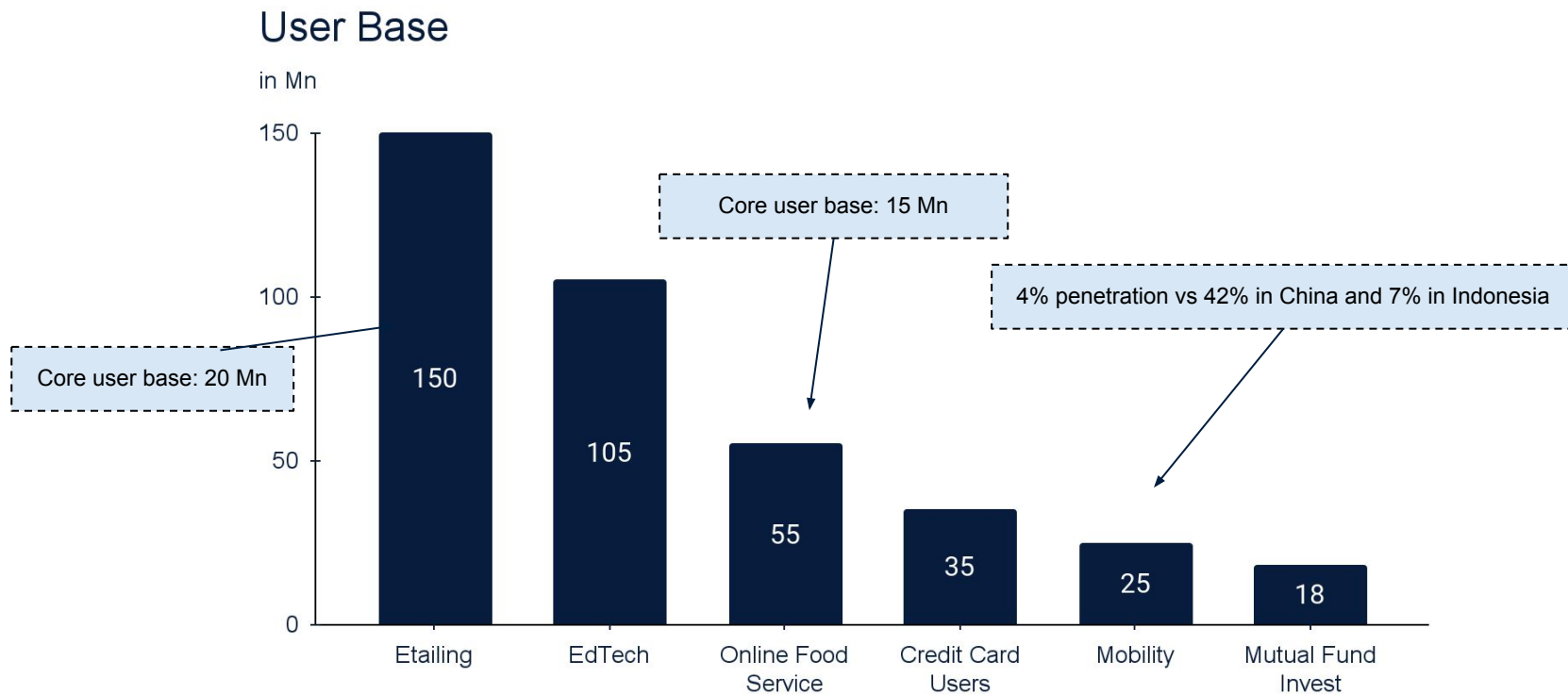
Just over a tenth of Indians have shopped online, ever, compared to USA's ~60%, China ~50%.

India Internet Funnel



How the user bases for other categories stack up

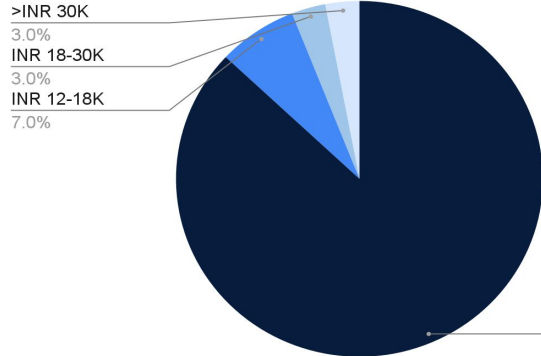
Frequent users tend to be anywhere from a quarter to a seventh of the user base.



A slim, growing consuming class sustains the Indian consumption story

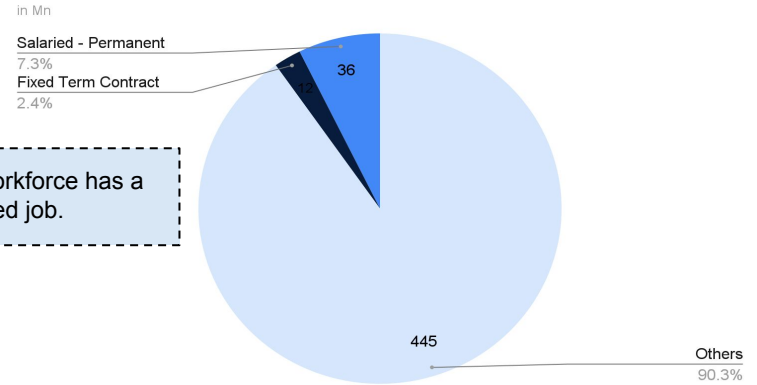
The consumption class is growing but hasn't exploded the way their peer class in China did.

School Fees



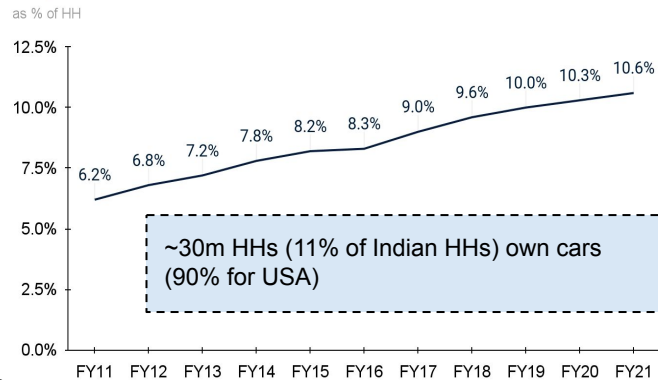
Only 13% of K12 students (260m total) go to schools with fees > ₹12k per year.

Indian Labour Force



~10% of India's workforce has a 'permanent' salaried job.

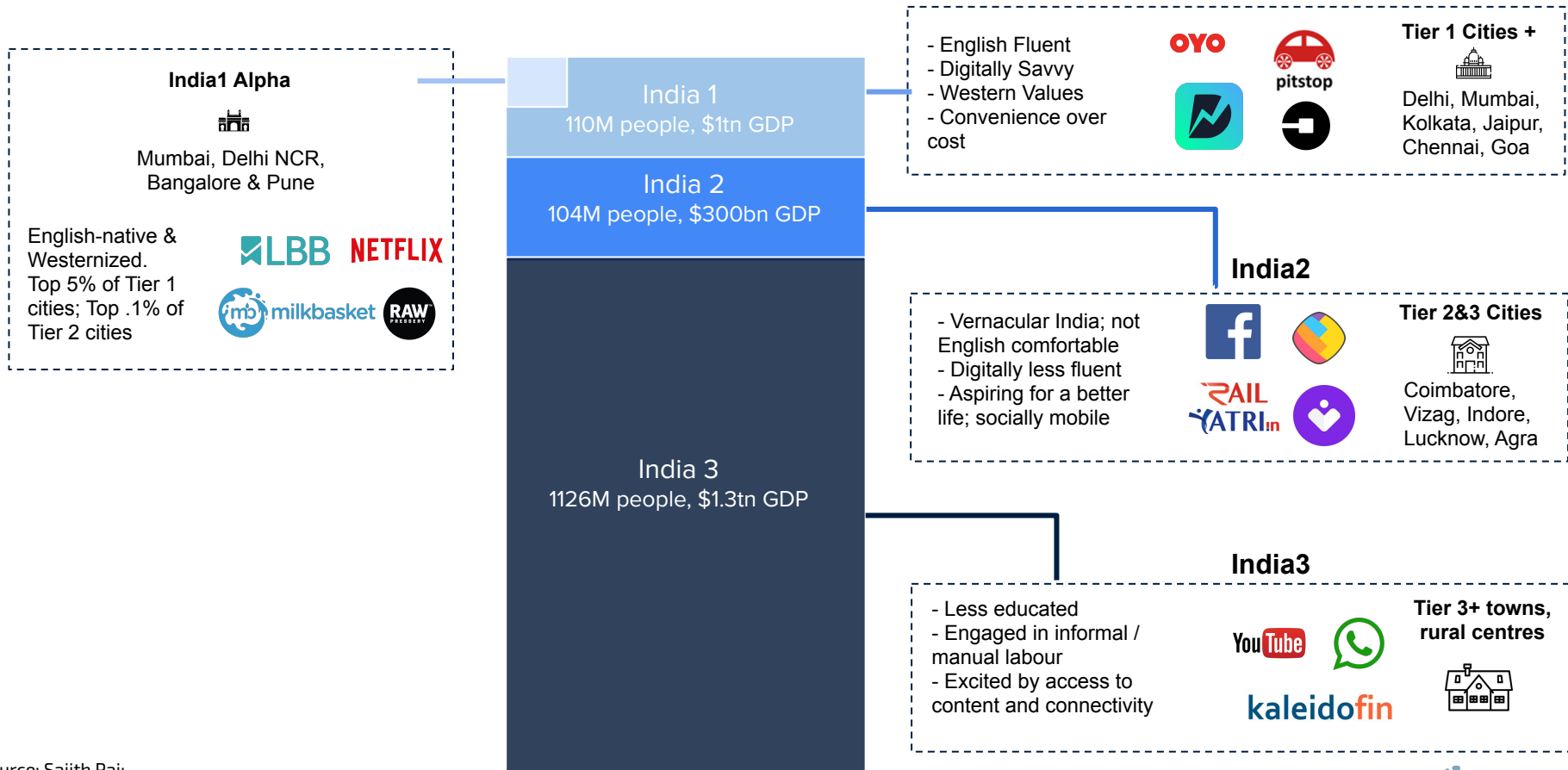
PV penetration



~30m HHs (11% of Indian HHs) own cars (90% for USA)

How to understand India

The India Consumer Stack, 2019



Source: Sajith Pai;

A tale of two studies

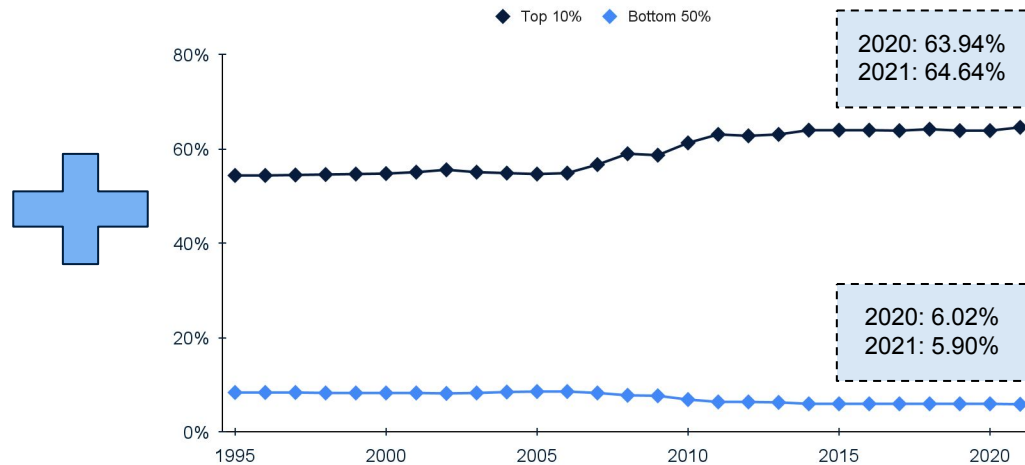
PostCOVID, the rich have gotten richer, the poor have gotten poorer.

ICE360 Survey, 2021

Quintile	Income 2016 vs 2021
Richest 20%	39% (rise)
Upper Middle 20%	7% (rise)
Middle 20%	-9% (drop)
Lower Middle 20%	-32% (drop)
Poorest 20%	-53% (drop)
All INDIA	8% rise

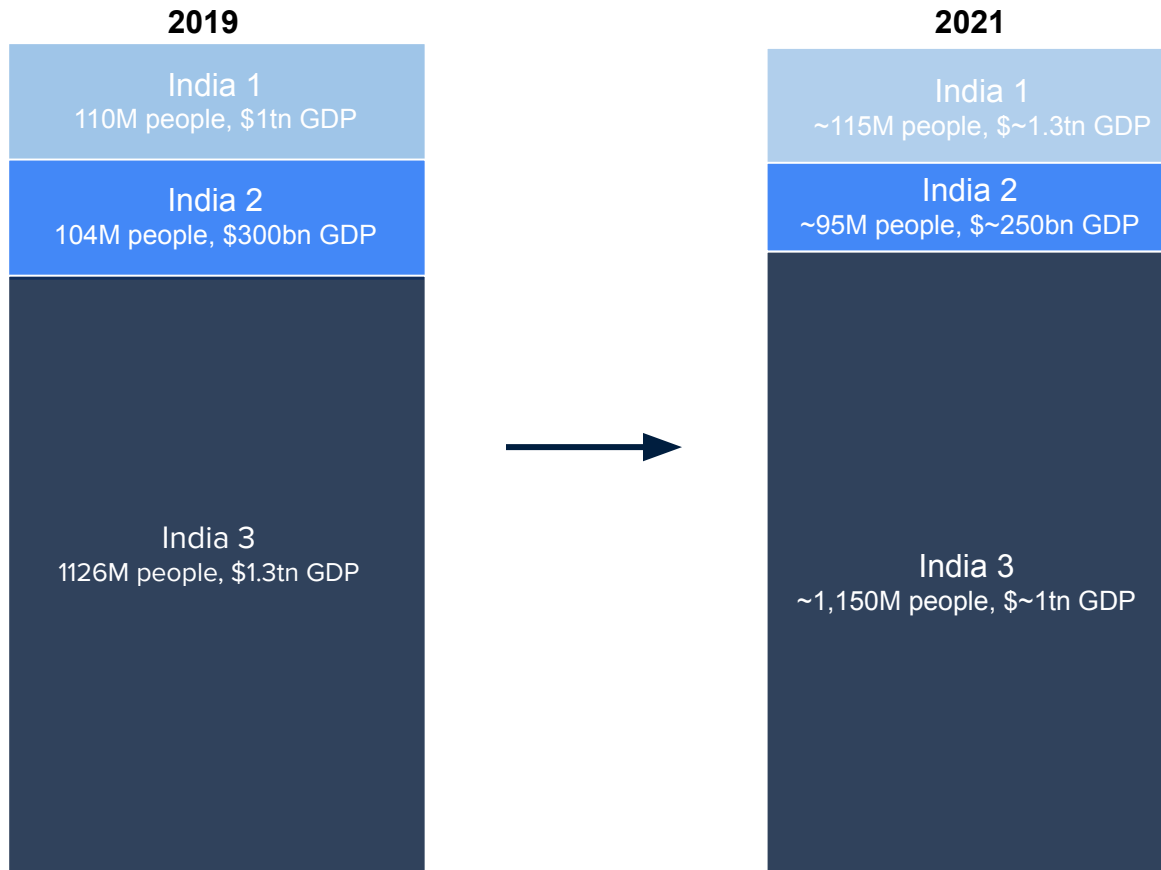
World Inequality Report 2022

India - Wealth Inequality



The India Consumer Stack, 2021

Reflecting the Matthew Effect¹



Notes: 1) Matthew Effect = 'The rich get richer, the poor get poorer'; Source: Sajith Pai;

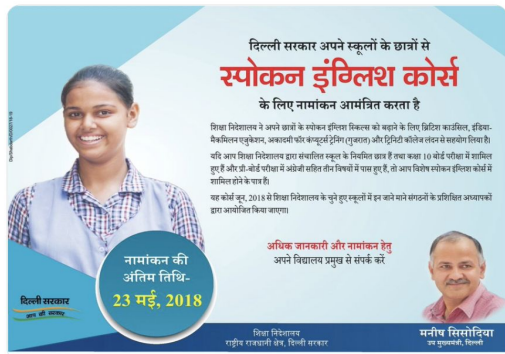
India seen through the 'axes of advancement'

There are 3 traditional paths to social & economic mobility in India: English, Exams and Exit

English



Govt school students mostly come from economically poor backgrounds. When i meet them, this was their biggest demand - sir, hame english bolna sikhwa dijiye. I am so happy this course is now starting for govt school students.



10:42 AM · May 20, 2018 · Twitter for iPhone

'...hame English bolna sikhwa dijiye.'
translated to "...help us learn spoken English."

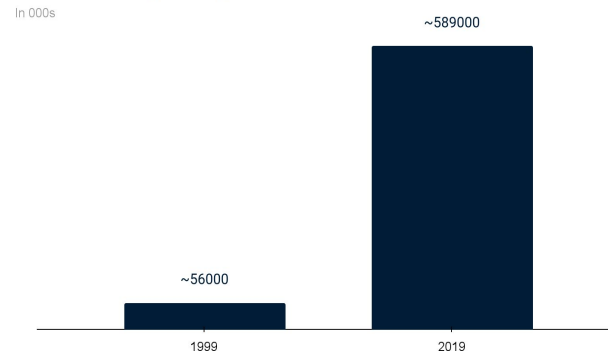
Exams

Exam	Test - Takers	Seats
IIT-JEE	2.2M	16K
UPSC	1.1M	1K
Railways NTPC	12.5M	35K

India is a nation of 60m test-takers, ranging from UG admission to government jobs of every kind.

Exit

Students Going For Higher Education



Indians going abroad has grown 10x over the past two decades and is gathering pace

Enterprise has historically been the weak fourth amongst these; but has typically been associated w the MSME sector thus far.

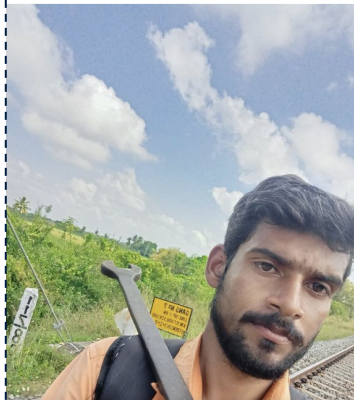
Government jobs are few, hard to get, but well paid

This explains why young men (mostly) spend their 20s preparing for exams, and rioting when the exams get postponed.

What is your salary? Are you happy with it?

Naveen Kumar · Follow
Track Maintainer at Indian Railways (2017–present) · Updated Jan 14

I am a trackmaintainer 4 in indian railways I got 32000 salary per month after deduction and I am very happy I have to do 8 hours duty per day with one day weekly rest I got my salary on last day of month if that day is Sunday then I get my salary 2 days before apart from my salary



37K 78 881

gov add 6500 per month in my nps I got 5000 for dress allowance every year also I get 18000 bonus at durgapuja every year my salary will increase by approx 2000 I am very happy I spent 10000 per month in tamilnadu and 22000 send to my mother she is saving for me from last four year I am a village person I have no more expenses but what I like to eat I am eating what I want to dress I take that cloth sorry for my bad English I got this job through railway recruitment cell chennai



On 10th May 2017 I got this job and my mother and father life increase by 10 years not only I am happy but my whole family happy

735.8K views · View 37,022 upvotes · View 78 shares

37K 78 881

The main duties of track maintainer is to **take care of track say railway line** . Other than this track maintainer responsibility to maintain track ,removes the rocks and concrete over there on track between some stations which is allocated to him.



Scroll.in
Monday, March 21st 2022

Video Latest The Reel The Field Trending Sections


COMMON GROUND

Inside Patna’s exam hub, where a million hopes die every year

Young people spend years to prepare for exams for government jobs. But the number of jobs is dropping and frustrations are boiling over.

Number Theory | Protests over railway jobs are a grim reminder of the state of India’s job market

The protests over problems with recruitment for railway jobs in the states of Bihar and Uttar Pradesh, may well be India’s first large-scale unemployment riots



Section I: Understanding India

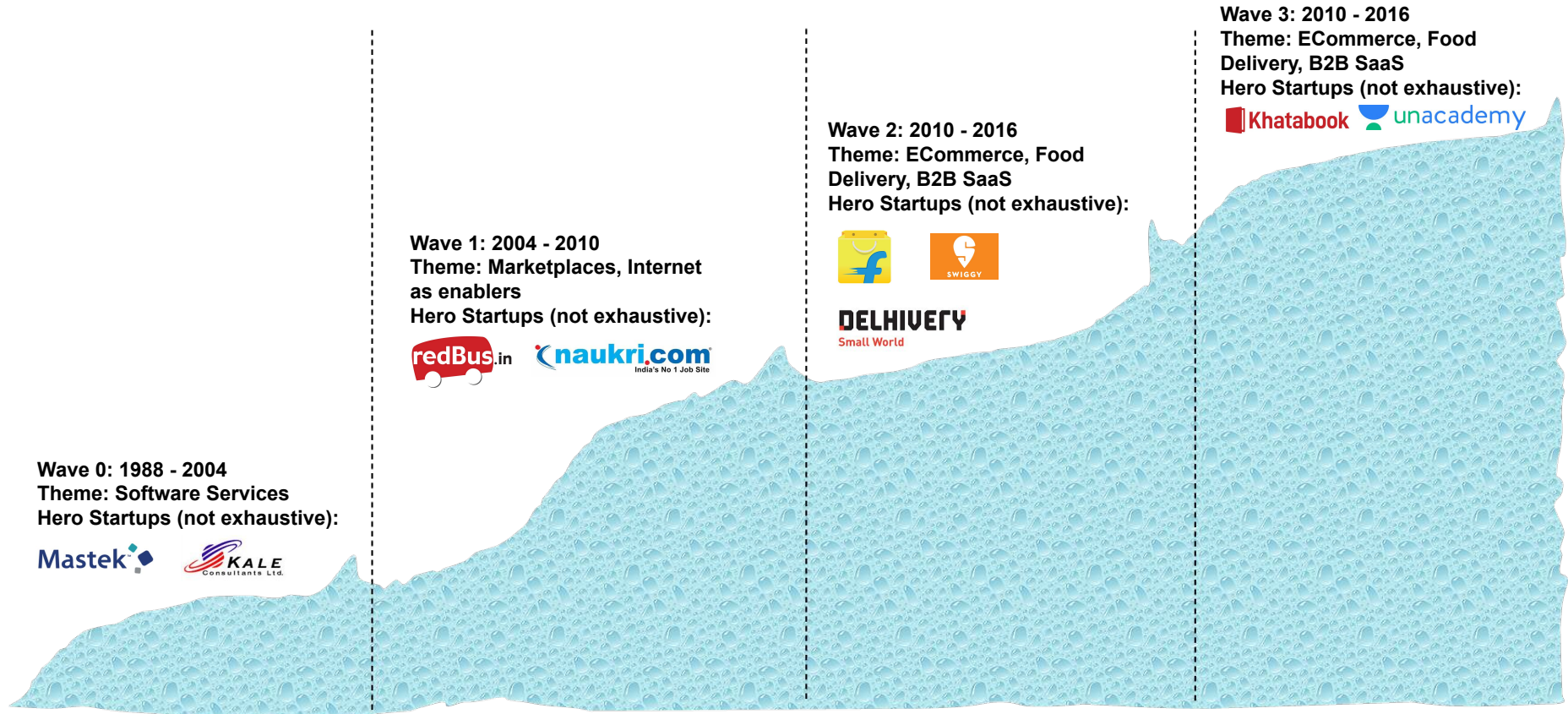
Section II: Understanding Indus Valley

Section III: State of the Valley 2021



Indus Valley: the prehistory

India's startup sector evolved through distinct phases of tech adoption and customer evolution.



Indus Valley is no longer at the economic periphery

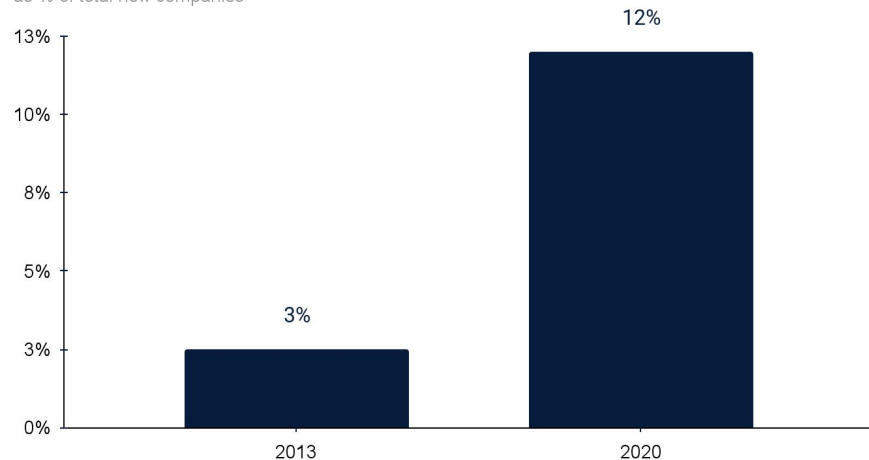
The # of startups registered annually is a steady line upward, though the actual % that get funded has stayed the same.

One in every eight new companies is a startup today

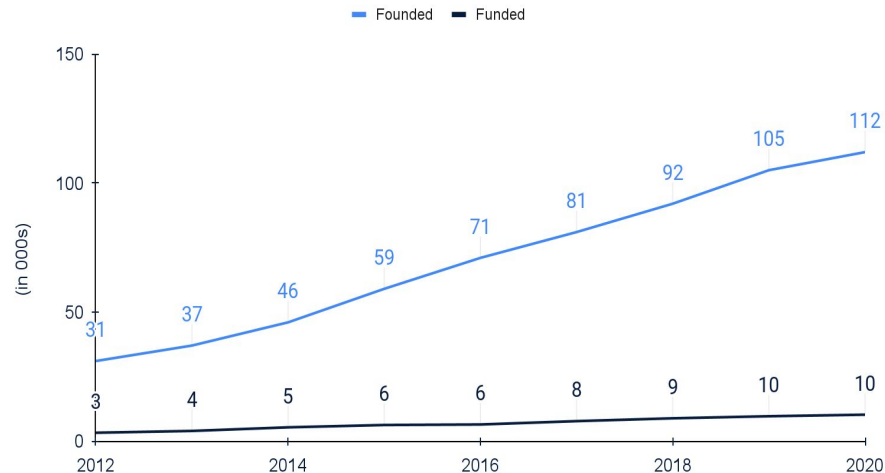
Just under a tenth of these startups get venture funding.

of Startups

as % of total new companies



Founded and Funded



Startup culture is emerging into the mainstream now

The local *Shark Tank*, the Zomato & Nykaa IPOs as well as the rise of Unicorns has made startups front page stuff.

Shark Tank India is Quietly Changing Dinner-Table Conversations for the Better



I want to be a scientist, says IIT-JEE topper

Divy Khare / TNN / Updated: May 19, 2012, 22:14 IST

JEE Main topper with AIR 1 looks up to Elon Musk and wants to start his own company

We got talking to JEE Main topper Amaiya Singhal, a student of Apeejay School, Noida, who secured AIR 1 in the JEE Main 2021 results. He looks up to Elon Musk and wants to launch his own company in the future.



Roshni Chakrabarty
New Delhi

September 21, 2021 UPDATED: September 21, 2021 18:25 IST



Home > National Interest > Arvind Kejriwal's start-up AAP is the political 'Unicorn' of the decade

National Interest

Arvind Kejriwal's start-up AAP is the political 'Unicorn' of the decade

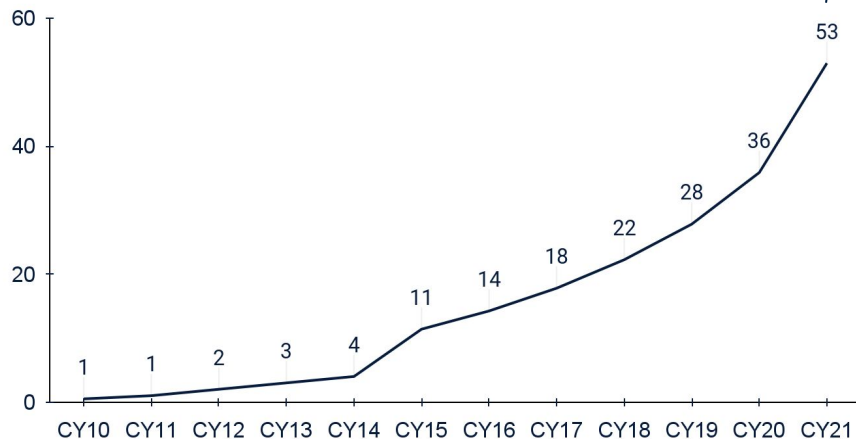
From \$4b in '14 to \$53b in '21

ECommerce / Etailing accounts for ~6% of India's retail sales in '21, doubled from 3% in '19 (US 12%, China 24%)

37% of ecommerce = mobile phones; Electronics & White Goods account for 60% of ecommerce sales.

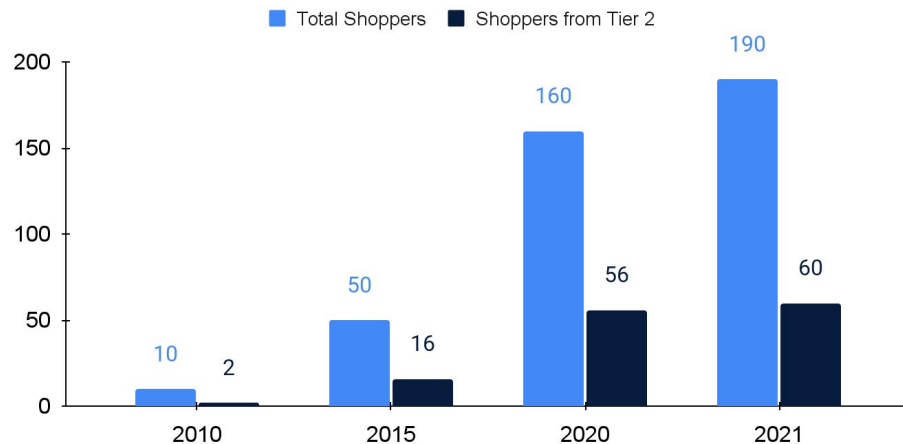
India E-tailing GMV

in \$Bn



Total Shoppers and Shoppers from Tier 2

All #s in Mn

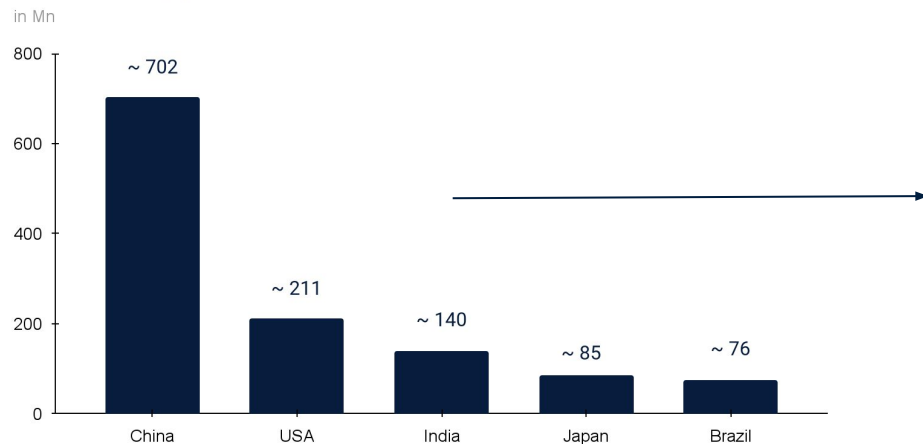


~70% market share with Amazon, Flipkart

But, all of this rests on a narrow base

A large number of 'ecommerce shoppers' are occasional shoppers

E-retail Shoppers



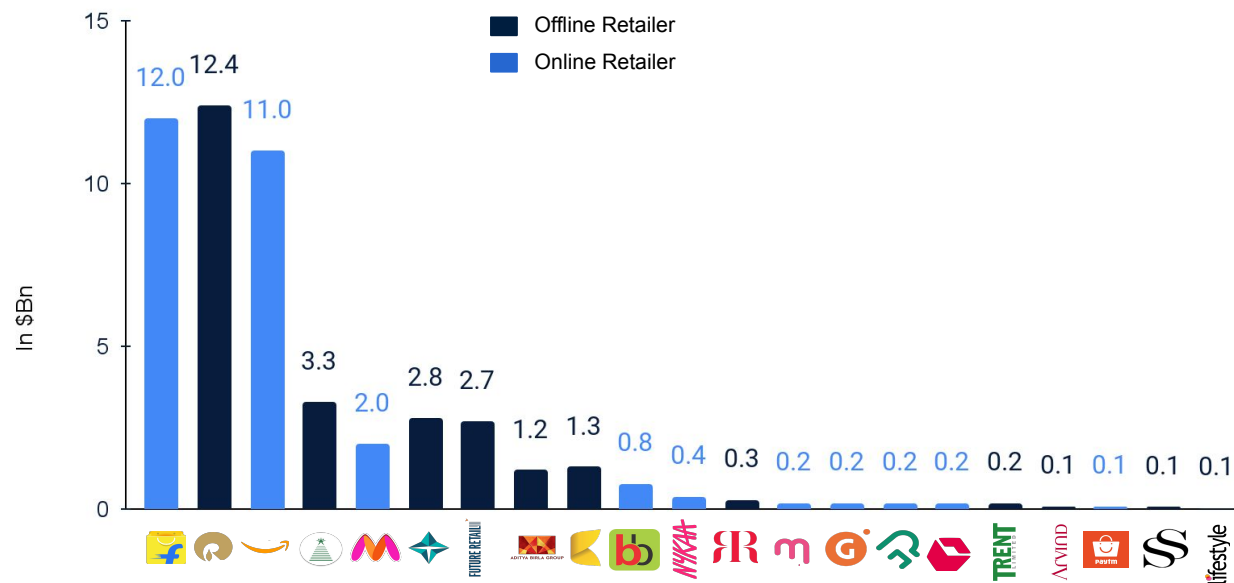
And according to one person I spoke to, in India, Amazon's Prime customers are just 5-7 million users, but account for over 50% of the company's Gross Merchandise Value. This is a small, but extremely valuable base for the company.

Indian ecommerce brands have penetrated top retail ranks

4 of the top 10, and 10 of top 20 retail brands are online brands; a key reason being modern retail's low share of ~13%

Top 20 Retailers

GMV



What explains the rise of Indus Valley, and its impact?

The following 'growth drivers' underpin the rise of Indus Valley, and explain its dramatic impact.



The 'Wang Trifecta'

Jio, UPI and smartphone affordability created a perfect storm for the consumer internet economy.



Sajith Pai
@sajithpai

In 2018, Tony Wang cofounder @agoralO told me that the Chinese consumer app economy took off when 3 things happened

- cheap bandwidth
- a smartphone in every pocket
- a frictionless payment system

Today, we in India have all 3 components of the 'Wang Trifecta'!

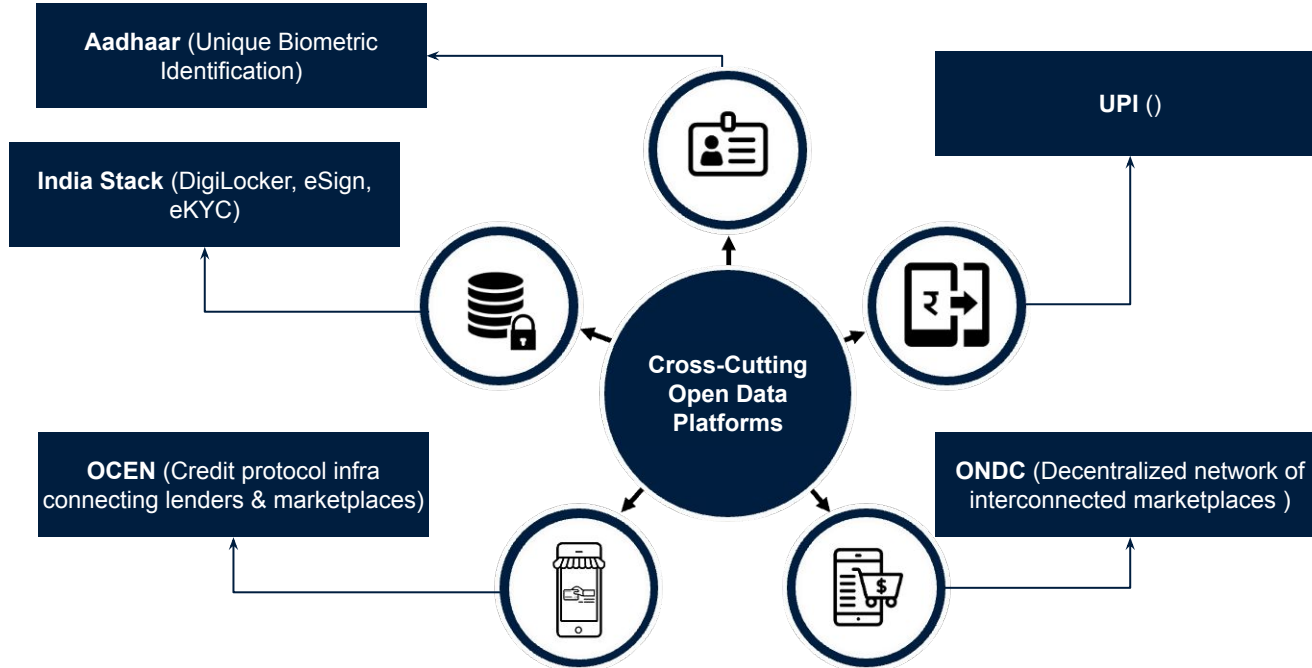
10:10 AM · Jan 15, 2022 · Typefully

||| View Tweet activity

4 Retweets · 14 Likes

Public digital infrastructure

Across multiple ecosystems, multiple data and interoperability platforms are emerging and could create new unlocks



Multiple platforms across core sectors have also emerged, which will create multiple new unlocks:

- Marketplace - **GEM**
- Healthcare - **NHS**
- Education - **SWAYAM**
- Agriculture - **eNAM**
- Travel - **Parivahan**
- Logistics marketplace - **NLIP**

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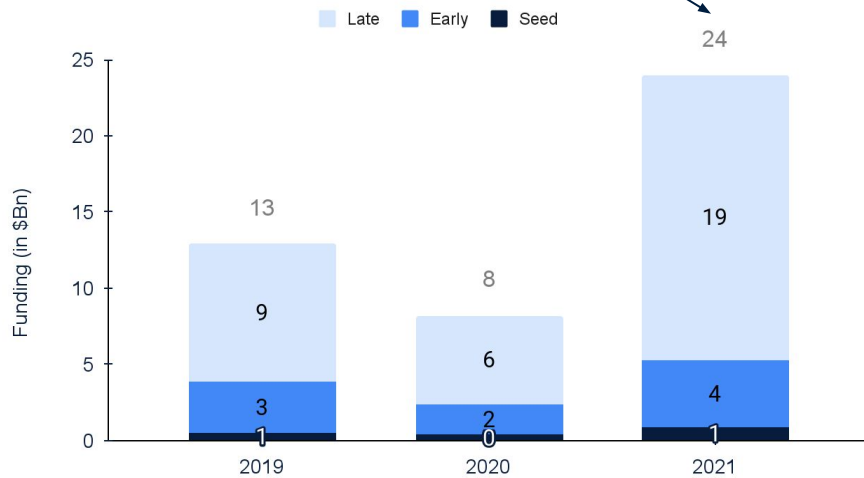
A year of records

2021 saw startups raise 3x the number they raised in 2020. Much of the funding (~60%) went to the 42 unicorns minted in '21.

As we see here, seed + early stage financing doubled over last year's but growth stage financing nearly quadrupled.

Global tailwinds helped; the global venture financing market moved grew from \$347b to \$671b; This was one big reason.

Investment Distribution by Stage



VC deals in India

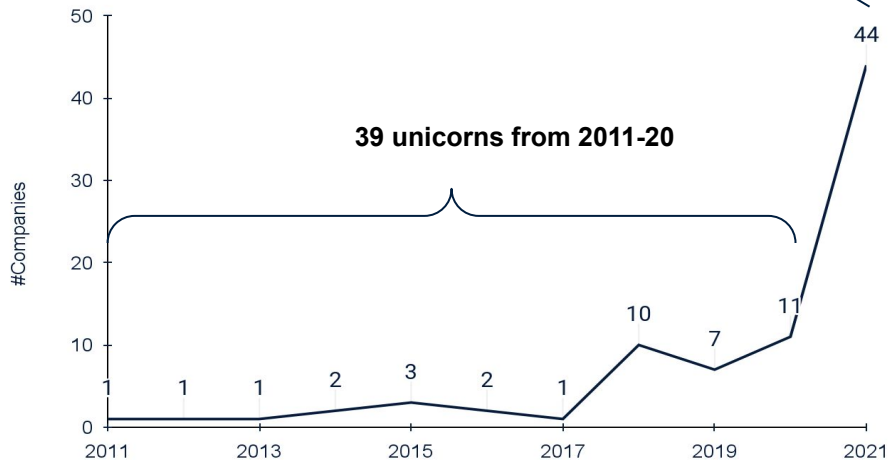


India birthed more unicorns in '21 than all previous years together

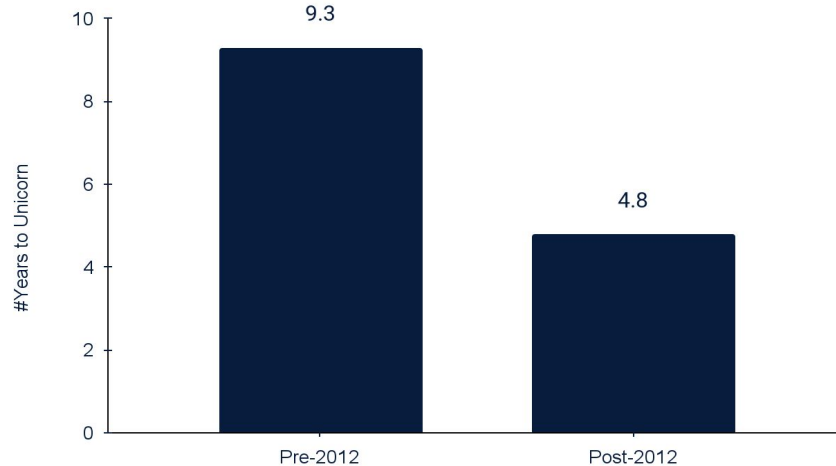
The pace has continued in '22 as well (12 by 7-March-2022)

In comparison US added 260 unicorns, China 146, Israel 35(!) and UK (22)

Companies achieving Unicorn Status



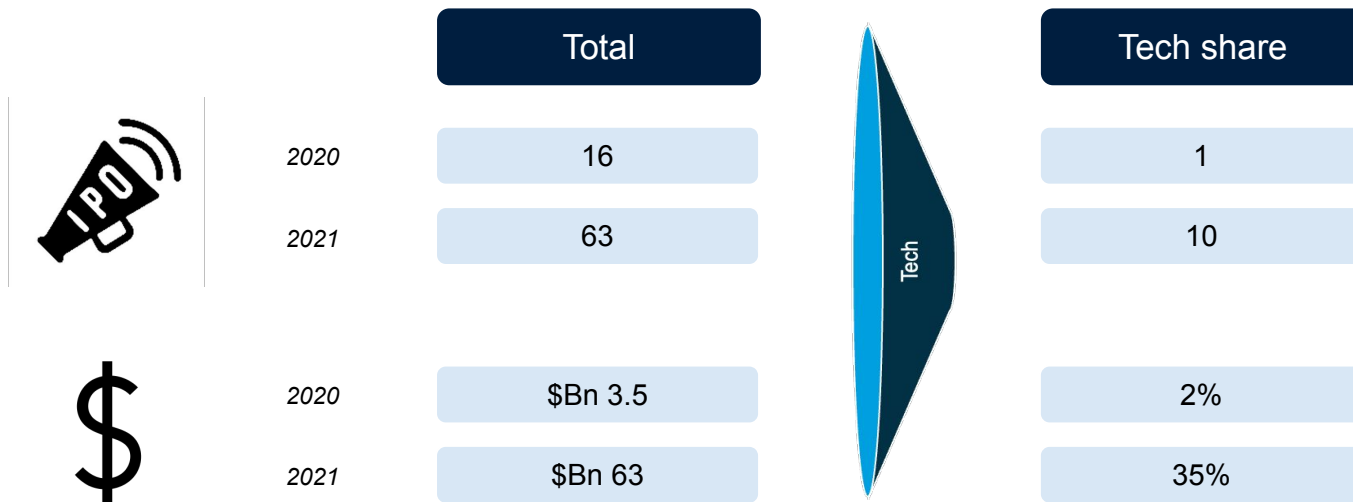
Average time to unicorn



Exit signs

Tech IPOs, from Zomato, Nykaa, PayTM, created buzz and excitement in a booming IPO market

2021 saw the emergence of the Tech IPO; SEBI (India's SEC) relaxed rules allowing loss-making companies to list.



A closer look at EdTech

EdTech was the hero sector of 2020 with a huge COVID bump; How did this sector do in 2021?

- India is the 2nd largest funding market for EdTech globally, given China EdTech's collapse

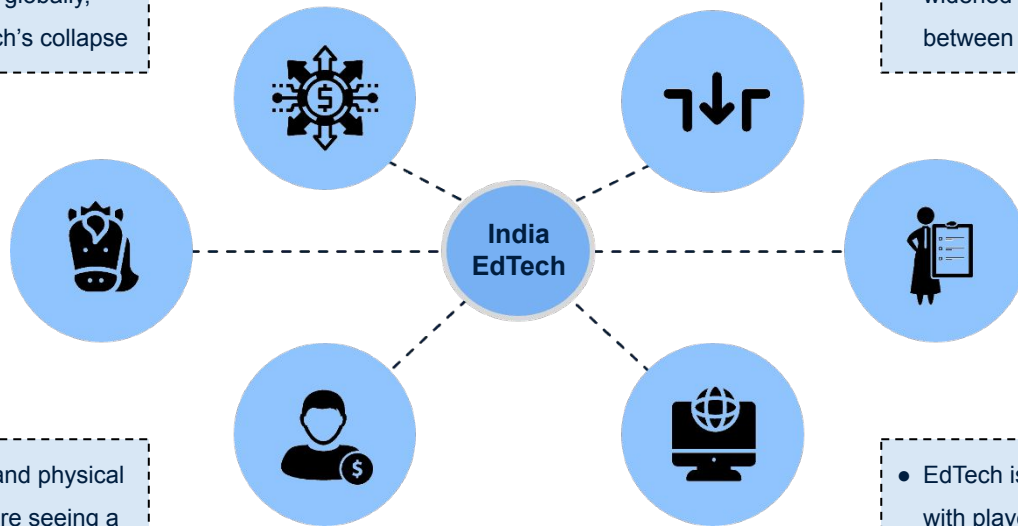
- In the long run, COVID has widened the learning gap, between the haves & have nots

- Much of the funding growth has been concentrated on EdTech unicorns

- Fear of government regulation has made Indian EdTech adopt proactive measures

- As COVID eases and physical classes start, we are seeing a slight drop in paid user base

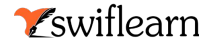
- EdTech is the new Global SaaS, with players like Byju's making >\$100



Building in the shadow of giants

EdTech biggies, loaded on capital, are chasing inorganic growth through M&A

It has never been easier to start an edtech company. It has never been harder to scale without getting an acquisition offer from Byju's or Unacademy!



Zoom School: India1 v India2

India2 has struggled to keep up with digital education



Via **Kaushik Deka** (from his story in India Today)

Malhar Mazumdar, a Class 9 student at the Mother's International School in New Delhi, attending an online class at home in Saket (an upper middle class neighbourhood in South Delhi).



Via **Chitra Pandit** (leads fundraising at Akanksha, a leading edtech nonprofit)

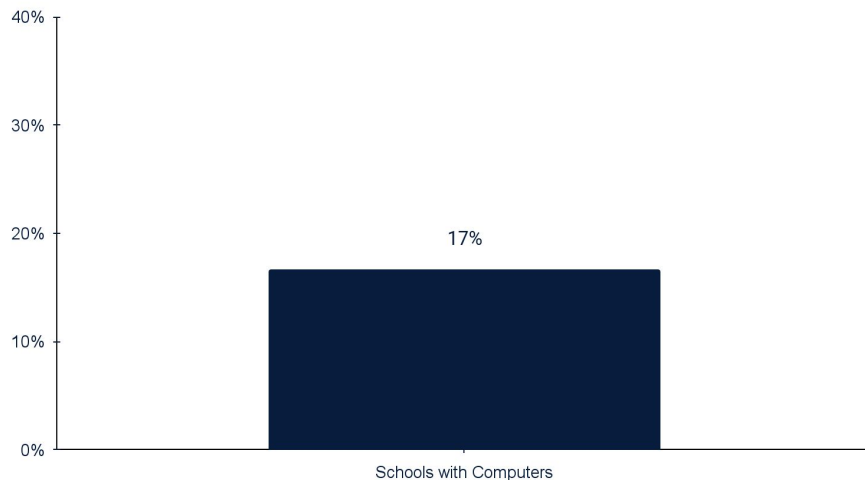
“I had the opportunity to visit the home of a child who is enrolled in Junior Kindergarten in an Akanksha School. The child has never seen the inside of a school building. In just under 6 months, with the help of online classes with an Akanksha teacher and his mother, he has been able to write the English alphabet. His mother sits with him for every online class and diligently follows the teachers instructions.”

COVID accentuated the digital divide

PreCOVID, barely a sixth of Indian schools, mostly private ones, had working computers. Still, Indian schools adapted.

PreCOVID

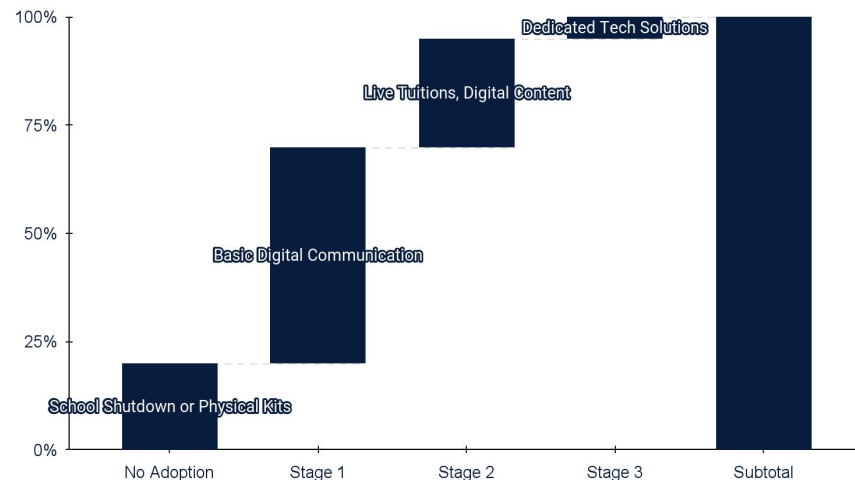
Schools with Working Computers



India has 1.5m schools, approximately 250k had working computers. Only 10% of govt schools had computers (vs 27% of private schools.)

PostCOVID

Adoption of Tech in Schools



From a survey of schools; about 20% shut down during COVID. 50% of them moved to using whatsapp + smartphone (no live classes though) mode. Indian schools adapted by and large.

The digital divide is accentuating the learning divide

Data from a survey done in government / public schools reveals learning loss.

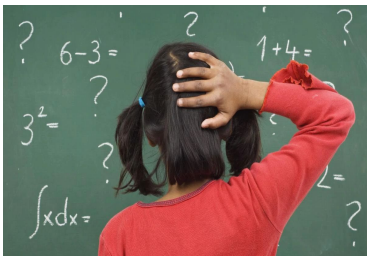
92% of children on an average have lost at least one specific language ability from the previous year across all classes.

82% of children on an average have lost at least one specific mathematical ability from the previous year across all classes

Class 3



46% of children lost the ability to express views about a given picture in written form.

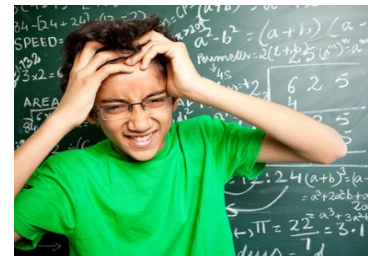


48% of children lost the ability to solve problems using subtraction operations in daily life operations.

Class 6



45% of the children lost the ability to orally express views on simple topics like home and school.

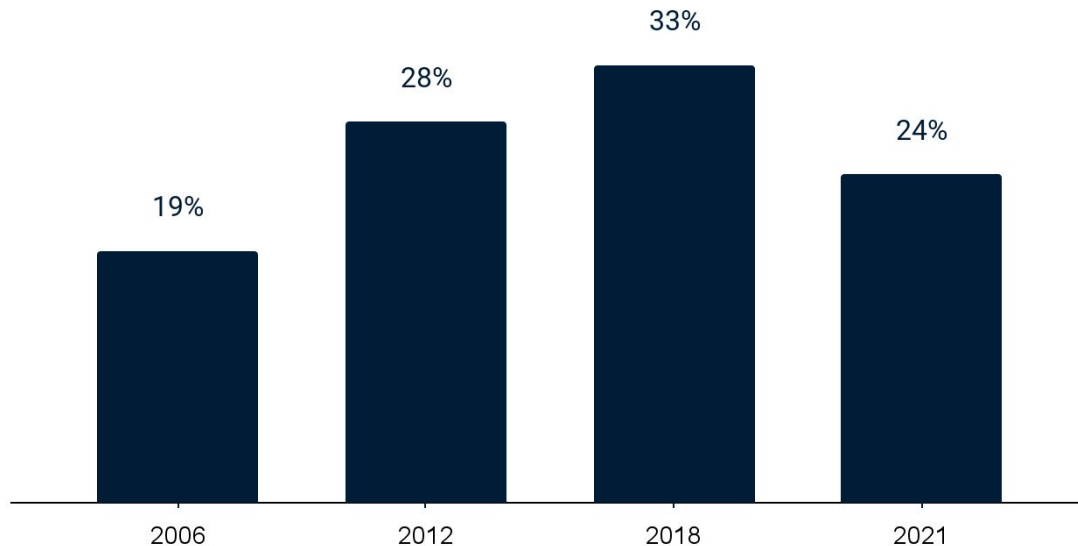


40% of the children lost the ability to perform division of four-digit numbers by a single-digit number.

A sharp shift away from private schools

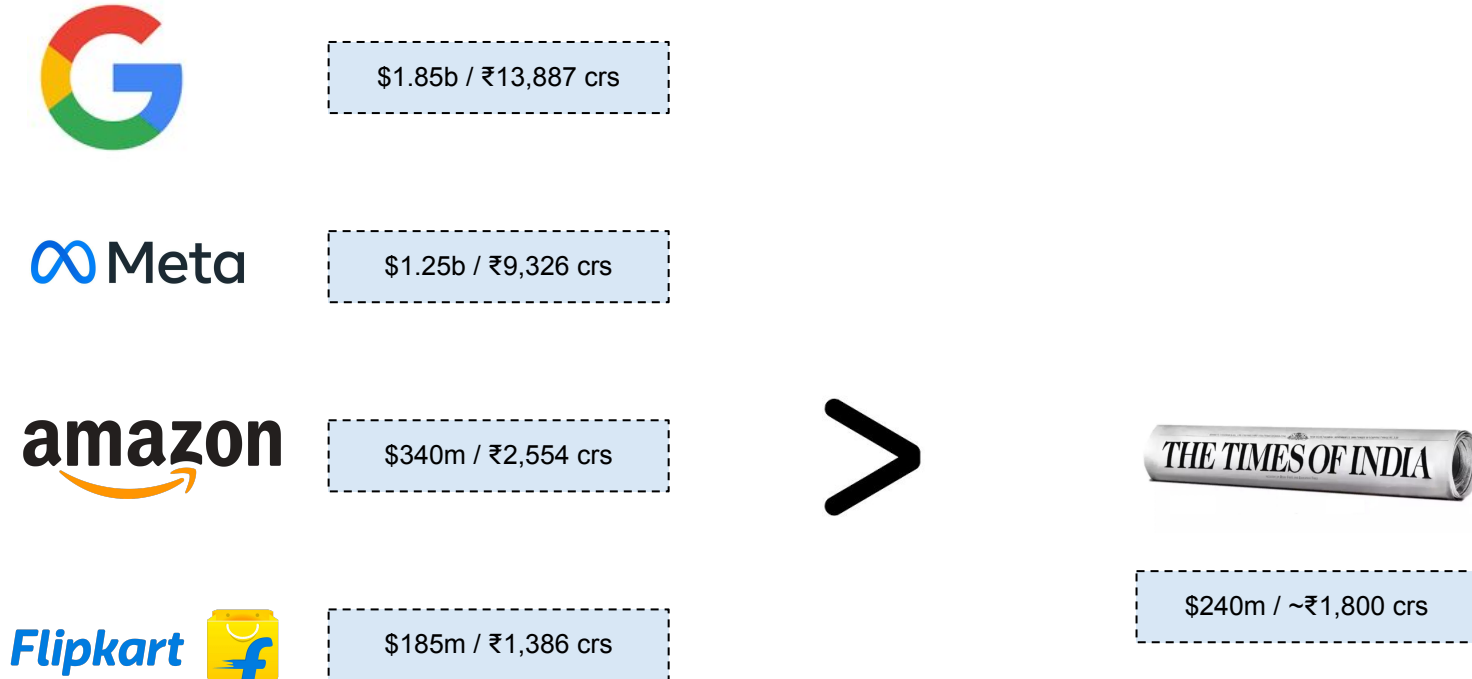
Despite poor facilities at government schools, we saw a sharp jump in enrollment, spurred by COVID's impact on incomes.

Private School Enrollment: 6-14 YO from Rural Areas



India's #3 and #4 digital ad platforms aren't media brands, really

Amazon, Flipkart emerge as the fastest growing digital ad platforms. Amazon sells more ads than Times of India print edition.



Regulating the unregulatable

Mixed signals from the India government + favourable Dubai tax / crypto regime push Indian founders to Dubai. Meanwhile Indian retail and financial investors can't tire of Crypto.

Business Insider India @BiIndia

Taxing #cryptocurrencies does not give them legal status, clarifies India's finance minister

businessinsider.in/cryptocurrency...

By @pabsgill



7:00 PM · Feb 12, 2022 · Twitter Web App

ish.eth #hiring @ishgoel

There are 36 Indian crypto entrepreneurs (I know of) who are in Dubai this week.

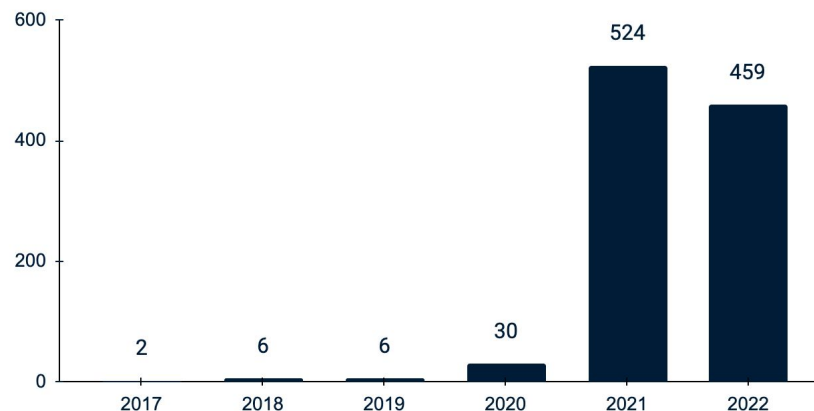
Just mind boggling how crazy of an Indian ecosystem has been created around crypto.

It's all happening.

9:40 AM · Oct 14, 2021 · Twitter for iPhone

Funding in Indian Crypto, Blockchain startups

In USD Mn



Why Crypto Cos are On a Flight to Dubai

An RBI circular barring banks from dealing with crypto assets and regulatory ambiguity had earlier forced many cryptocurrency firms to shift base to Dubai and Singapore. Now, a restrictive tax regime and policy flip-flops may make others follow suit. **Vinod Mahanta** analyses the trend

Reserve Bank of India governor chief delivered a stark warning against investing in cryptocurrencies, saying they lacked the underlying value of even a tulip - in a reference to a speculative bubble that gripped the Netherlands in the 17th Century.

Everyone is a VC

Easy access to capital in the landscape has led to multiple components of the ecosystem becoming operators - investors

Unicorns as Quasi - Funds

Startups Setting Up Formal Funds

Startups as Roll-Up-Funds

Founders as Angel Investors

What?

Dedicated M&A teams in unicorn startups, on the lookout for acquiring startups/ teams that are complementary / adjacent to their core business.

Dedicated funds set up by startups, which invest in synergistic startups and help them innovate, launch, and scale. It also helps startups quickly validate their products.

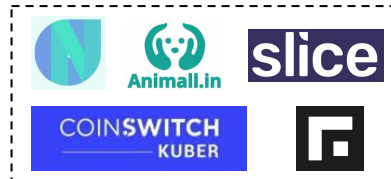
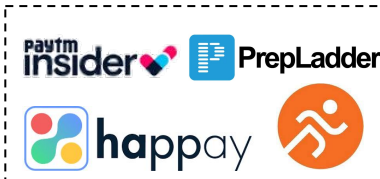
Roll-up ecommerce or aggregators have raised millions to acquire digitally native brands and sellers. They offer digital hand-holding and sales know-how to these brands.

Founders of unicorn startups have started to deploy capital in multiple startups. They thus guide new founders basis their own rich operating experience.

Who?



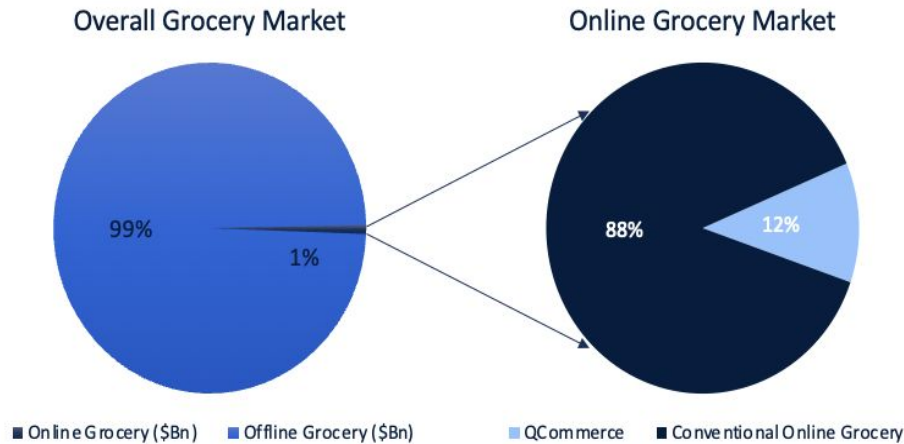
Examples?



Quick commerce: can it deliver?

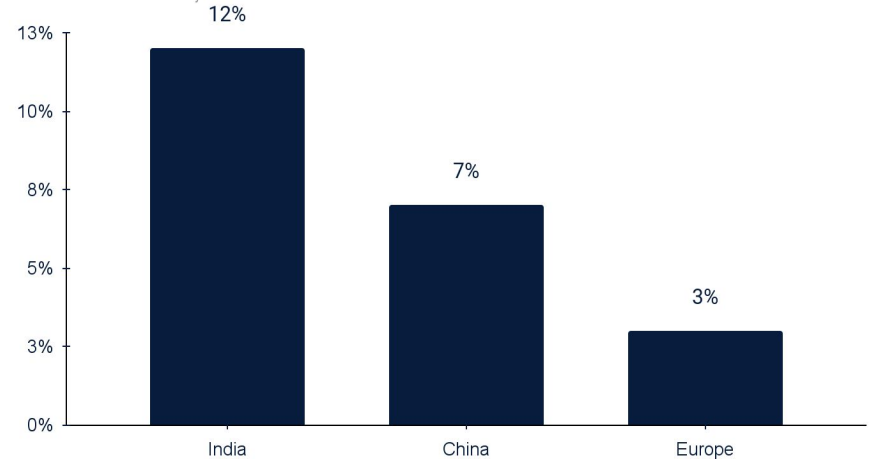
Quick commerce was one of the most talked about sectors this year, as the 10-min grocery delivery wars came to India.

Given a stunted online grocery sector, QCommerce has made quick inroads.



Penetration of Quick Commerce

As % of Online Grocery

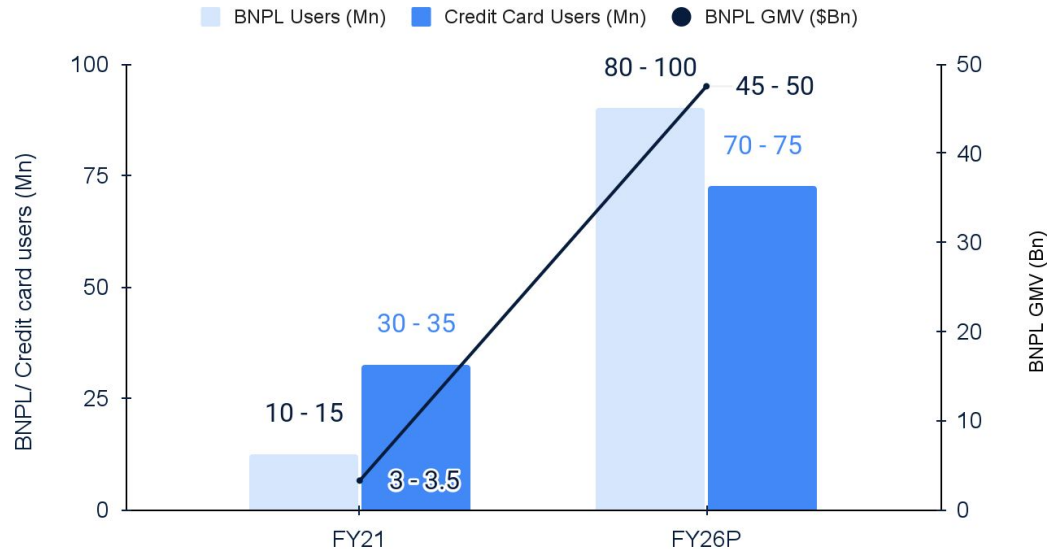


Leapfrogging - example #1: BNPL vs Credit Cards

Credit cards will grow, but BNPL may just grow faster

While the credit card industry has been growing at an impressive 15% CAGR, the overall low credit card penetration, stellar growth of UPI, India's traditional comfort with credit and convenience, has left a substantial whitespace for BNPL to prosper. Here is a projection by Redseer on BNPL overtaking Credit Cards.

BNPL vs Credit Cards in India



Six impossible things?

We put our thinking caps to imagine the most outrageous but possible predictions in regards to the startup ecosystem.

1

It is 2030, and there are less than 100 petrol pumps in Mumbai and Delhi. No one is buying ICE cars anymore thanks to attractive subsidies on EVs, higher taxes on ICE cars and greater green consciousness. 80% of all urban 2W market are electric (<10m units sold).

2

It is 2030, OCEN / AA and ONDC build on UPI's success to create base public digital infra layers for lending and commerce. This has led to a wave of design / UI focused, backend light startups that are primarily marketing led, leveraging public APIs cleverly for the backend and focusing on acquiring and owning the customer.

3

It is 2030, and SpaceTech has taken off in a massive way as India becomes the centre for low cost Space launches. India's most valuable company is a startup that operates a launch pad for suborbital tourism.

4

It is 2030, and the first set of apartments without a full kitchen - with just a small kitchenette with a coffee machine, microwave and water filter / sink - has gone on sale in Mumbai. It is focused on serving Gen Z who live on food delivery.

5

It is 2030, and self-monitoring and AI based nudges have become the dominant mode of treatment of lifestyle diseases and conditions - cholesterol, diabetes and heart conditions. Those who don't use monitoring devices see differential health premia.

6

It is 2030, and an "Indian cloud" has emerged, as founders and their companies encourage WFR. We see many people working out of a +/- 4 hour time zone, from Lisbon to Thailand.

Thank You!



Appendix



Resources to help you better understand today's India

The following books are extremely useful to understand India and Indians today

- *Poor Economics* - Abhijit Banerjee and Esther Duflo
- *Desperately Seeking Shah Rukh* - Shrayana Bhattacharya
- *Truck de India! A Hitchhiker's guide to Hindustan* - Rajat Ubhayakar
- *Whole Numbers and Half Truths* - Rukmini S
- *Dreamers* - Snigdha Poonam
- *A Feast of Vultures* - Josy Joseph

The following books are helpful to understand how the Indian economy and society evolved

- *India Unbound* - Gurcharan Das
- *India after Gandhi* - Ramchandra Guha
- Two novels: *A Suitable Boy* by Vikram Seth and *A Fine Balance* by Rohinton Mistry

The following podcasts help make sense of India today

- *The Seen & The Unseen* - Amit Varma
- *Ideas of India* - Shruti Rajagopalan