e-Conomy INDIA 2023
The economy of a billion connected Indians
Reference

India e-Conomy Report is a research report jointly developed by Google, Bain & Company and Temasek. The research leverages Temasek insights, Bain analysis, Google insights, primary research, expert interviews and industry sources to shed light on the future of internet economy in India. The information included in this report is sourced as “Google, Temasek and Bain, India e-Conomy Report 2023”, unless otherwise specified.

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e-Conomy India research methodology

Introduction

Temasek insights

Google insights

Expert interviews² and industry sources

Bain analysis

Primary research¹

Notes: All dollar amounts are in USD at an exchange rate of 1 USD=77.2 INR. Standard conversions of 1,00,000=1 Lakh=0.1M, 1 crore=100 Lakh=10M have been used across this report. Digital consumers are defined as people who have used at least two paid digital services in the past 12 months.

1. Google commissioned Kantar to run the e-Conomy India consumer survey. The research was conducted across 23 urban cities spread across different town classes to represent the four zones adequately. The online fieldwork ran from December 24, 2022 to January 23, 2023 via a 25-minute Computer-Assisted Web Interview survey with a total of 7,200 net comm transactors in the age group of 18-55 years with a quota controlled on demographics as per the net comm transactors universe. The net comm transactors were defined as respondents who had used any two digital paid services in the past 12 months. Analysis was conducted with weighting data based on age, gender, socio-economic classification, zones and town classes for a more accurate and fairer representation of the markets and the country as a whole.

2. Bain and Temasek conducted a quantitative survey of India-focused venture capital and private equity investors in January to February 2023, with a sample (n) of 22. This survey is referenced as “Investor survey” in this report, wherever applicable.
India’s population landscape

Notes: As defined by India Census 2011, T2+ refers to all urban towns with less than 1M population + all rural villages; T3+ towns refers to all urban towns with less than 250K population; Rural population refers to all rural villages; Approximated to nearest whole number

Introduction

1. Unlocking the $1T opportunity
2. Internet sectors ready to rocket
3. Connecting a billion Indians
4. Digital habits steer the course
5. Businesses as bedrock of growth
6. Investing towards profitability
7. Navigating India’s digital decade
A. Sector deep dives
Executive summary

India’s growing internet economy roars towards a trillion

A continued shift in consumer and merchant behaviour, matched with strong investor confidence, has ushered India into its ‘Digital Decade’ and set the country on a path to reach a $1T internet economy by 2030. Digital services are fast becoming integral to India’s 700M+ internet users, which includes 350M digital payment users and 220M online shoppers. As India undergoes a dramatic boom that will see household consumption doubling by 2030, digital commerce will invariably become even more entrenched in Indians’ everyday experience.

All internet sectors on steep trajectories while digital exports emerge with immense opportunities

Overall, internet economy sectors are on positive growth paths, with B2C e-commerce contributing approximately a third of the internet economy’s value. Largely driven by increased penetration in smaller towns and cities, B2C e-commerce GMV sits at $65B today with expectations it will swell 6x to reach $380B by 2030. Meanwhile, other sectors like online travel and ride-hailing are also projected to follow similar trajectories with high probability of scaling at least 4-5x over the decade. Lastly, widening consumer and merchant acceptance of digital tools and solutions means digital financial services can also expect to see promising growth ranging from 8%-13% CAGR between 2022-2030 across subsectors (i.e., payments, lending, investments and insurance).

Prompted by various success stories in SaaS, Edtech and B2B e-commerce, many Indian businesses are eager to plant their flag on global shores. Three key enablers will help unlock the exports opportunity, including skilled and creative talent base, learnings gleaned from India’s sizable domestic market and more proactive regulatory support.

Digital infrastructure has sprint in strides, supported by a strong policy push

The India Stack has been fundamental to making public goods and services accessible to citizens and businesses via digital platforms. Services such as Aadhar, United Payments Interface (UPI) and Digilocker have been instrumental to unlocking the expansion of India’s internet economy. This has set the stage for disruptive open networks like the Open Network for Digital Commerce (ONDC), Open Credit Enablement Network (OCEN) and Unified Health Interface (UHI) that have opened new opportunities for existing and new sectors as they await the inflection point.

On track to $1T as Indians, especially in T2+, embrace digital-first habits and preferences

Indian consumer habits have been shifting over the past few years, with three standout digital behaviours: 1) the widespread preference for digital interactions; 2) convenience and value are key drivers; and 3) sustainability is increasingly top of mind. This tidal wave of change isn’t uniquely a phenomenon of large cities — India’s T2+, given its population size, a large cohort of growing internet users, and their readiness to embrace digital-first habits, will also be a substantial driving force behind the seismic digital shift. But while the T2+ opportunity is immense, its challenges are equally sizable and require a concerted effort from the state and the private sector. Solutions are emerging across education, health and agriculture, each addressing a set of T2-specific needs such as lack of quality teachers, limited reach of healthcare services or poor crop productivity.
**India’s businesses are digitising to meet evolving customer expectations**

The expansion of India’s internet economy lies in three independent but parallel evolving paths to digital maturity. Recognising digital as a strategic priority, large, traditional firms have been building up their digital core through digital-first investments and acquisitions with gradual but steady success. Micro, small and medium enterprises (MSMEs) have also begun leveraging digital solutions to increase access to customers, improve business efficiencies and drive better outcomes, with over 6M+ — or nearly 10% — of India’s MSMEs already actively buying and selling online domestically. And lastly, as home to over 100 unicorns and five decacorns, startups are the proven frontrunners and fuel behind India’s digital innovation. With 93K recognised startups in the country, 27K of which were registered in 2022 alone, it is likely startups will see sustained interest — from both potential employees as well as investors.

**Investor confidence positive despite challenges ahead**

Strong growth fundamentals, successful exits and supportive regulations have sparked an in-pouring of global capital into India since 2016. Abundance of capital acted as a catalyst for growth, steering India up the ranks to #3 in the world in terms of total unicorns; its digital sectors as a result captured an increasingly large share of local and international investments. While funding activity moderated in 2022 over 2021 on account of macroeconomic softness and high pricing expectations, investors expect a swift recovery to 2021 peak by 2024. Over the long-term, investor outlook for India remains favourable.

**Key imperatives and enablers to unlock the $1T economy**

The flourishing internet economy in India presents a compelling opportunity for businesses to capitalise on. To fully harness this potential, enterprises must gain a deep understanding of evolving consumer needs and strive to build more customer intimacy. Furthermore, leveraging digital technologies has become critical for streamlining the operating model and driving growth.

The digital shift will also lead to emergence of some unique imperatives across trust, security and responsibility, and combating these will require collaborative efforts from India’s policymakers and the private sector.
Unlocking the $1T opportunity
India is undergoing a fundamental shift in income and consumption structure.

**Distribution of households by income level**

<table>
<thead>
<tr>
<th>Income Level</th>
<th>2022</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low income</td>
<td>38M (12%)</td>
<td>20M (6%)</td>
</tr>
<tr>
<td>Lower/middle income</td>
<td>156M (50%)</td>
<td>136M (38%)</td>
</tr>
<tr>
<td>Upper/middle income</td>
<td>103M (33%)</td>
<td>165M (46%)</td>
</tr>
<tr>
<td>High income</td>
<td>14M (5%)</td>
<td>35M (10%)</td>
</tr>
</tbody>
</table>

311M households in 2022, 356M households in 2030.

- $5,500 projected GDP per capita in 2030, more than doubling from ~$2,500 in 2022.
- 25% growth in consumption over the next eight years due to premiumisation.

Notes: Low income: <1.25L; Lower middle income: 1.25-5L; Upper middle income: 5-30L; High income: >30L base income per household (₹ at 2020-21 prices) per annum; Household expenditure is per capita expenditure by class multiplied by average household size for that class; India's total income is based on ~$3T in 2022 and ~$5.1T in 2030. Source: Bain analysis.
Phenomenal rise of online usage has put India well ahead of the world’s largest digital economies

<table>
<thead>
<tr>
<th></th>
<th>India</th>
<th>US</th>
<th>China</th>
<th>World</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Time spent online</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average hours/day</td>
<td>6.5</td>
<td>7</td>
<td>6.5</td>
<td>7</td>
</tr>
<tr>
<td>spent online per</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>internet user</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social media hours</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average hours/day</td>
<td>2.5</td>
<td>2.3</td>
<td>2.8</td>
<td>2.8</td>
</tr>
<tr>
<td>spent on social</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>networks per</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>internet user</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Online video hours</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average hours/day</td>
<td>1.6</td>
<td>1.3</td>
<td>1.1</td>
<td>1.1</td>
</tr>
<tr>
<td>spent watching</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>online videos per</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>online video user</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Digital payments</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of real-time</td>
<td>25</td>
<td>12</td>
<td>12</td>
<td>25</td>
</tr>
<tr>
<td>transactions per</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>capita per year</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: 1. Online video hours are as per a survey conducted by Limelight Networks in 2020 and includes time spent on online video content across platforms such as over-the-top (OTT), YouTube and social media. Data for online video hours for China is not available; 2. Real-time transactions are defined as payments occurring instantaneously and includes United Payments Interface (UPI) and Immediate Payment Service (IMPS) for India, Real-Time Payments (RTP) and Zelle for the US, and Internet Banking Payment System (IBPS) of China; 3. As of February 2023.

Source: Bain analysis.
Digital adoption has now reached the tipping point across most sectors in India’s internet economy.

Note: Digital consumers are defined as people who have used at least two paid digital services in the past 12 months.
Source: Bain analysis.

- 220M shopped online
- 110M made purchases in online games
- 65M ordered food online
- 80M households paid utility bills online
- 25M used online ride-hailing services
- 15M have paid for an online course
India’s internet economy is expected to reach $1T by 2030, double the value of IT services

Internet economy's share of GDP

- **2010**
  - Internet economy: $8B-10B
  - Technology sector: $50B-60B
  - 15% of technology sector
  - Internet economy’s share of GDP: 0.5%

- **2022**
  - Internet economy: $155B-175B
  - Technology sector: $320B-350B
  - 48% of technology sector
  - Internet economy’s share of GDP: 4-5%

- **2030**
  - Internet economy: $900B-1,000B
  - Technology sector: $1,450B-1,550B
  - 62% of technology sector
  - Internet economy’s share of GDP: 12-13%

Note: Absolute figures represent consolidated internet economy size across sectors; 1. Technology sector includes information technology (IT), business process management (BPM) and the internet economy.
Source: Bain analysis.
Section 2

Internet sectors ready to rocket
All sectors poised for exceptional growth, with e-commerce taking the lion’s share

Notes: B2C e-commerce includes product and service e-commerce across categories, including grocery and goods sold by Indian merchants overseas via e-commerce platforms; B2B e-commerce includes upstream commerce such as raw material buying (including farm inputs) and downstream commerce such as finished goods supply to channel partners; SaaS includes software applications that are delivered over the internet and accessed via licensing (only companies with Indian or Indian-origin founders with majority of the workforce based out of India are considered); Online travel includes online bookings of flights, hotels, buses, rail, and car rentals; Online media includes digital advertisements, gaming (browser-based, smartphone, tablet, console and PC games), and video/audio streaming services; Online food delivery includes delivery of food ordered online using app or website; Edtech includes K-12, post K-12 and test preparation; Healthtech includes e-pharmacy, teleconsultation, e-diagnostics and online fitness and wellness; Online ride-hailing includes ride sharing through app or website for cars, bikes, and autos; Other consumption sectors include Insurtech (retail life and non-life insurance), online utility bill payments (including mobile recharges) and online auto-retail (new and used cars and two-wheelers); Estimated exports in each sector are also included.

Source: Bain analysis.
Digital financial services to see increasing digital share through the coming decades

- **Payments**
  - Gross transaction value ($T)
  - Traditional: 1.9 in 2022, 5.2 in 2030
  - Digital: 34% in 2022, 62% in 2030
  - CAGR ('22-'30): 62%

- **Lending**
  - Personal and consumer loans disbursed ($B)
  - Traditional: 170 in 2022, 350 in 2030
  - Digital: 12% in 2022, 37% in 2030
  - CAGR ('22-'30): 88%

- **Investments**
  - Net flows in mutual funds ($B)
  - Traditional: 43 in 2022, 95 in 2030
  - Digital: 8% in 2022, 81% in 2030
  - CAGR ('22-'30): 98%

- **Insurance**
  - Gross written premiums ($B)
  - Traditional: 133 in 2022, 345 in 2030
  - Digital: 2% in 2022, 83% in 2030
  - CAGR ('22-'30): 95%

Notes: CAGR=Compound annual growth rate; 1. Digital payments include only C2B payments (modes of payments considered: credit cards, debit cards, netbanking, prepaid cards, and UPI); 2. Digital lending includes personal and consumer loans (excluding credit card loans) disbursed/originated through digital channels (non-face-to-face, non-phone or non-ATM interactions) by both fintech players and traditional institutions (banks, non-banking financial companies (NBFCs), etc.); 3. Digital investments include net flows of mutual funds through digital channels (non-face-to-face and non-phone) by both fintech players and traditional institutions (banks, traditional brokers, etc.); 4. Insurtech includes gross written premiums for renewals and new business for life, health, and motor insurance; 5. Numbers for payments and lending are for financial years FY2022 and FY2030; 6. Traditional payments include cash-based transactions; 7. For lending, investments and insurance, traditional includes any transactions done in an offline setting (face-to-face or via phone); 8. Digital financial services not included in overall internet economy sectors to avoid overlaps of financial transactions with value of other sectors. Source: Bain analysis.
India is well-poised to become a major digital exports hub over the coming decade.

India’s exports are currently under-indexed compared to other markets in Asia.

<table>
<thead>
<tr>
<th></th>
<th>India</th>
<th>China</th>
<th>SEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share of global population</td>
<td>17.6%</td>
<td>17.7%</td>
<td>7.3%</td>
</tr>
<tr>
<td>Share of global GDP</td>
<td>3.3%</td>
<td>18.4%</td>
<td>3.3%</td>
</tr>
<tr>
<td>Share of global exports</td>
<td>2.4%</td>
<td>12.7%</td>
<td>7.1%</td>
</tr>
</tbody>
</table>

SaaS is a key driver of Indian digital exports.

Indian SaaS companies represented ~5% of global revenues in 2022 and is expected to reach 7-8% by 2025.

Notes: SEA=Southeast Asia, includes Indonesia, Philippines, Vietnam, Thailand, Malaysia, Singapore; Population share pertains to 2022, exports and GDP shares pertain to 2021; Exports include both merchandise and service exports.

Global interest in adopting India’s digital frameworks is cementing the country’s position as a digital technology leader.

Six nations, including Philippines, Morocco and Ethiopia, are already using the India Stack platform, with countries such as Tunisia, Samoa, Uganda, and Nigeria expressing interest in adopting the model.¹

National Payments Corporation of India (NPCI) launched subsidiary NPCI International Payments to export its offerings, such as the RuPay cards network and UPI, to overseas markets.

Notes: Startups and developers need be certified as India Stack system integrators/developers in order to help other countries integrate their existing digital infrastructure with digital solutions from the India Stack; ¹ As per Minister of State of Electronics and IT (MoS IT).
Sources: National Payments Corporation of India (NPCI), Bain analysis.
Digital exports likely to see a steep uptick, with SaaS, edtech and e-commerce paving the way

**SaaS**
Standing on the shoulders of IT services
- 75% of SaaS revenues hail from overseas customers. Firms like Zoho see exports accounting for 90% of revenue.
- Indian SaaS companies are proving to be world-class, with 12-14 of them already exceeding $100M in ARR (vs. one to two companies five years ago).
- Some sectors are relatively mature, but clear opportunities exist for Indian SaaS players, including workflow automation, better pricing management, as well as identity and access management.

**Edtech**
Emerging as the edtech vishwaguru
- India’s edtech players have a sizable opportunity for global expansion because
  - they hold **significant cost-advantages** due to high English proficiency among teachers and parallels to the K-12 curricula used in many parts of the world.
  - in non-English-speaking markets, there is an opportunity to conduct **English-language classes** for a wide range of students or data science/IT-related courses for professionals.

**E-commerce (B2C & B2B)**
Unlocking global audiences for Indian businesses
- Indian manufacturers can out-compete China and SEA’s exports by virtue of international product certifications/quality standards, while providing best-in-class value via scaled manufacturing and government export incentives.

Note: ARR=Annual revenue run-rate.
Source: Bain analysis.
### 3 key enablers will propel India’s digital exports to new heights

<table>
<thead>
<tr>
<th>Currently going well</th>
<th>What’s needed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Skilled and creative talent</strong></td>
<td>Developing more advanced skilling and upskilling programmes can help address a rapidly widening talent gap, especially in cloud, artificial intelligence (AI), Internet of Things (IoT), data analytics, etc. In 2021, demand for talent reached ~350K, exceeding supply by 7x.</td>
</tr>
</tbody>
</table>

India’s fast-growing internet economy is fueled by strong engineering talent who have developed products with global appeal (over 1.5M engineers join the workforce annually — the highest in the world). Many of India’s tech talent who traditionally preferred working for multinational tech giants are increasingly joining fast-growing Indian startups.

**India is home to 80M content creators**, many of them video streamers and influencers (including English language-first creators), and over 7,000 YouTube channels that count 1M+ subscribers — a 50% year-over-year (YoY) leap (highest in the world). They appeal to a wide range of global audiences, especially educational content.

**Developing more advanced skilling and upskilling programmes can help address a rapidly widening talent gap**, especially in cloud, artificial intelligence (AI), Internet of Things (IoT), data analytics, etc. In 2021, demand for talent reached ~350K, exceeding supply by 7x.

**Investing in R&D to develop deep tech expertise** and attract more talent.

**Upskilling, educational and stronger platforms to discover and recognise talent**, akin to “75 Creative Minds of Tomorrow”, an initiative by The Ministry of Information and Broadcasting that identifies and nurtures young creative film talents.

<table>
<thead>
<tr>
<th>Learnings from India’s large domestic market</th>
<th>Adapting to new marketing and customer acquisition strategies that are more suited to respective local audiences (e.g., local partnerships, data sharing agreements)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A large (~100M Indians are considered upper-middle class) and diverse market with varied digital consumer behaviours offers an opportunity to continually adapt, redesign and make products and services more robust. B2C products/services can get tested on attributes such as high value for money in order to be more competitive in the global market.</td>
<td></td>
</tr>
</tbody>
</table>

**Adapting to new marketing and customer acquisition strategies** that are more suited to respective local audiences (e.g., local partnerships, data sharing agreements).

<table>
<thead>
<tr>
<th>Regulatory support</th>
<th>Further strengthening intellectual property rights (IPR) can help foster innovation while enhancing the quality of digital goods and services.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government schemes like the Software Technology Parks scheme (STP), India BPO Promotion Scheme (IBPS) and Service Exports from India Scheme (SEIS) heavily incentivise companies to export their digital offerings to global markets. Active bilateral/multilateral partnerships support the trade of digital products and services, including the India-US ICT Trade Agreement, India-ASEAN Agreement on e-commerce, India-Australia CEPA, etc.</td>
<td><strong>Engaging more in digital diplomacy</strong> can create more opportunities for Indian companies in international markets, as in the case of the G20 Digital Economy Task Force.</td>
</tr>
</tbody>
</table>

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Notes: 1. As of December 2022.
Sources: Oxford Economics, World Economic Forum, YouTube, Bain analysis.
Connecting a billion Indians
A strong policy framework ushered India towards **mainstream adoption of digital solutions**, enabling Indians to gain better access to public and private services.
India Stack serves as a powerful foundation for the digitisation of the country and its internet economy

India Stack enables citizens, businesses and governments to access a wide variety of public services online. Here’s how:

1. A unique identification number for each individual enables authentication-on-demand.
   PROGRAMMES: Aadhaar

2. Documents-on-demand has helped digitise the user onboarding process, allowing more to be accomplished online.
   PROGRAMMES: DigiLocker, e-KYC

3. Payments-on-demand has helped shift India towards a cashless society.
   PROGRAMMES: UPI, AEPS, RuPay

4. Permission-on-demand or personal data sharing, provides a secure way to apply and get approvals for services like personal loans.
   PROGRAMME: Sahamati

Adoption has been significant:

- 1.3B Aadhar cardholders (99% coverage)
- 67B Digital identity verifications
- 8.9B UPI transactions per month
- 9.3M Consent requests via account aggregators

Notes: 1. Information taken in April 2023 and may have changed over time
Sources: India Stack, Unique Identification Authority of India (UIDAI), Bain analysis.
3 open networks — ONDC, OCEN and UHI — were built on the back of India Stack and are likely to create step change

<table>
<thead>
<tr>
<th>Open Network for Digital Commerce (ONDC)</th>
<th>Open Credit Enablement Network (OCEN)</th>
<th>Unified Health Interface (UHI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supports the <strong>digitisation of small businesses</strong> and encourages the democratisation of digital commerce. The initiative set an ambitious target of $48B annual GMV and 1.2M sellers by 2027.</td>
<td><strong>Democratises credit for small borrowers and enables lending</strong> as a feature for marketplaces. A 2021 pilot saw loans as small as $2.50 being authorised through the network. The average loan amount is $475.</td>
<td>The <strong>backbone of India’s healthcare system</strong>, with centralised patient information including doctor and test appointments, teleconsultations and ambulance services. Over 390M digital health profiles exist today as part of the Ayushman Bharat Digital Mission (ABDM) Stack, which aims to improve the quality and delivery of healthcare.</td>
</tr>
</tbody>
</table>

**Implications for consumers:**
- Access to more sellers, brands and products
- Faster delivery via hyperlocal retailers
- Lower prices

**Implications for small retailers:**
- Access to a bigger audience
- Lower cost of selling
- More options for services like logistics
- Reduced dependence on larger platforms like Amazon and Flipkart

**Implications for individual borrowers and MSMEs:**
- Greater accessibility to credit from more sources
- Lower cost of borrowing
- Streamlined loan application process

**Implications for lenders:**
- Access to a wider pool of borrowers
- Reduced cost of acquisition, especially for small non-bank financial companies (NBFCs)
- More efficient underwriting and lending decisions

**Implications for patients:**
- Ability to easily store and access personal health information, like prescriptions and appointment times
- Readily available information on health services
- Transparency in pricing and services offered

**Implications for health service providers:**
- Greater discoverability
- Access to patient’s medical history to minimise errors
- Digitised claims process and quicker reimbursements
- Integrated systems for more effective follow-ups

Note: MSME=Micro, Small & Medium Enterprises.
Sources: Ayushman Bharat Digital Mission (ABDM), Bain analysis.
Better internet quality and more vernacular language content will fuel consumer engagement, especially in T2+ and beyond.

### Section 3: Connecting a billion Indians

**Reliable, high-speed internet**

4G penetration has reached 60% of India’s mobile users (doubling between 2017 and 2022), but average mobile internet download speeds remain 5-10x lower than US and China.

<table>
<thead>
<tr>
<th>Country</th>
<th>Avg. Mobile Internet Download Speeds</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>~15 Mbps</td>
</tr>
<tr>
<td>US</td>
<td>~70 Mbps</td>
</tr>
<tr>
<td>China</td>
<td>~120 Mbps</td>
</tr>
</tbody>
</table>

**Ongoing initiatives to boost India’s connectivity:**

- Extension of 4G coverage: 90% of Indian villages are already covered by 4G network, with 100K+ additional towers being built to support the remaining villages
- BharatNet Phase III aims to connect ~250K Gram Panchayats with optical fibers by 2025, with 180K+ already connected
- PM-WANI to introduce ~10M remote Wi-Fi hotspots in public places, with 100K+ already set up
- Private players (i.e., Bharti Airtel and Jio) are working towards satellite-based broadband services that will further extend high-speed internet connectivity and digital services to remote areas across the nation

**Vernacular language support**

500M (out of a total of 700M) internet users in India are non-English literate, half of which are urban users.

53% of non-internet users would go online if content was available in their native languages.

**Ongoing initiatives to build more vernacular language content:**

- Bhashini Project was launched in 2022 and aims to provide internet content in 22 major languages
- New smartphones are also offering Indian languages as an in-built functionality. JioPhone 4G Pragati’s OS, for example, supports 10 languages
- Many startups are increasingly offering products and services in regional languages:
  - KukuFM launched in 2018, and now has podcasts in seven vernacular languages, 2.7M paid users, and 35M downloads
  - Meesho’s reseller e-commerce platform is offered in eight Indian languages to appeal to its primarily T2 audience
  - Apna, a professional networking platform geared mainly to blue-collar workers, is available in 11 Indian languages across over 70 cities

Notes: 1. As of April 2023; OS=operating system.
Source: Ministry of Electronics and Information Technology (MeitY), Bain analysis.
Digital habits steer the course
3 trends are transforming India’s digital consumer behaviours

1. Preference for digital interactions
   Indians prefer researching products via search engines, e-commerce platforms, brand websites, video platforms and social media.
   - 80% of digital consumers begin their search for a new product online, instead of visiting a physical store or seeking offline recommendations.
   - They also prefer digital modes of communication such as text messaging, in-app chat support, emails or social media.
   - 69% of digital consumers prefer digital communications for customer support interactions.

2. Convenience, value and trust as key drivers
   Across most internet sectors, conveniences like ease of delivery, frictionless payment, ease of checkout, user experience, etc., are amongst the highest ranked drivers for usage along with value factors like price, promotions, discounts and rewards.
   Trust is also ranked highly in sectors like B2C e-commerce, online medicine delivery and ride-hailing.
   - 35% of digital consumers rank trust as a Top 3 driver when using B2C e-commerce.

3. Sustainability is increasingly top of mind
   Indians are more and more willing to pay a premium for sustainable options.
   - 63% of digital consumers are willing to pay a premium for food deliveries that use electric vehicles.
   - Similarly, they are willing to forego some convenience for more sustainable options.
   - 70% of digital consumers are willing to take a longer route with less traffic to reduce emissions.
   - Indian consumers are willing to compromise on aesthetics for sustainable options.
   - 66% of digital consumers are willing to pay a premium for biodegradable packaging for groceries.

Note: 1. Across all age groups. 2. Consumers ranked Top 3 drivers from a set of 13 distinct options.
Source: Google commissioned Kantar e-Conomy India consumer survey, Bain analysis
T2+ India to play a material role in unlocking the $1T internet economy

With over 1 billion people living in India’s T2+ cities, digital players stand before a sizable potential audience. In 2022, three in five new e-commerce consumers hailed from T3+ towns. Going forward, rapid digital adoption is expected to continue, with 2022’s ~400M rural internet projected to reach 480M by 2025.

Large, untapped consumer base

With over 1 billion people living in India’s T2+ cities, digital players stand before a sizable potential audience. In 2022, three in five new e-commerce consumers hailed from T3+ towns. Going forward, rapid digital adoption is expected to continue, with 2022’s ~400M rural internet projected to reach 480M by 2025.

Sizable GDP contribution

T2+ India generates over half of India’s GDP, mainly driven by agriculture. This portion will only grow as government and the private sector continue to improve physical and digital infrastructure like road and internet connectivity.

Immense consumption

T2+’s consumer spend represents 3x that of the top 60 cities. Rural India’s per capita income (PCI) is exploding, growing 4.3x between 2019 and 2030 (vs. 3.5x in urban India), meaning rural spending among affluents will likely multiply in the coming years.

Note: 1. As of Dec 2022.
Sources: India Census 2011, Refinitiv, World Economic Forum, Bain analysis.
Despite T2+’s immense opportunity, it is also severely complex to solve for

- **Wide geographic spread**: 95% of India’s total land area is inhabited by T2+. T2+ India’s land area is >3.13M km², with Metro/T1 accounting for 6% of that space (0.2M km²).

- **Low population density**: 1/3rd the population density. 380 people/km² are in T2+ India vs. 1150 people/km² in Metro/T1.

- **Diverse consumer profiles**: ~60x more languages spoken. 1,600 languages are spoken in T2+ India compared to ~25 in the Metro/T1.

- **Low per capita consumption**: 1/2 the per capita annual consumption. T2+ sees $1,200 annual consumption per capita vs. $2,400 in Metro/T1.

Notes: All numbers are based on full year 2022 data; 1. Discretionary spend is even lower at 35% in T2+ India vs. 54% in top cities.
Sources: Government of India, Bain analysis.
New emerging needs and behaviours of consumers have led to an evolution of their digital habits. T2+ offers immense opportunities, and businesses must tap into the unique behaviours of this fast-growing segment.
T2+ digital consumers are just as digitally savvy as their metro counterparts

They spend more time online ...

<table>
<thead>
<tr>
<th>Average time spent on online activities</th>
<th>(hours/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metros</td>
<td>4</td>
</tr>
<tr>
<td>Tier 1</td>
<td>4.25</td>
</tr>
<tr>
<td>Tier 2</td>
<td>4.5</td>
</tr>
</tbody>
</table>

... and their average spend on emerging digital services is equivalent to or higher than Metro consumers

<table>
<thead>
<tr>
<th>Average spend on digital services</th>
<th>(T2 vs. metro consumers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1x</td>
<td>1x</td>
</tr>
<tr>
<td>Grocery¹</td>
<td>Healthtech and e-pharmacy¹</td>
</tr>
<tr>
<td>1.1x</td>
<td>1.3x</td>
</tr>
<tr>
<td>Food Delivery²</td>
<td></td>
</tr>
<tr>
<td>1.6x</td>
<td></td>
</tr>
<tr>
<td>Edtech³</td>
<td></td>
</tr>
</tbody>
</table>

Notes: 1. Based on monthly average spends; 2. Based on average order value; 3. Based on average spend on platform in the last 12M
Q. Considering the activities you engage in while being online, on an average how much time do you spend on them daily? Please exclude any time spent online as part of work or study requirements; What was the average amount you spent on your last [category] purchase? Base: n=7,200 digital consumers.
Sources: Google commissioned Kantar e-Conomy India consumer survey, Bain analysis.
T2+ digital consumers trust local, relatable influencers more than traditional celebrities

Consumers who consider YouTube vloggers/influencers more trustworthy and credible than traditional celebrities

65% Metros
75% Tier 1
84% Tier 2

India’s internet economy has 80M content creators, enabling businesses to reach a wider audience with their content.

Marketing spend on influencers is projected to grow to >$3B by 2030.

70% of this spend will be focused on non-celebrity influencers for their relatability and the trust that they inspire in the audience.

Note: Base: n=7,200 digital consumers.
Q. Please indicate the extent to which you agree or disagree with the following statements? I find promotion by Instagram influencers or YouTube vloggers most credible/trustworthy than a movie or cricket celebrity.

Sources: Google commissioned Kantar e-Conomy India consumer survey, Bain analysis.
T2+ digital consumers are more open to experimenting with new brands and products

Consumers who are willing to purchase brands or products they’ve not bought before

- 67% of Metros
- 78% of Tier 1
- 83% of Tier 2

83% of T2+ are open to trying new products or new brands, likely because digital opened a plethora of new choices and they’re deciding which products and services they like/dislike, unlike Metro consumers, who are more mature.

71% of those from T2+ India are willing to try new content, regardless of genre, language or which country it comes from, when consuming content via over-the-top (OTT) platforms.

Insurgent cosmetics brand Recode Studios, for example, worked with salons, parlours and beauticians in T2+ India to host in-person make-up classes for women. The campaign was instrumental in achieving a ~$2M turnover within 4 years of launch.

Notes: Base: n=7,200 digital consumers.
Q. Please indicate the extent to which you agree or disagree with the following statements? - I prefer to buy products from new brands as I like to experiment with new brands & new products.
Sources: Google commissioned Kantar e-Conomy India consumer survey, Bain analysis.
T2+ digital consumers have an underlying preference for ‘Made in India’ products

Consumers who purchase ‘Made in India’ even when other options are available

- Metros: 68%
- Tier 1: 77%
- Tier 2: 83%

Non-metro consumers are increasingly proud of their regional identity and are finding the right balance for themselves, rather than blindly replicating Metro lifestyle and product choices.

House of Chikankari is a digital-first craft apparel brand that engages 10,000+ women artisans from Lucknow. Since inception two years ago, they’ve seen 5x growth.

Notes: ODOP=One District One Product; Base: n=7,200 digital consumers.
Q. Please indicate the extent to which you agree or disagree with the following statements? - I would prefer to purchase only Made in India products whenever there is an option even if I have to pay a higher price for them.

Sources: Google commissioned Kantar e-Conomy India consumer survey, Bain analysis.
Majority of T2+ consumers want personalisation and are ready to pay a premium for it

- 65% of consumers are willing to pay a premium so they can tailor their food orders to their tastes (e.g., no sugar, low oil, etc.) when ordering from food delivery apps.
- 95% of customers expect companies to understand their unique needs and expectations.
- 65% of customers expect offers to always be personalised.
- 52% of customers expect offers to always be personalised.

Notes: Base: n=7,200 digital consumers. Q: Please indicate the extent to which you agree or disagree with the following statements? - I am willing to pay a higher price for personalised and customised products / services.

Source: Google commissioned Kantar e-Conomy India consumer survey, Bain analysis.
Digitisation to be a bedrock for new business models to unlock the T2+ opportunity.
Digitisation, especially in education, healthcare and agriculture, will bring substantial growth and value to T2+

- More qualified teachers
- Sufficient medical resources
- Improved farming efficiencies
- Increased revenue recovery for farmers

Access to quality teachers enabled by edtech platforms along with an improved educational infrastructure will vastly improve the quality of education for the next generation.

Improved access to healthcare services through digital solutions and enhanced medical infrastructure will have a significant impact on quality of healthcare.

Improved farming efficiencies, like monitoring capabilities and adoption of precision agriculture techniques, will drive big strides in farming outputs.

Farmer revenues are likely to grow when food wastage is managed more effectively, such as through more efficient supply chains and less intermediaries.

Notes: All data is pulled for 2021.
Sources: UNESCO, Organisation for Economic Co-operation and Development (OECD), Fitch Solutions, Euromonitor, Bain analysis.
Digital consumers are willing to pay a premium for the better quality healthcare

- 65% of digital consumers expressed a willingness to pay a monthly rental for digital tools that regularly monitor and support early detection of health risks among their parents, provided the data is secure.
- 75% of digital consumers are willing to pay a high premium for fresh, organically-sourced, chemical-free ingredients when ordering food deliveries.
- 84% of T2 digital consumers are comfortable doing e-consultations if they can access a reputable doctor for the best healthcare possible — more than any other segment.

Notes: Q1&2 Base: n=7,200 digital consumers; Q2 Base: n=797 digital consumers.

Q1. Please indicate the extent to which you agree or disagree with the following statements - I am willing to pay some monthly payment to constantly monitor the data collected by my/my parents fitness band to detect any health risks early provided my data is safe; Q2. Which of the items below would you be willing to pay more for? Faster delivery, better quality of ingredients, fresh organically-sourced, chemical free ingredients, more healthy food options, additional cutlery, ability to buy from more than one store in the same area, ability to order from famous joints outside the city, ability to customise food (low oil, sugar, gluten free, protein requirements, etc.). Please use the scale below to state your preferences: 'I will be willing to pay a high premium for it', 'I will be willing to pay some premium for it', I will not pay any premium for it; Q3. Please indicate the extent to which you agree or disagree with the following statements - I will prefer e-consultation from a reputed doctor compared to live appointment from a doctor recommended by friends and family.

Source: Google commissioned Kantar e-Conomy India consumer survey, Bain analysis.
78% of edtech consumers started using educational services during or after the pandemic

People who started using edtech courses in the last two years

- 85% of T2+ digital consumers who prefer to take an expensive online course even if it means taking out a personal loan (compared to an average quality, offline course that’s within their budget)
- 59% of digital consumers prefer courses that feature the best quality teachers even if it’s at a higher price (vs. courses with average quality teachers at lower prices)

Notes: Base: n=1,564.
Q1. When did you start attending paid courses online? Q2. Which type of courses will you prefer to enroll for in the future?
Source: Google commissioned Kantar e-Conomy India consumer survey, Bain analysis.
Specialised digital solutions are sprouting up across the country, each with unique value propositions for T2+ consumers.

<table>
<thead>
<tr>
<th>Sector</th>
<th>Challenge</th>
<th>Company</th>
<th>Core proposition</th>
<th>Impact created</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>Lacking quality teachers and learning tools</td>
<td>Delight Learning</td>
<td>Digital interactive courses to assist teachers and engage students in rural India</td>
<td>25% schools in rural and semi-urban Gujarat have adopted the tool; 20K+ students impacted</td>
</tr>
<tr>
<td></td>
<td>Shortage of affordable educational content in vernacular languages</td>
<td>Adda247</td>
<td>Online courses that help students prepare for government and competitive exams in 12+ regional languages</td>
<td>85% of enrolled students are from T2+ India; platform garners 30M+ YouTube subscribers with 35M+ monthly active users (MAUs)</td>
</tr>
<tr>
<td>Healthcare</td>
<td>Limited reach of healthcare institutions and services</td>
<td>GoAppTiv</td>
<td>Proper distribution of medicines via qualified resellers, especially in rural areas</td>
<td>200K+ villages have benefited from access to medicines when needed; 700+ pharmaceutical brands onboarded</td>
</tr>
<tr>
<td></td>
<td>Inconvenient and expensive access to medical services</td>
<td>Medcords</td>
<td>Affordable teleconsultations and medicine delivery for T2+ India patients</td>
<td>3M+ patients have received medical services; 15K+ medical stores and 5K+ doctors onboarded</td>
</tr>
<tr>
<td>Farming and livestock</td>
<td>Poor crop productivity</td>
<td>DeHaat</td>
<td>Crop yield monitoring, weather alerts and advisory services to help enhance crop yield</td>
<td>80K+ hectares of farmlands have benefited; ~20% crop yield increment achieved</td>
</tr>
<tr>
<td></td>
<td>High information asymmetry (price and quality)</td>
<td>Animall</td>
<td>Cattle trading marketplace with e-veterinary services at affordable costs</td>
<td>8M+ dairy farmers onboarded; 1M+ cattle have been sold via the platform</td>
</tr>
</tbody>
</table>

Notes: Metrics captured as of May 2023. Source: Bain analysis.
Businesses as bedrock of growth
The expansion of India’s internet economy lies in three independent but parallel evolving paths to digital maturity

**Large, traditional businesses**
With the strongest reach, brand equity and potential to scale, large corporations (i.e., Reliance and Tata) are investing significantly in building a strong digital core. Once they become digital mainstream, they can potentially shift consumption dynamics considerably.

**MSMEs**
As the backbone of India’s economy, MSMEs require the most effort to digitise, but once they hit a tipping point, there will be sizable stepchange in growth and efficiency.
Critical challenges stand in the way of MSME’s digitisation journey, but supportive efforts including various government initiatives and digital solutions offered by startups, are proving effective.

**Startups**
Startup-led innovation, supported by favourable regulations, has been central to the rise of India’s digital reputation — at home and around the world. Now operating in a more mature ecosystem, there needs to be a greater focus on balancing profitability, growth and innovation.

$930B
market capitalisation of India’s 10 biggest companies

30%
share of MSMEs contribution to India’s GDP

93K
recognised startups in India

Notes: 1. As of April 2023, Top 10 biggest companies by market cap include Reliance Industries, TCS, HDFC Bank, Infosys, Hindustan Unilever, ICICI Bank, HDFC, SBI, ITC, Bharti Airtel. 2. As of CY 2022. 3. As at February 2023; MSME=Micro, Small and Medium Enterprises.
Sources: Press Information Bureau, Bain analysis.
Large, traditional firms are investing heavily in building a strong digital core.
India’s largest — and oftentimes oldest — businesses are vested in digitising, but change will take time

Large, traditional businesses have many strengths to lean on in their journey towards digital transformation

Current advantages

1. **Economies of scale**
   Significantly scaled benefits include lower material and conversion costs and access to cheaper working capital, among others.

2. **Distribution advantage**
   Robust distribution networks facilitates rapid, full-scale rollouts of successful pilots.

3. **Brand recall and trust**
   Well-known and trusted brands, often that have been built up over decades, reduce branding and marketing pressure compared to smaller entities.

... but improving their tech and data capabilities can drive competitiveness and eventually steer the internet economy

Capabilities to be developed

1. **Strong technology backbone**
   Investments in digitally skilled talent and infrastructure are needed to provide a seamless UI and UX — a hygiene factor for success in today’s online world.

2. **Data architecture and analytics**
   Competing with digital-first brands requires sophisticated customer-level data and analytics for the customer experiences people have come to expect.

3. **Omnichannel distribution**
   Large, offline footprints can be leveraged for fulfilment and customer acquisition — a significant differentiator from online-first brands.
India’s biggest companies are building large digital ecosystems, at pace

<table>
<thead>
<tr>
<th>Reliance</th>
<th>Investments</th>
<th>Initiatives</th>
</tr>
</thead>
</table>
|          | JioSaavn, Netmeds, Zivame, Urban Ladder, Clovia, Milkbasket | ● Subsidiary for digital ventures - Jio Platforms  
  ● Digital commerce platforms Jiomart, Ajio, Tira |
| Tata Group | BigBasket, 1mg, Curefit | ● Wholly owned subsidiary Tata digital for digital ventures  
  ● Umbrella app, Tata Neu, enables access to all its consumer businesses  
  ● Digital commerce initiative Tata Cliq |
| Aditya Birla Group | Bewakoof, Berrylush, Juneberry, Natilene, Nauti Nati, Nobero, Urbano, Veirdo | ● B2B e-commerce platform for building materials  
  ● Digital-first house of brands, TMRW, is an incubator of fashion and lifestyle brands |
| ITC | Mylo, Yoga Bar | ● Has its own direct-to-customer (D2C) website for its portfolio of brands |
| Emami | Tru Native F&B, The Man company | ● Has its own D2C websites for flagship brands Zandu, Kesh King, Boroplus |
| Marico | Beardo, Just Herbs, True Elements | ● Saffola Stores owns its D2C website for its Saffola brands  
  ● Portfolio of digital-first personal care brands, Pure Sense and Coco Soul |

Note: Above is non-exhaustive; VC=Venture Capital.
Source: Bain analysis.
MSMEs are adopting digital technologies to help solve access, productivity and credit challenges.
Unleashing the potential of MSMEs will present huge impetus to India’s economy

MSMEs are the backbone of India’s economy

- **60M**: MSMEs exist in India
- **120M**: people employed by MSMEs (~40% of the non-agricultural workforce)
- **30%**: share of contribution to India’s GDP by MSMEs
- **50%**: share of merchandise exports driven by MSMEs

Three critical hurdles stand in the way of MSME growth

1. **Geographical reach and market access**: 95% of India’s MSMEs are micro-firms, usually with less than 10 employees and limited ability to reach new markets.

2. **Operational efficiencies**: MSMEs suffer from lower efficiencies, with 5-8% lower operating margins than their larger peers.

3. **Credit availability**: MSMEs lack access to formal credit and instead rely on costly informal credit. Less than 40% of MSMEs’ total credit demand (~$1.1T) is met through formal credit.

Note: All figures pertain to full year 2022; MSME = Micro, Small and Medium Enterprises. Sources: Ministry of Micro, Small and Medium Enterprises, Press Information Bureau, Bain analysis.
Impact of digital adoption

10M+ MSMEs now use Vyapar GST billing software (as a free mobile app)

74% of medium enterprises are likely to move to cloud applications in 2022¹

Digital solutions

- Low-cost, pay-per-use software is centralising business processes management
  - Startups such as Zoho offer affordable cloud suites to help MSMEs with their business management needs, including customer relationship management (CRM), customised enterprise resource planning (ERP) and human resources management.
  - Digital solutions such as employee self-service (ESS), human capital management (HCM), and customer resource management (CRM) are now being offered in Indian languages across T2+ India

- Solutions are helping tackle specific business functions, such as tax compliance and invoicing
  - Software platforms such as Clear and Vyapar assist companies with software for GST filing, e-way bills, tax deducted at source (TDS), e-invoicing, income tax return filing, etc.
  - Such platforms help maximise tax savings and/or other compliance requirements, including legal drafting and government registrations.

- Low-cost automation are helping streamline (e.g., payment reporting platforms help manage account receivables)
  - Platforms such as Recordent leverage data to help MSMEs manage and monitor their credit risks.
  - Recordent has assisted with recovery of receivables worth $300M² via timely reminders and calls, automated legal notices, etc.

Notes: 1. According to a study conducted by International Data Corporation (IDC) - System Analysis Program Development (SAP) called, “The State of Midmarket Enterprises in India”, December 2019; 2. As per Recordent website as of December 2022; GST = Goods & Services Tax.
Source: Bain analysis.
Digital channels are enabling MSMEs to unlock a sizable domestic and rapidly expanding exports market

Key challenges

- Lack of market intelligence and know-how to sell to non-local and export markets
- Limited access to the necessary infrastructure, such as logistics and warehousing networks

Impact of digital adoption

- 6M of 60M+ MSMEs are already actively buying and/or selling products online domestically
- 64% of MSMEs see higher sales when using digital or e-commerce channels
- $40B of goods or services procured from MSMEs via online Government e-Marketplace

Digital solutions

- B2C and B2B marketplaces provide pan-India and global access
  - E-commerce players like Amazon and Etsy enable small businesses to access a cross-india and global customer base with minimal overhead. 4M+ MSMEs are selling on Amazon India including 1M+ weavers and artisans.
  - Some marketplaces provide favourable terms to MSMEs, including logistics fees waivers during the festive season and sales events.
  - Tech-driven B2B aggregators such as Zetwerk and OfBusiness offer MSMEs access to a global customer base, while assisting in supply chain management and working capital financing. In 2022, OfBusiness enabled 700K+ SMEs to bid for 20M+ tenders across 140 countries.

- Low-code/no-code platforms enable MSMEs to sell directly to end customers, bypassing any middle agents
  - With pre-integrated services for delivery, payments and inventory management, small business owners can now set up their custom direct-to-customer (D2C) stores via platforms Dukaan and Bikayi.
  - Bikayi has enabled 15K+ sellers to set up their online stores through its easy-to-use and affordable one-stop-shop platform.
  - Logistics integrators and platforms like Shiprocket or Xpressbees offer reliable, large-scale logistics networks and fulfilment support so MSMEs can own the process from head to toe.

Sources: 1. As per ‘Pulse of startups and MSMEs’, survey conducted in 2020-2021 on the LocalCircles platform which received more than 17,000 responses from over 6,200 startups and MSMEs across 172 districts in India, Bain analysis.
Digital unlocks previously unavailable financial products and formal credit, accelerating small businesses growth

**Key challenges**

- Lack of formal credit available due to legacy systems and a lack of necessary documentation and credit history
- When available, usually under unfavourable terms, including high interest rates, poor credit terms and complicated approval processes

**Digital solutions**

- Digital lenders have started partnering with e-commerce enterprises, online aggregators and B2B marketplaces, while payment providers are offering MSMEs instant loans and BNPL options.
- Data such as transactions and inventory are increasingly being leveraged to underwrite loans.
- Online platform UdaanCapital facilitates ~$1B loans to 150K+ kiranas/small businesses per year.

**Impact of digital adoption**

- $10B formal credit disbursed by fintechs to MSMEs in 2021
- 50% projected CAGR growth of formal credit disbursed by fintechs to MSMEs in 2021 to 2026

**Short-term business loans for MSMEs are using digital underwriting**

- Platforms such as KredX and LendingKart offer unsecured business loans and invoice discounting to MSMEs.
- These platforms leverage formalised supply chain data, including GST returns, e-invoices and e-way bills to underwrite loans.
- Digital loans platform CredAble disbursed ~$3B in working capital to finance ~150K MSMEs in 2022 alone.

Source: Bain analysis.
Startups are benefiting from favourable regulations and heightened consumer interest in digital products and services.
Startup registrations have surged exponentially in the past years.

Number of new startups registered

- 2016: <1K
- 2017: 5K
- 2018: 9K
- 2019: 11K
- 2020: 14K
- 2021: 20K
- 2022: 27K

93K entities now recognised as startups by India’s DPIIT.

Notes: DPIIT=Department for Promotion of Industry and Internal Trade; Figures as of 28 February 2023.
Source: Press Information Bureau, Bain analysis.
Home to world’s third largest unicorn hub, the future of India’s internet economy shines brightly

India’s unicorn birth rate is outpacing other nations. At 108 unicorns, India became the world’s 3rd largest unicorn hub in 2022, only behind US and China.

Number of unicorns per country

Global

<table>
<thead>
<tr>
<th>Country</th>
<th>2018</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>4x</td>
<td>124</td>
</tr>
<tr>
<td>UK</td>
<td>4x</td>
<td>97</td>
</tr>
<tr>
<td>India</td>
<td>6x</td>
<td>1,294</td>
</tr>
<tr>
<td>China</td>
<td>2x</td>
<td>28</td>
</tr>
<tr>
<td>USA</td>
<td>3x</td>
<td>81</td>
</tr>
</tbody>
</table>

Notes: 1. Unicorns list includes all companies that are valued at > $1B, including those that have exited through Mergers and Acquisitions (M&As) and Initial Public Offerings (IPOs) for current years; 2. Decacorns=privately owned companies valued at more than $10B.

Sources: Press Information Bureau, Bain analysis.
A healthy correlation exists between the rising supply of jobs at startups and Indians’ declining aversion to taking them.

**Total number of jobs created by startups in India**

<table>
<thead>
<tr>
<th>Year</th>
<th>Jobs Created</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>88K</td>
</tr>
<tr>
<td>2019</td>
<td>132K</td>
</tr>
<tr>
<td>2020</td>
<td>161K</td>
</tr>
<tr>
<td>2021</td>
<td>198K</td>
</tr>
<tr>
<td>2022</td>
<td>269K</td>
</tr>
</tbody>
</table>

**CAGR ('18-'22)**

32%

**New graduates placed in digital-native firms**

<table>
<thead>
<tr>
<th>Year</th>
<th>Place Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>18%</td>
</tr>
<tr>
<td>2021</td>
<td>26%</td>
</tr>
</tbody>
</table>

**269K employment opportunities created in startups, a steady 30% YoY growth since 2016**

**74% of senior professionals prefer working for startups over large corporations,** though attrition remains a challenge; 2021’s startup attrition rate was 45% vs. 25% at IT service firms.

Notes:
1. An entity is considered as a startup for up to a period of 10 years from the date of incorporation/ registration and if the turnover of entity for any of the financial years since incorporation/ registration has not exceeded one hundred crore rupees; 2. As of 2022; According to a survey of 1,250 senior professionals by a social community of startups – CoffeeMug.AI; 3. Covers data for top 3 colleges in India from commerce (SRCC), engineering (IIT-Bombay) and business administration (IIM Ahmedabad) streams. Base: n=500 for 2016, n=800 for 2021; 4. Analytics India Attrition Study 2022; 5. Data as on 17 January 2023.

Sources: Ministry of Finance, Bain analysis.
Strong trend of repeat entrepreneurs is boosting confidence in the startup ecosystem

Note: 1. Top 100 startups is based on the amount of funding received in its founding year.
Source: Bain analysis

Section 5: Businesses as bedrock of growth

Serial founders do things differently

- **Network**: They leverage support from a wide network of mentors and advisors and hire strong talent.
- **Product**: They realise the value of understanding a problem and how long it takes to iterate a product.
- **Funds**: They know when and how much funds to raise and are preferred by investors.

The number of serial founders is growing and they’re finding strong backing from investors.

Founder experience of top 100 startups

- **Serial founders**
  - 2016: 33
  - 2022: 61

- **New founders**
  - 2016: 67
  - 2022: 39

Average funding raised based on founder experience ($M)

- **New founders**
  - 2016: 3
  - 2022: 9

- **Serial founders**
  - 2016: 3
  - 2022: 9

~2x increase in serial founders in top startups founded in 2022 (vs. in 2016)

3x more funds are raised by serial founders than new founders

~2x increase in serial founders in top startups founded in 2022 (vs. in 2016)

3x more funds are raised by serial founders than new founders
Incubators have nearly doubled and are playing a key role in propping up the ecosystem

Key startup incubators in India

<table>
<thead>
<tr>
<th>Incubator</th>
<th>Sector focus</th>
<th>Notable startups</th>
<th>Number of investments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Venture Catalysts</td>
<td>E-commerce, fintech, SaaS and consumertech</td>
<td>BharatPe, Fynd, Beardo, Pee Safe, Innov8, SuprDaily</td>
<td>180</td>
</tr>
<tr>
<td>CIIE.CO (IIMA)</td>
<td>Biotech, medtech, AI/ML, robotics, fintech</td>
<td>Razorpay, Hashcube, Rolocule, Thrillophilia</td>
<td>80</td>
</tr>
<tr>
<td>iTIC Incubator (IITH)</td>
<td>Deeptech</td>
<td>Anvatio Labs, Blupower, Carbon Hubs, EasyKrishi</td>
<td>70</td>
</tr>
<tr>
<td>WE Hub (State-led for women founders)</td>
<td>SaaS, healthtech, consumertech, deeptech, edtech</td>
<td>Bluebot Robotics, Ikshana, Lauriko, Kula Studio, Abby</td>
<td>40</td>
</tr>
<tr>
<td>AdvantEdge Founders</td>
<td>Consumer sectors</td>
<td>Rapido, Grip invest, Park+, Scoopwhoop</td>
<td>35</td>
</tr>
</tbody>
</table>

Notes: 1. As of October 2020. Information may have changed since; 2. Includes incubated/accelerated startups.
Source: Department of Industries and Commerce, Bain analysis.

Number of startup incubators in India

Over 60% of the 326 incubators come from non-metro cities

70%+ (~160) of those are in cities and towns that are not state capitals
Under the Startup India Initiative, a number of national initiatives have been instrumental to nurturing today’s thriving ecosystem.

1. As part of the DPIIT Ministry of Commerce and Industry’s Fund of Funds for Startups programme, $1B was committed to approximately 100 alternative investment funds (AIF) to invest in startups.

2. A three-year tax exemption is granted to eligible startups to be used within the first 10 years of their incorporation.

3. Loss-making startups are permitted to list on public bourses (with mandatory minimum subscription of 75% by qualified institutional buyers).

4. 80% rebates in filing patents, 50% rebates in trademarks and fast-tracked patent applications are provided to startups (vs. other companies).

5. Startups designated as ‘fast track firms’ get 90 days to wind up operations (vs. 180 days for other companies).

Note: 1. As of February 2023.
Sources: Press Information Bureau, Securities and Exchange Board of India, Bain analysis.
Investing towards profitability
Indian private equity (PE) and venture capital (VC) activity may have slowed from 2021 peaks in this challenging year, but deal values still surpassed $60B for a third consecutive year.

Investments in India grew at a CAGR of 23% (from 2018 to 2022), while the number of deals has increased by 27%. With rising interest rates, geopolitical tensions and fears of recession, however, investments tapered in 2022 as investors turned to small ticket (<$100M) investments.

While total deal value declined from the record highs of $70 billion in 2021 to $62 billion in 2022, deal value remains significantly higher than it was three years ago and deal volume has sustained, indicating that investor confidence in India remains high.

Source: Bain analysis.
Investors are treading cautiously due to high pricing expectations and lack of scalable opportunities.

Q. What are your main concerns around digital deals given the current economic climate?

% who ranked the selection as their top 3 concerns

<table>
<thead>
<tr>
<th>Concern</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher pricing expectations/entry multiples</td>
<td>77%</td>
</tr>
<tr>
<td>Macroeconomic softness</td>
<td>45%</td>
</tr>
<tr>
<td>Lack of scalable opportunities</td>
<td>45%</td>
</tr>
<tr>
<td>Challenging exit conditions</td>
<td>41%</td>
</tr>
<tr>
<td>Increased competition from other funds</td>
<td>23%</td>
</tr>
<tr>
<td>Challenges in recruiting/retaining talent</td>
<td>23%</td>
</tr>
<tr>
<td>Unpredictable government policies</td>
<td>18%</td>
</tr>
<tr>
<td>Cost of capital/debt raised</td>
<td>18%</td>
</tr>
<tr>
<td>Geopolitical risks</td>
<td>5%</td>
</tr>
<tr>
<td>Others, please specify</td>
<td>5%</td>
</tr>
</tbody>
</table>

Note: Base: n=22.

Q: What are your main concerns amid the current economic climate on digital assets? (Includes free text).

Source: Investor survey.

As interest rates rise further, the opportunity cost for illiquid investments will also rise. Only the best companies will get funded, leading to a crowding of investors into the best companies.

Overhang at growth-stage level on valuations of companies that had raised funds in 2021 and early 2022.

Inability of portfolio companies to progress to profitability is a big concern.

There’s no room for error — failed experiments may not get runway extensions.
Investors are optimistic for the mid to long-term, with over half seeing an uptick in deal activity.

Q. What is your expectation around deal activity in terms of count and ticket size?

% of respondents

- Significant reduction: 5%
- Moderate reduction: 27%
- Remain similar: 27%
- Moderate increase: 27%
- Significant increase: 14%

Past 12 months
- Significant reduction: 5%
- Moderate reduction: 27%
- Remain similar: 27%
- Moderate increase: 14%
- Significant increase: 14%

Next 2-3 years
- Significant reduction: 14%
- Moderate reduction: 27%
- Remain similar: 27%
- Moderate increase: 41%
- Significant increase: 5%

Notes: 1. Q3. Do you expect long-term outlook to remain favourable with India being one of the best investment destinations between 2025-30? Includes both “Significant increase” and “Moderate increase” options; 2. The survey targeted a mix of investors, with majority of the investment firms operating across the globe. Base: n=22.

Source: Investor survey.

3 in 5 investors expect deal activity to go up in the next two to three years and 90% see India as a favourable investment destination, given the country’s sound digital infrastructure.

Key growth drivers for deal-making expected to shift towards profitability/positive unit economics, improvement in exit opportunities and improvement in macro-economic conditions.

Abundance of dry powder will also serve as a key growth driver for deal activity in the next 12-18 months.
3 in 4 VC investors expect digital allocations to exceed 75% over the next few years

Q. What is the expected split of your fund’s investment in digital companies in the future?

% of respondents by share of digital assets allocation

<table>
<thead>
<tr>
<th>Share of Digital Assets Allocation</th>
<th>Next 2-3 years</th>
<th>Next 5-7 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤25% allocation</td>
<td>14%</td>
<td>9%</td>
</tr>
<tr>
<td>26-50% allocation</td>
<td>5%</td>
<td>9%</td>
</tr>
<tr>
<td>51-75% allocation</td>
<td>18%</td>
<td>9%</td>
</tr>
<tr>
<td>≥76% allocation</td>
<td>64%</td>
<td>73%</td>
</tr>
</tbody>
</table>

Notes: Base: n=22.

Q. What is the expected split of your fund’s investment in digital companies in the future?

Source: Investor survey.

Opportunities in digital will draw bulk of VC investor attention

Enhancement of infrastructure, including for 5G technology, the implementation of UPI and improved logistics has strongly bolstered the internet economy.

Two key factors are driving this rise in investments:
- expanding audience size for a wide variety of goods; and
- global adoption of digital matched with ballooning digital exports from India
SaaS, Fintech and B2C/B2B e-commerce seen as most appealing sectors over the medium term

Q. Which of these sectors are the most attractive for investment over the next two to three years?

% who ranked the sector in their top 3 choices

- SaaS: 77%
- Fintech: 59%
- B2C e-commerce: 36%
- B2B e-commerce: 36%
- Online media: 23%
- Healthtech: 23%
- Online food delivery: 14%
- AgriTech: 5%
- Mobility: 5%

SaaS advantages
- Large pool of talented developers known for producing quality software
- Growth in newer verticals with startups identifying profitable niches
- Increased sales efficiency due to the success of the ecosystem and global adoption of Indian products

Fintech advantages
- Growing underpenetrated middle class with investable income
- Expanding B2B lending vehicles, along with better credit access for underserved borrowers
- Rising number of micro-pay transactions, especially through UPI

B2C/B2B e-commerce advantages
- Rising consumer demand from T2+ catalysed by emerging e-commerce models like social commerce, live commerce and creator commerce
- Opportunities abound to help businesses get organised, streamlined and digitised

Notes: Fintech includes digital payments, digital investments, digital lending, and insurtech; B2C e-commerce includes marketplaces (i.e., Flipkart), quick commerce, D2C brands and platform-enabled social commerce (i.e., Meesho); AgriTech includes online farm inputs; Base: n=22; UPI=Unified Payments Interface.

Source: Investor survey.
Navigating India’s digital decade
7 imperatives to help businesses **today** thrive **tomorrow**

**Evolving with the consumer**

Businesses looking to adapt to the future must understand consumers’ changing needs and strive to foster an authentic & intimate relationship with them.

- **Mind share = market share**
- **Convenience at the core**
- **Personalisation wins love**
- **Values over value**

**Tapping into the power of digital**

Businesses must leverage digital technologies to drive growth and streamline operations to stay competitive.

- **Brave new worlds**
- **Operating model 2.0**
- **Nurture new revenue streams**
Mind share = market share

Lean on inclusive content, communities and gamification to drive user engagement and increase mindshare — and ultimately, sales

Consumer attention is getting shorter, and the battle for it fiercer. In 2022, 500 hours of videos were uploaded to YouTube per minute (vs. 48 hours in 2011) — and that’s just one of many platforms. As pressure for profit intensifies, customer acquisition and retention is increasingly top of mind for tech companies and their investors, but acquisition and retention via discounts have become unjustifiably expensive. Three alternatives that don’t exhaust marketing budgets are developing engaging content, building a strong community and gamifying the user experience. 

Offer engaging content

By offering content that’s engaging, shoppable and entertaining, a brand is more likely to nurture stickiness on the platform. Brands that are top of mind are more likely to be recommended to others and enjoy more repeat purchases, giving the brand a solid competitive advantage.

Mynta Studio is a content destination known for its original, entertaining and shoppable content, which are largely created by influencers and brands themselves. This content platform engages about 20% of Mynta’s MAUs (as of November 2021).

MyGlamm is home to shoppable blogs that discuss everyday and trending topics, such as beauty tips that are embedded with the ability to purchase items mentioned in the article.

Create user communities

Online communities can be valuable tools for businesses. By providing a space for customers to authentically interact with each other and with the brand, customer engagement rises, valuable feedback is given, customer support costs are reduced, brand awareness goes up and sales are likely to grow.

Firstcry Parenting, India’s largest parenting community, nurtured an active community of 15M users (per month), 1.3M YouTube channel subscribers and 360K+ and 160K+ followers on Facebook and Instagram, respectively.

OnePlus Community spurs engagement with its 6M+ members by working closely with them to design new products, give them priority on OnePlus news and alert them of member contests.

Gamify the platform

Gamification can help increase engagement by making tasks more fun and rewarding. When users are engaged, they are more likely to spend time on a website or app, which can lead to increased sales.

Financial education app Zerodha Varsity made learning simple, fun and engaging by building in gaming elements like progress bars, up-level certifications, quizzes, etc.

Notes: 1. As of May 2023; MAU=Monthly Active Users. 
Source: Bain analysis.
Convenience at the core

Reliable solutions and content that simplifies life for the consumer, will be favoured

In today’s fast-paced world, consumers are always looking for faster, easier and more convenient solutions. Rising incomes and busy schedules have further ramped up everyday spending on conveniences like food deliveries and ride-hailing services.

Consumers are leveraging digital tools to make more informed purchase choices. Businesses that provide the most reliable, flexible and easy-to-use solutions, and helpful content are the most likely to capture hearts and market share.

Reliability

There are now more options than ever before and consumer decisions are becoming increasingly difficult. Being able to trust a brand’s quality and service helps users save time, money and effort from second-guessing or seeking an alternative later.

Pluckk delivers pre-washed, handpicked non-GMO vegetables and fruits right to customers’ doorsteps, with a $5M annualised run rate by October 2022.

BluSmart is an electric vehicle ride-hailing app that promises its customers punctuality, zero cancellations and no surge fees. Dependable and affordable, the transport player holds a fleet of 3K cars and raised $75M in 2022.

Flexibility

Allowing customers to tailor the brand experience through product customisation, service preferences or even price options, means customers can opt for what works best for them. By not expecting them to make changes in their stressful lives is providing a convenience that consumers want.

Furlenco offers rental furniture at a fraction of the cost it takes to purchase, making it easy for customers to upgrade as their needs evolve.

cult.fit enables busy customers to choose from a range of workouts and to exercise either from home or at its centres, earning the fitness platform $110M of revenue in 2022.

Simplification of the everyday

Consumers appreciate brands that make a task or chore easier, like apps that simplify communication or order groceries. By helping people achieve tasks more quickly, whether through voice commands or easy refunds, they are enabling consumers to do more with their time.

Inshorts summarises news articles into less than 60 words and delivers them to the reader based on their preferences.

Clear simplifies tax filing by using pre-filled data from uploaded documents to plug into the income tax portal. Over 6M income tax returns have been filed through the platform.

Sources: Bain analysis.
Personalisation wins brand love

Customised recommendations, promotions and rewards key to unlocking brand love and loyalty

People are getting inundated with content and product/service choices, and it’s making them want more relevant, personalised experiences. Fortunately, AI and pre-trained Machine Learning (ML) models have unlocked mass personalisation and enabled brands to deepen the relationship with their customers. Companies that leverage advanced technologies to tailor the customer experience across the funnel are well-placed to deliver better outcomes, including stronger brand loyalty, higher repeat purchases and reduced marketing costs.

Platform/Product discovery
- **At the awareness stage**, personalisation can help reach a wide range of customers. Through targeted ads and messaging, brands can appeal to specific demographics, interests or need states.

Search and recommendations
- **At the consideration stage**, guide customers along by providing information they need to make their decision, like via product recommendations and reviews.

Sales and checkout experience
- **At the decision stage**, personalised reminders and prompts such as discounts, free shipping or other incentives can help encourage customers to purchase a specific product or brand.

After-sales experience
- **At the post-purchase stage**, tailored touch points through newsletters, loyalty programs or customer support are especially useful for keeping customers engaged and coming back for more.

<table>
<thead>
<tr>
<th><strong>Company</strong></th>
<th><strong>Technology/Innovation</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rephrase.ai</td>
<td>Deploys avatars in hyper-personalised video ads to enable scaled and effective communication.</td>
</tr>
<tr>
<td>Starbucks</td>
<td>Delivers AI-powered in-app messages and notifications based on customer preferences, recent activities and past purchases, driving 3x incremental revenue.</td>
</tr>
<tr>
<td>Spotify</td>
<td>Highly curated and personalised recommendations are generated by an advanced AI engine, spurring a 5x surge in monthly user engagement (vs. its closest competitor).</td>
</tr>
<tr>
<td>AmazonGo</td>
<td>Cashierless checkouts at retail stores leverages IoT, computer vision and other AI technologies that are based on customer movements.</td>
</tr>
<tr>
<td>Zomato</td>
<td>Virtual chatbot provides personalised, round-the-clock customer support.</td>
</tr>
<tr>
<td>Bharat Petroleum</td>
<td>Introduced multilingual virtual chatbots with Natural Language Processing (NLP) capabilities to help manage customer feedback and resolve customer queries.</td>
</tr>
</tbody>
</table>

Notes: IoT=Internet of Things.
Source: Bain analysis.
Values over value

Brands today need to deliver on more than just quality and performance, they need to resonate on values. Consumers increasingly prefer brands that align with their value systems, which often include social impact, sustainability, and wellness. Consumers, especially young people, gravitate towards brands that deliver positive impact in their life and the environment around them. Companies that are purpose-driven with a strong ethos will capture the much-coveted share of wallet; functionality will be considered a hygiene factor while impact/life-changing elements the differentiators.

The Elements of Value pyramid counts 30 elements that determine the perceived value of a product or service. They can be broken down into four main sections — at the bottom are functional elements, then emotional elements, life-changing elements, and finally, social impact.

- **Ather** manufactures and sells electric two-wheelers. Despite selling at a 40-60% price premium over non-electric scooters (mainly due to lower cost of ownership and high top-of-the-pyramid intangible benefits), their revenues surged 400%+ YoY between 2021 and 2022.

- **24 Mantra** sources organically certified staples like dal and salt directly from farmers so that profits are funneled back to the community. While they are 40-60% more expensive, their revenues jumped 1.5x between 2019 to 2021, proving that Indian consumers are willing to pay for more ethical brands.

Sources: BSE India, Bain analysis.
## Brave new worlds

Digital businesses that established themselves on home turf are now looking overseas for new growth opportunities. Audiences both at home and abroad are becoming fervent adoptees of India’s digital platforms and solutions. At the same time, many consumers all over the world seeking out the best solutions, products and brands, regardless of where they come from. This has flung open the door for Indian companies. But to achieve success, brands must ensure their offerings are thoughtful and inclusive for all audiences.

### Overseas market

**B2C:** With powerful technology and global ambitions, consumer products and services are increasingly hailing from India.

- **Lenskart** expanded into 20 countries, including Owndays, a Japanese eyewear retailer they acquired majority stake in 2022.

**B2B:** Best-in-class technology and solutions offer Indian tech/SaaS players export opportunities.

- **Postman** simplified the API creation process and streamlined collaboration. Today, 17M+ developers and 500K+ companies use their services globally. Their 2022 revenue stands at ~$100M.

### T2+ India market

**B2C:** Waves of Indians from T2+ are going online and becoming increasingly savvy digital consumers.

- **Sugar Cosmetics** is available in 35K+ multi-brand outlets across 500 cities and towns, leveraging micro-influencers to increase customer awareness via their offline stores. 60%+ of their revenue comes from T2 and T3.

**B2B:** Digital proliferation among India-focused businesses (e.g., agriculture) has carved out new opportunities.

- **FloBiz** helps businesses with invoice generation and accounting. With 6M+ active users, mostly from T2 and T3, a multi-lingual approach has been taken, and is available in Hindi, Gujarati, Tamil, etc.

**Cloud software suite Zoho** helps manage business processes like customer relationships, accounting, marketing, etc. With $1B revenue in 2021, their solutions and tools are used by 80M+ users globally, namely in US and Europe.

**Trulymadly** is an online dating platform with 11M+ app downloads. 54% of its users and 42% of revenue is generated from non-metro cities.

Sources: Bain analysis.
As digital continues to shape how we do and will conduct business in the future, embracing new technologies is the only means of staying ahead of the curve.

### Operating model 2.0

Graduating to 2.0 indicates that digital solutions have helped increase business efficiency, output and potential substantially.

<table>
<thead>
<tr>
<th>Digital technologies</th>
<th>Areas of focus</th>
<th>Tools</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural language processing</td>
<td>Customer and channel engagement</td>
<td>Yellow.ai, Yugasa Bot</td>
<td><strong>Bajaj Finserv</strong> deployed multilingual virtual assistants powered by natural language processing model to support customers across the customer lifecycle, helping them achieve ~$16M cost savings a year.</td>
</tr>
<tr>
<td>AI-driven sales optimisation</td>
<td>In-store sales optimisation</td>
<td>Agrex.ai</td>
<td><strong>Bata</strong> used AI-powered video analytics to boost in-store sales. Using existing video infrastructure, they analysed customer segments and emotions that certain products evoked.</td>
</tr>
<tr>
<td>Robotic Process Automation</td>
<td>Operational efficiencies</td>
<td>Ui Path Automation Anywhere</td>
<td><strong>Tata Sky</strong> leveraged Robotic Process Automation (RPA) to automate 17 processes, including in finance, supply chains and tax reconciliation, saving the company 10K+ hours per year.</td>
</tr>
<tr>
<td>Big data analytics</td>
<td>Data analysis</td>
<td>Amazon Web Services, Microsoft Azure</td>
<td><strong>Indegene</strong> implemented cloud-based data solutions to extract insights from adverse events so they could take pre-emptive actions, achieving 80% time savings.</td>
</tr>
<tr>
<td>Cybersecurity measures</td>
<td>System protection</td>
<td>SecuroniX, Palo Alto Networks</td>
<td><strong>Ashok Leyland</strong> upgraded their security network to enhance protection, improve security services management and optimise costs, leading to a 90%+ reduction in time to set up security for new stores as well as lowered costs.</td>
</tr>
<tr>
<td>AI-driven HR solutions</td>
<td>Talent management</td>
<td>Leena AI, Eightfold.ai</td>
<td><strong>Vodafone Idea</strong> deployed AI-driven HR solutions to streamline their employee grievance mechanism, which significantly enhanced employee productivity by resolving 90%+ of employee queries without escalation.</td>
</tr>
</tbody>
</table>

Sources: INDIAai, Bain analysis.
Nurture new revenue streams

Expanding ‘beyond the core’ to capture greater market share

Making the most of India’s incredible digital consumption trajectory means businesses will need to invest in seeking out new audiences, cultivate new consumer habits and create the products and services that satisfy these needs. With the right enablers, talent and commercialisation model, businesses will be able to monetise their intangible and tangible assets and add to their topline.

Consider adding supplementary services that enhance the customer experience or expands the current offering for an even more seamless experience.

Fintech solutions
Cater to the financial needs of your audience by offering BNPL, credit solutions, or e-wallets to compliment your core offerings.
B2C and B2B lending can also provide lucrative monetisation opportunities provided there’s visibility into customers’ financial needs and circumstances.

Data and insights
Leverage first-party data to generate valuable insights that other players can use to help inform their strategies.
First-party data can be of interest to data brokers (e.g., Nielsen), consulting firms and insurance companies, among others.

Technology
Offer white-labeling technology and related infrastructure services like data processing and storage to third parties.
Companies can also provide a versatile platform to test products and promote new product launches.

Physical infrastructure
Physical infrastructure like warehousing facilities and delivery fleets can provide new revenue streams using existing assets and capabilities to offer value-added services.
Add-on services like inventory management can also generate additional revenue streams.

Examples

- **Paytm’s** loan disbursement platform facilitates loans from leading NBFCs to customers, earning a commission of 2.5-3.5% on the loan amount.
- Based on the behaviours of its 300M+ users, **PayU** provides payments-related insights (i.e., propensity score, digital engagement score, affluence score, etc.) to 500K+ businesses.
- **redBus** provides SaaS solutions to 1.800+ bus operators, helping them manage their ticketing and inventory.
- **eKart** offers end-to-end supply chain solutions to companies across India and handles 10M+ shipments a month.

Notes: BNPL=Buy Now, Pay Later; MAU=Monthly Active Users; NBFC=Non-banking financial companies.
Source: Bain analysis.
4 new enablers have gained prominence over the decade

Emerging enablers

- Sustainability
- Inclusivity
- Trust and security
- Responsible AI
These 4 enablers can help carry India towards a more sustainable internet economy, but will require participation from all parties.

**Sustainability**
- Taking care of the planet is increasingly important to both consumers and businesses.
- Businesses and regulators have started adopting measures to reduce carbon footprint.
- A concerted effort from all the parties is required to put sustainability at the heart of business strategy and operations.

60% of investors surveyed indicated that ESG compliance is an important factor in their investment decisions over the next two to three years.

**Inclusivity**
- Successful startups (i.e., Animall and Meesho) were built on products geared for non-metro audiences. They’ve attracted large VCs and raised awareness about the digital opportunity among non-metro segments.
- Public and private entities must help non-metro users transition from ‘content consumers’ (i.e., YouTube viewers) to ‘commerce transactors’ (e.g., a ride-hailing or food delivery consumer).
- Fast, reliable connectivity, improved digital literacy and offerings in local languages are needed to close the gap.

480M+ expected number of rural internet users by 2025.

Note: Base: n=22
Sources: Investor survey, Bain analysis.
Business leaders must collaborate with policymakers to balance data protection and innovation

**Trust and security**

- Rising cases of cyberattacks, digital fraud and misinformation have triggered an urgent need for a safer internet. Each and every security breach can harm the user, damage their trust and slow digital adoption.

- The draft Digital Personal Data Protection Bill is a positive step in the right direction, but as AI and small financial transactions gain traction, more proactive measures are needed.

- As exports grow, infrastructure that supports safe cross-border data flows is critical.

- Small financial fraud detection and prevention will gain greater importance as digital payments adoption goes mainstream.

7x rise in cyberattacks\(^1\) over the last four to five years (0.2M in 2018 to ~1.3M in 2022)

**Responsible AI**

- AI is creating new opportunities to improve people’s lives everywhere, but it’s also raising questions about the best way to build fairness, interpretability, privacy and safety into policies and systems.

- Proliferation of AI requires new regulations that promote greater responsibility and usage in an ethical, transparent, and inclusive way.

- Data used to train AI models is diverse and practices that help avoid bias and discrimination are needed. AI usage must not compromise privacy (e.g., facial recognition should not be applied to publicly available video content).

3 in 4 executives see AI ethics as a competitive differentiator

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Note: 1. “Cyberattacks” include vulnerable services, unauthorised network access, viruses or malicious code. Source: Bain analysis.
India is well on track to $1T by 2030, but getting there will require a balancing act and solving for complex challenges.

Where do we draw the line between personalisation and data privacy?

How do businesses balance the drive for profitability and growth with innovation?

AI opens new frontiers, but how do we harness its power in a responsible manner?

How can we ensure that India's growing entrepreneurial ambitions remain undeterred in the current economic climate?

India's talent has great strength and scale, but how do we upskill and reskill them to maintain relevance amidst an ever-evolving landscape?
Annex

Sector deep dives
B2C e-Commerce continues on upward trajectory on the back of new growth areas

India’s new online shoppers tend to be young, and come from Tier 2+

~220M online shopper base\(^1\)

~40M new shoppers added annually\(^1\)

1 in 3 new shoppers are aged <25 years\(^2\)

>60% new shoppers are from smaller towns\(^3\)

Online share in 2022

~5% ~20% 28-30%

Online share

India is home to the world’s 2nd largest online shopper audience, behind China’s 900M+ shoppers. US is 3rd with 200M+ online shoppers.

B2C e-commerce is slated to grow nearly 6x its current size

<table>
<thead>
<tr>
<th>Grocery</th>
<th>Non-grocery</th>
</tr>
</thead>
<tbody>
<tr>
<td>60-65 B2C e-commerce GMV ($B)</td>
<td>55-60</td>
</tr>
<tr>
<td>2022</td>
<td>2025</td>
</tr>
<tr>
<td>120-130</td>
<td>110-120</td>
</tr>
<tr>
<td>350-380</td>
<td>50-60</td>
</tr>
</tbody>
</table>

CAGR (‘22-‘25) CAGR (‘25-‘30)

60-65 5-6x 26% 38%

120-130 110-120 22%

300-320 350-380 26% 35%

Notes: Online share is defined as B2C e-commerce gross merchandise volume (GMV) as a percentage of total retail market in India (including small family-owned businesses); B2C e-commerce includes marketplaces (e.g., Flipkart), quick commerce, D2C brands, platform-enabled social commerce (e.g., Meesho); B2C online home services market (e.g., Urban Company) and goods sold by Indian merchants overseas via e-commerce platforms; Smaller towns refer to towns outside top 150 cities by population; 1. Metrics pertain to CY 2022; 2. Metrics pertain to CY 2021. 3. Smaller towns refers to towns outside top 100 cities by population.

Source: Bain analysis.
B2C e-Commerce: New customers and direct-to-customer (D2C) offerings have bumped up online purchases of big-ticket items

Notes: “Big-ticket items” refer to items valued at more than INR 10,000, such as mobile phones, refrigerators, etc.; 1. Base: n=1,572.

Source: Google commissioned Kantar e-Conomy India consumer survey

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Platform/product preferences

**Big-ticket items**

- **Entry into the category**: 69% only started using e-commerce in the last two years
- **Perceptions**: 87% are happy with their last experience, 87% intend to stay loyal to the brand

- **65%** prefer purchasing from e-commerce platforms such as aggregators or marketplaces (e.g., Amazon)
- **28%** prefer purchasing directly from official brand websites and multi-brand stores (i.e., department stores)

**Core expectations**: Price, trust, payment and delivery experience

**Differentiators**: Customer service, product variety and sustainable options

**Groceries**

- **Entry into the category**: 71% only started ordering online groceries in the last two years
- **Perceptions**: 94% are happy with their last experience, 87% intend to stay loyal to the brand

- **41%** of total grocery purchases are done online
- **69%** prefer purchasing personal care products online (vs. other product categories)

**Core expectations**: Price, trust and product quality

**Differentiators**: Customer service, product variety and sustainable options

---

Annex: Sector deep dives
B2C e-Commerce: The path forward

**Inclusive features like vernacular and voice searches are making the online user experience more accessible to smaller towns**

These inclusive features are boosting engagement on all levels. 2021 saw a 5x YoY growth in voice and 3x YoY growth in vernacular search users, with 70% of vernacular shoppers coming from smaller towns.

Reseller commerce is also gaining traction in smaller towns, with 40% reseller model users being first-time e-retail shoppers. 70% of these new shoppers belong to smaller towns.

**A diversified channel strategy is key to balancing scale and control.**

D2C brands (e.g., Sugar Cosmetics, Mamaearth, etc.) alone will not yield the desired scale, but in their absence, there will be less valuable consumer engagement opportunities.

- The number of D2C brands is expected to reach 200-250K by 2025 — up from 70-80K in 2020. Driving scale solely on the back of D2C channels remains a challenge, however, due to high acquisition costs.
- Established online-first brands are expanding into D2C due to greater control of customer data and greater ability to grow user engagement.

**With <1% online share, online groceries present a sizable, untapped opportunity**

- 25% of Indians those who shop online for their groceries intend to order more frequently from now on.
- Newer business models or services like instant deliveries look promising, but players need to develop an economically viable model that mediates between low order values, costly operations and delivery logistics.

Notes:
- Smaller towns refer to towns outside top 150 cities by population.
- D2C=Direct-to-customer.
- ‘Instant delivery’ is defined as <15-minute grocery deliveries using micro-fulfillment centres spread out across select cities.

Sources:
- Google commissioned Kantar e-Conomy India consumer survey.
- Bain analysis.
Online food delivery

Food deliveries are thriving but still behind the potential seen in more developed markets

1B
yearly orders via food delivery apps

65M
Indians ordered food online

200K
average monthly active restaurant partners

11-13%
Online Share in 2022

~16%

~20%

Consolidated industry structure can help drive better profitability across the sector

Online food delivery GMV ($B)

2022
8-9

2025
4-5x

2030
35-40

CAGR
('22-'25)
22%

CAGR
('25-'30)
19%

Online share
11-13%

15-17%

20-22%

Entry into the category
66%

started using online food delivery services in the last two years

Perceptions
96%

are happy with their last experience

89%

intend to stay loyal to the brand

Platform/product preference

44%
of outside food consumption occurs through online ordering.

91%
prefer using aggregator platforms over direct restaurant apps/websites because they offer more options than a single app.

Notes: Online share is defined as online food delivery GMV as a percentage of total non-home-cooked meals across restaurant dine-in, takeaways, ready-to-eat, and online delivery; Online food delivery refers to delivery of food ordered online using an app or a website; 1. Metrics pertain to FY22; 2. Metrics as of CY22.

Sources: Zomato investor releases, Tracxn; Analyst reports, Secondary research, Bain analysis.
Online food delivery: The path forward

Businesses need to test new propositions, such as HyperPure on Zomato or Gourmet on Swiggy, to capture greater value from premium users

Online food delivery’s Gross Order Value (GOV) increased 2x YoY in 2021 (vs. 1.7x over 2019), primarily driven by growth in family and/or bulk orders during the pandemic. As the country re-opened, dining out saw a swift recovery that resulted in a mild drop MAUs.

Demand for healthier food options is on the rise, with 75% of existing food delivery customers willing to pay a premium for fresh, organically-sourced and/or chemical-free ingredients. Food delivery players should work with their restaurant partners to increase access to these healthier options.

Long-term growth prospects remain positive, given Indians’ shift away from home-cooked meals over the years. Increasing order frequency stands to be a significant growth driver in the future, as 20%+ of existing customers intend to order more online in the coming 12 months.

Full-service restaurants likely to continue moving towards cloud kitchens to overcome manpower and real estate overheads

- Full-service restaurants are increasingly setting up separate cloud kitchens to service online deliveries, while leveraging established brand names to attract customers.
- Favourable economics will drive growth in cloud kitchens at a pace faster than the overall food delivery market, despite leaders shifting focus towards profitability.

The ONDC project is taking bold steps to connect restaurants to end consumers, reducing dependency on larger aggregators

- Recently launched, government platform ONDC is gaining popularity with over 10K orders per day. This is mainly driven by its competitive pricing, which is 30-80% lower than traditional food delivery apps.
- There remains headroom for improvement in delivery infrastructure so that fulfillment operations can be further enhanced.

Core expectations

- Price, faster delivery, food variety

Differentiators

- Customer service

Notes: ONDC=Open Network for Digital Commerce; MAU=monthly active users; 1. Base: n=1,543. Sources: Google commissioned Kantar e-Conomy India consumer survey, Bain analysis.
Edtech: Near term challenging but offline mismatch in supply of teachers vs. demand for courses will fuel long-term growth

Edtech on gradual growth trajectory, with various hurdles ahead

150M+ registered users
15M+ Indians registered for a paid online course

Rise in adoption by 2030 is due to an increasingly digitally-savvy audience

<table>
<thead>
<tr>
<th>Year</th>
<th>Online share in 2022</th>
<th>Edtech GMV ($B)</th>
<th>CAGR ('22-'25)</th>
<th>CAGR ('25-'30)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>2%</td>
<td>4</td>
<td>26%</td>
<td></td>
</tr>
<tr>
<td>2025</td>
<td>3-4%</td>
<td>5-6x</td>
<td>22%</td>
<td></td>
</tr>
<tr>
<td>2030</td>
<td>8-10%</td>
<td>20-25</td>
<td></td>
<td>22%</td>
</tr>
</tbody>
</table>

Upskilling and online K-12 tuition segments expected to grow at 30%+

Platform/product preferences

- Learners use an average of 2 edtech platforms.
- Edtech platforms account for nearly 50% of users’ total study hours, reiterating the quantum of usage.

Entry into the category

- 81% started using edtech platforms only in the last two years.

Purpose of the paid course/future preferences

- 28% of students use it to prepare for entrance (e.g., Joint Entrance Exam (JEE), Common Admission Test (CAT), Graduate Management Admission Test (GMAT), etc.) or competitive exams.
- 23% want to learn a new skill for their work.
- 55% are open to taking an expensive online courses even if means taking a personal loan.

91% are likely to recommend the service.

Notes: 1. As of 2022; 2. Refers to undergraduate or postgraduate courses. e.g., Institute of Technology – Joint Entrance Exam (JEE), Common Admission Test (CAT), Graduate Management Admission Test (GMAT), etc.; 3. Online share is defined as GMV share of e-learning in the overall education market, which includes K-12 (pre-primary, schools, tuition), post-K-12 (corporate L&D, certifications, and degree/diploma) and test prep market.

Sources: Google commissioned Kantar e-Conomy India consumer survey, Bain analysis.
Edtech: The path forward

Improving economics will remain a top priority in edtech. Covid-19 bolstered the sector, with 18 deals in 2021, but 2022 saw a number of consolidations that resulted in large, inefficient organisations.

Firms invested heavily in customer acquisition during the pandemic, which drove accelerated growth but also led to high costs of 75% of sales (vs. 22% prior to Covid). Fast and easy funding dried up in 2022, forcing edtech players to chase synergy realisation and prioritise cost optimisation in areas such as marketing and operations.

Online certification and diploma courses will see rising demand since today’s fast-evolving nature of work requires regular upskilling and reskilling.

- The government launched India’s first digital university in January 2023, which offers certificate and diploma courses.
- A lack of qualified teachers is likely to propel students towards online test preparation platforms, with ~30% of edtech customers having paid for an online test preparation course.

Edtech giants are revisiting their value proposition by testing an omnichannel approach as post-pandemic demand drops.

- A majority of edtech users (~60%) prefer offline-online models compared to pure-play online courses. BYJU’S acquired offline player Aakash for ~$1B, indicating that hybrid models are fast becoming a focus area.

Core expectations
- Trust, flexibility, accessibility

Differentiators
- Authenticity (recognised by industry), quality of content

Note: 1. Base: n=1,552.
Sources: Google commissioned Kantar e-Conomy India consumer survey, Bain analysis.
Healthtech: Took off during the pandemic and now emerging from nascency

Healthtech1 continues to pick up pace as people enjoy the convenience and privacy

60M orders made from e-pharmacies2
8K healthtech startups exist in India3

Online share in 2022
- 4-5%
- 7%
- 20%

60M orders from e-pharmacies in 2022
8K healthtech startups in India

Sector growth will be fueled by new behaviours and trends as health and wellness become top of mind

<table>
<thead>
<tr>
<th>Year</th>
<th>E-pharmacy</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>1-2</td>
<td>4-5</td>
</tr>
<tr>
<td>2025</td>
<td>12-15x</td>
<td>3-4</td>
</tr>
<tr>
<td>2030</td>
<td>20-25</td>
<td>19-23</td>
</tr>
</tbody>
</table>

CAGR ('22-'25): 41%
CAGR ('25-'30): 38%

Platform/product preferences

56% order medicines about once every two weeks or less
38% of total medicine purchasing occasions are done online

Entry into the category
71% started ordering medicines online only in the last two years

Perceptions
92% are happy with their last experience
84% intend to stay loyal to the brand

Notes: 1. Healthtech accounts for e-pharmacy only and defined as share of GMV of e-pharmacy platforms in overall pharmacy market; Others include teleconsultation, e-diagnostics and online fitness & wellness; 2. Metrics pertain to CY22; 3. As of May 2023
Sources: Google commissioned Kantar e-Conomy India consumer survey, Bain analysis.
**Healthtech: The path forward**

Healthtech offers sizeable headroom for growth — only 2% of India’s internet users go online for healthcare reasons, namely for medicines (vs. 26% in China for their overall healthcare needs).

The pandemic accelerated adoption of e-pharmacies, with 70% of current digital users having tried e-pharmacies for the first time during or in the aftermath of the pandemic. Having experienced the convenience, 77% of current e-pharmacy users have said that they will continue ordering their medicines online at the same or more frequently.

Relatively high take rates and quicker breakeven timelines are attracting the interest of big players like Tata and Reliance, which in turn are catalysing infrastructure at scale.

**Core expectations\(^1\)**
- Trust, price, delivery

**Differentiators\(^1\)**
- Customer service, brand availability

$\quad$ Chronic segment e-pharmacy offers great value proposition while acute segment presents challenges including lower order values and expectations for quick deliveries

- Buyers get better value and ensured availability, and sellers make positive unit economics due to planned nature of purchase combined with high ticket size.
- Players are testing faster delivery leveraging offline store network, with lower discounts and passing of delivery costs to buyers to balance unit economics.

The popularisation of buying medicines online has primed this customer set for other healthtech services, too

- Teleconsults with doctors are the most popular online healthcare service, followed by fitness workouts, booking doctor appointments or sample collection pick-up times. These set the stage for synergies across segments.
- Easy, one-stop-shop health hubs are starting to offer a range of wellness services from a single platform, leading to consolidation among players.

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Note: 1. Base: n=1,707
Sources: Google commissioned Kantar e-Conomy India consumer survey, Bain analysis.
Online travel: Gradually recovers past pre-pandemic levels

Online travel players need to re-focus on profitability as online penetration matures

~75M
flight tickets booked online¹

~100M
hotel rooms booked online¹

Notes: 1. Metrics pertain to CY22; Online share is defined as GMV share of bookings done online for flights, hotels, buses, railways, and car rentals via online travel agencies or directly through supplier apps/websites; Travel is defined as GMV of bookings done for flights, hotels, buses, railways, and car rentals through offline and online platforms; 2. 75% of users who booked accommodation or a flight or a train or a bus online from platforms like MakeMyTrip, Yatra, Cleartrip, etc or directly from brand websites like Indigo in the past 12 months; Base: n=1,553

Sources: Google commissioned Kantar e-Conomy India consumer survey, Bain analysis.

Sector to grow steadily and reclaim its role as key contributor to India’s internet economy

Online travel GMV ($B)

<table>
<thead>
<tr>
<th>Year</th>
<th>Online share</th>
<th>2022</th>
<th>2025</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CAGR ('22-'25)</td>
<td>28%</td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>Online travel market grew at 57% in 2022-23, and expected to grow at 15% in 2023-25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Platform/product preferences

- 56% of leisure travel bookings are made online
- 76% prefer to use travel aggregator platforms²

Entry into the category

65% started booking online travel only in the last two years

Perceptions

- 89% are happy with their last experience
- 82% intend to stay loyal to the brand

Notes: 2. 4-5x

Online travel market grew at 57% in 2022-23, and expected to grow at 15% in 2023-25

CAGR

- 28%
- 15%

55-60

62% 68%
Online travel: The path forward

India’s domestic flight market recovered to pre-pandemic levels in January 2023. In Q1 this year, passenger traffic reached 37.5M, compared to 35.5M in Q1 2019 — a 5% increase. This is the first quarter of sustained growth in domestic passenger traffic since the onset of Covid, ending a long-drawn recovery.

India’s travel vertical expected to fully recover in the near future

New travel occasions, consumer behaviours and preferences key to driving growth

- 55% of online travel users are taking leisure trips primarily to explore new destinations or cultures, learn something new, do charitable work, do outdoor activities, or try new cuisines.
- Continued work from home, together with rising internet penetration, are likely to prop up demand for staycations and quick getaways.
- 35% of online travel users show preference for spontaneous trips. As income levels rise, travelers will be increasingly willing to pay a premium for flexibility and superior service.

India’s government plans to connect more cities via air by adding 80 airports over next five years

This massive effort will require online travel platforms to evolve their products, especially for T2+ India consumers, to feature lighter apps, voice and vernacular-enabled search.

Core expectations*
Trust, price/promotion, flexibility

Differentiators*
Loyalty programmes, customer support
Online ride-hailing: Demand for the service is strong though profitability remains difficult

Online ride-hailing has seen incredible uptick due to accelerated adoption during Covid-19

880M cab rides booked through apps

~1B autos and bikes hailed through ride-hailing apps

25M Indians have used online ride-hailing services

Notes: 1. Metrics as of CY22; Online share is defined as GMV share of rides (cars) booked online using apps out of the overall ride-hailing market which includes bookings done for cabs through offline means (e.g., telephone) and through online means (e.g., Uber, Meru cabs); Two and three-wheeler market not considered while estimating online share due to significant informalisation present in the segment.

Sources: Google commissioned Kantar e-Conomy India consumer survey, Bain analysis.

Growth to be mainly driven by new product features and audience segments

Online ride-hailing GMV ($B)

2022

2025

2030

CAGR ('22-'25)

CAGR ('25-'30)

25-30%

35-40%

55-60%

19%

19%

25-30%

4-5x

17-20

Online share

Entry into the category

65% started booking cabs, cars and bike rides in the last two years

Perceptions

93% are happy with their last experience

84% intend to stay loyal to the brand

Platform/product preferences

On average, consumers book cab, car and bike rides 12 times a month.

44% of hailed-rides are to go to and from the airport or railway station — the most common use case
Online ride-hailing: The path forward

Next leg of growth is expected to come from autos and bikes

The four-wheeler segment is witnessing stagnation on both supply and demand sides due to reduced driver incentives and rising fuel prices.

Autos and bikes constituted 25% share of the online ride-hailing market in 2022, and is expected to reach 45-55% in 2030, largely driven by sizeable penetration headroom. The current 15% penetration of automobile ride-hailing is expected to grow beyond 50% by 2027.

Beyond today's online ride-hailing options, electrification and automation will likely lead the next revolution in the sector. While still in development, advancements are progressing rapidly.

New models are emerging to address inefficiencies (e.g., cancellations or long wait times)

- Ease of booking, ride quality (including safer/cleaner rides, good drivers, etc.) and good customer service (positive experience in settling disputes with drivers) are the top qualities customers expect from their rides.
- Insurgents like Drife are offering commission-free models, where the driver don't pay the platform but instead allows the driver to set the price. Viability of such models remains to be seen, but initial response seems positive as Drife boasts 19K+ drivers and 72K+ customers.

Premiumisation offers monetisation opportunities

- ~60%+ of metro ride-hailing users are willing to pay a premium for features such as environmentally friendly vehicles, assured safety during late hours or better vehicles.
- Existing players need to integrate these as value-added features to generate higher revenues from premium users.

Core expectations
- Trust, ease of booking, ride quality, customer service

Differentiators
- Better reviews, better app design, sustainable options (especially in smaller towns)

Notes: 1. As of May 2023; 2. Base: n=1,567.
Sources: Google commissioned Kantar e-Conomy India consumer survey, Bain analysis.
**Online media:** Growing consumption of digital content is driving a fundamental shift in the media landscape

**New content formats and delivery are needed to meet the rising expectations of India’s audiences**

- **110M** people have paid to play online mobile games
- **100M+** paid subscriptions on video OTT platforms

**Online share in 2022**

- 32-35%
- 72%
- 82%

**Significant growth in online media expected in coming years**

<table>
<thead>
<tr>
<th>Year</th>
<th>Online media revenue ($B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>8-9</td>
</tr>
<tr>
<td>2025</td>
<td>15-20</td>
</tr>
<tr>
<td>2030</td>
<td>40-50</td>
</tr>
</tbody>
</table>

**5-6x** growth is expected

**Platform/product preferences**

- Indians spend ~3 hours a day watching video content recreationally
- 60% of total watch time is spent on paid and subscribed platforms
- 73% watch on mobile, followed by 13% on TV

**Entry into the category**

- 73% started streaming video content on paid platforms in the last two years

**Perceptions**

- 95% are happy with their last experience

Notes: 1. Metrics pertain to calendar year (CY) 2022; 2. Metrics pertain to CY 2022; Online share is defined as share of ad spend on digital platforms out of total ads displayed on television, cinema, radio, print, out-of-home and digital platforms; Online media includes digital advertisements, gaming (browser-based, smartphone, tablet, console, and PC games) and video/audio streaming services; OTT = over-the-top.

Sources: Google commissioned Kantar e-Conomy India consumer survey, Bain analysis.
Online media: The path forward

Focusing on India-first games will bring more players to the already fast-growing gaming population

Legacy Indian games such as popular board game Ludo King are attracting a completely new segment of players — the 45+ year olds. With 40-60% of total gaming population coming from T2+ towns, the Ludo King app has garnered 800M+ downloads on the Google Play Store alone.

Fantasy gaming has emerged as a favourite — not surprising given cricket’s large fan base in India. Regulations in the segment are still evolving, and incumbents are awaiting more clarity amidst growing demand.

eSports, a proven segment globally, remains a whitespace in India. While it is witnessing growing demand amongst younger Indian gamers, overall uptake has been gradual. User base is expected, however, to reach critical mass in the next one to two years.

~75% of digital content viewers intend to increase or maintain their OTT subscriptions, pushing providers to level up their offerings

- Time spent on social media and online videos has doubled, compared to time spent on traditional media. As a result, integration of content and commerce is expected to accelerate as brands continue shifting ad spend to digital channels.

Core expectations
- Quality of content, content variety shared experiences

Differentiators
- Price/promotion,
B2B e-commerce: A large addressable market with significant opportunities makes this sector one to watch

Profitability starting to emerge as early incumbents reach scale

45M+
orders catered through downstream B2B e-commerce platforms

72%
of manufacturers’ spend on B2B e-commerce has increased

6M+
farmers are selling via online platforms

| Online share in 2022 | 0.5% | 10% | 16% |

Notes: 1. Metrics pertain to 2022; 2. Specifically pertains to manufacturers’ spend on material procurement via B2B e-commerce channels; 3. As of November 2022, Online share is defined as share of GMV of products bought by businesses using online platforms. This includes upstream products such as raw materials (including farm inputs) and downstream products such as FG supply to channel partners.

Source: Bain analysis.

Geographic and market diversification essential to B2B e-commerce growth

B2B e-commerce GMV ($B)

<table>
<thead>
<tr>
<th>CAGR ('22-'25)</th>
<th>CAGR ('25-'30)</th>
</tr>
</thead>
<tbody>
<tr>
<td>44%</td>
<td>34%</td>
</tr>
</tbody>
</table>

B2B e-commerce penetration in the US is comparable to B2C e-commerce, but India has a significant gap that is expected to be bridged over the next four years.
B2B e-commerce: The path forward

A large addressable market of $1T+, a growing number of digitised MSMEs and scope to bypass middlemen provide opportunities for upstream B2B e-commerce, which currently sits at less than 1% penetration.

Existing players are venturing into multi-category plays to capture a larger market share. Moglix, which sold office supplies and industrial machinery, expanded into construction raw materials and broadened up their customer base. Some businesses are also vying for vertical integration as a way to grow share of the profit pool and gain more control on supply. OfBusiness acquired manufacturing units across key categories and was able to expand their business and reach.

B2B e-commerce continues to open doors to global markets for Indian businesses. OfBusiness, for example, enables 700K+ SMEs to bid for 20M+ tenders across 140 countries, and Zetwerk tripled its share of revenue hailing from exports to 16% within a year.

Farm inputs (i.e., seeds, fertilisers, and pesticides, etc.) currently face many challenges across the lengthy, fragmented supply chain. The sector will likely gain traction and attract more investor interest as players solve for accessibility, affordability and transparency.

Downstream B2B e-commerce platforms face near-term headwinds as unit economics remain unproven:

- Large brands will continue to leverage B2B e-commerce players to reach weaknesses in supply chains and distribution networks to tap underserved markets.
- As long as the tussle between incumbent distributors and e-commerce B2B players continues, consumer brands will tread cautiously and experiment with different sales channels as they gradually carve out their portfolios and territories.
**SaaS: India rapidly climbing the charts to become SaaS capital of the world**

**Saas companies starting to scale as ‘Make in India, Make for World’ goes mainstream**

1.6K¹ funded Indian SaaS companies⁴

42K² India-based employees working for Indian-owned SaaS companies⁵

95% leap in number of seed deals from 2019 to 2022

**As the ecosystem matures, large number of new entrants is expected across subsectors**

<table>
<thead>
<tr>
<th>SaaS revenue ($B)</th>
<th>CAGR (22-25)</th>
<th>CAGR (25-30)</th>
</tr>
</thead>
<tbody>
<tr>
<td>~5%</td>
<td>25%</td>
<td>21%</td>
</tr>
<tr>
<td>~50-55%</td>
<td>5-6x</td>
<td>12-13</td>
</tr>
<tr>
<td>2022</td>
<td>25-30</td>
<td>65-75</td>
</tr>
<tr>
<td>2025</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2030</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: SaaS refers to delivery of software apps over the internet accessed via licensing; India share is defined as share of revenue of Indian SaaS firms in the global market; Indian SaaS firms are defined as those that have been founded domestically by Indian founders (or founders of Indian origin) and have the majority of their workforce in India; 1. Annualised basis October 2022 year-to-date deal values excluding $1B Securonix deal; 2. Includes top 20 Indian SaaS companies by scale; 3. Metrics pertain to CY2022; ARR=Annual recurring revenue.

Source: Bain analysis.

Annex: Sector deep dives
**SaaS: The path forward**

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**Horizontal business software continues to attract the largest portion of funding in the SaaS ecosystem, followed by infrastructure software**

Sub-sectors such as marketing tech, workflow management and human capital management can expect to see more interest going forward.

Increasing cloud adoption, coupled with the replacement of legacy models, is likely to generate high demand for SaaS companies, especially those specialising in DevOps and specific DevTools. This is largely supported by India's extensive developer base (accounting for ~10% of total global developer community) and rapid product-led growth.

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**Pursuing global opportunities is not only possible, but critical if supported by enablers**

- Product excellence, competitive pricing and an effective go-to-market strategy are helping Indian startups gain a strong foothold in the global SaaS market. Success stories, including Postman and BrowserStack, have proven feasibility and have inspired a new generation of SaaS firms.
- Incubators and accelerators (e.g., xto10x and Upekkha), and events and initiatives sponsored by communities, including NASSCOM and SaaSBOOMi, have helped build a strong and supportive ecosystem among India’s SaaS companies.

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**Talent gap remain a critical challenge; SaaS players must address the limited supply and fierce competition for talent**

- Talent demand/supply gap remains a critical issue as demand growth continues to grow faster than supply. Demand for SaaS go-to-market, project management and engineering talent is expected to double or even triple between 2021 and 2025.
- Indian SaaS companies will not only compete with each other but also with consumer tech for talent (30-40% overlap in sources of engineering talent).

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Source: Bain analysis.
Digital payments: Broadening stepping-stone for digital commerce adoption

India-wide initiative UPI has propelled digital payments to new heights

5B+ monthly C2B UPI transactions completed

50M+ payment QR codes deployed in India

The rapidly consolidating industry structure will drive profitability over the longer term

Digital payments gross transaction value ($T)

- 2022: 0.6-0.7
- 2025: 1.2-1.3
- 2030: 3.1-3.2

CAGR (‘22-‘25) 27%

CAGR (‘25-‘30) 20%

Online share

- 2022: 32-34%
- 2025: 43-45%
- 2030: 55-57%

Notes:
- Digital payments include only C2B payments (modes of payments considered: credit cards, debit cards, netbanking, prepaid cards, and UPI); Overall payments include C2B digital and cash payments.
- Online share is defined as share of digital payments GTV in overall payments.
- 3. Financial years.

Source: Bain analysis.
Digital payments: The path forward

Rapid adoption of digital payments, along with innovations like Aadhar Enabled Payment System (AePS), FASTag and BBPS, are squeezing cash out

In early 2022, the Reserve Bank of India (RBI) rolled out UPI, a simple bank account-to-bank account transfer system that low-cost feature phones could support via an interactive voice response (IVR). The goal was to enable 400M additional people to participate in the digital payments ecosystem.

Cash maintains a strong foothold in India, with over 50% of Indians preferring to deal in cash transactions, according to a 2021 RBI survey. But adoption of UPI and QR code-based payment systems is expanding rapidly, with 2022's 50M QR codes expected to reach 250M+ by 2025 — and will likely displace cash over time.

Digital payment solution providers, such as payment gateways (PG) and point of sale (POS), are expanding into full-stack merchant solutions with the aim of driving higher engagement and ARPU

- PhonePe gained scale and user growth by incentivising platform usage with rewards. The company now drives hyperlocal commerce through its merchant ecosystem and cross-sells insurance and investment products to onboarded users.
- White label solutions (e.g., the brand’s logo on the payment screen) are offered by payment gateways like Paytm. These are gaining traction due to improved brand visibility and potential fraud prevention.
- Merchant-focused payment players, such as Pine Labs, are supporting merchants by building one-stop-shop solutions like consumer lending at the point-of-sale, merchant working capital financing and business management solutions. Some are now expanding into new segments like neo-banking.

Note: ARPU=Average Revenue Per Unit.
Source: Bain analysis.
Digital lending: **Short-term, small-ticket financing is gathering momentum, mainly driven by tech innovations**

Widespread use of data and AI is propelling digital lending forward, though regulators remain conservative

**5M**

- Online customers use buy-now-pay-later platforms

**45%**

- YoY growth in the number of total digital loans originated

As digital lending gains momentum, underserved Indians will gain access to financial products

**Digital personal and consumer loans disbursed ($B)**

- 2022: 20-22
- 2025: 46-50
- 2030: 130-135

**Online share**

- 2022: 11-13%
- 2025: 20-23%
- 2030: 38-42%

**CAGR (’22-’25)**

- 34%

**CAGR (’25-’30)**

- 21%

Notes: Digital lending includes personal loans (excluding credit card loans) disbursed/originated through digital channels (non-face-to-face, non-phone, or non-ATM interaction) by both fintech players and traditional institutions (banks, NBFCs, etc.). Online share is defined as share of digital lending in overall personal and consumer loans disbursals; 1. Metrics pertain to CY21; 2. Between 2019-2021; 3. Financial years.

Source: Bain analysis.
Digital lending: The path forward

Financing of small-ticket consumption is on a growth trajectory in semi-urban regions, mainly driven by younger users.

Average personal loan ticket sizes are declining given the spike in small-ticket-size loans (+120% CAGR in volume of loans disbursed from 2019 to 2022 for loans smaller than $650). Such loans are happening primarily in semi-urban India, driven by Millennials and Gen Zs.

Small-ticket-sized loans are seeing in-line or better asset quality performance than bigger ticket sizes, indicating that tech-powered due diligence to evaluate consumer risk has been effective.

BNPLs and PPIs both necessary for pivot to alternate business models, but for very different reasons:

- BNPL have seen robust growth while new regulations have forced PPIs to reform their business models.
- Prepaid payment instruments (PPI) wallets and card-based products have grown quickly given the convenience they offer. In 2021 alone, $25B-$30B of credit was disbursed to 15M BNPL users and three of India’s largest BNPL players witnessed a 200%+ YoY growth in MAUs between June 2019 and June 2022. India’s fintech industry also counted a total of 206M prepaid cards in circulation at the end of May 2022.

- In June 2022, RBI introduced new regulations that would restrict PPIs, like e-wallets, from offering lines of credit and prevent card-based lenders and BNPL players from extending revolving lines of credit. Businesses have since had to look for alternatives, such as acquiring NBFC licenses and rolling out bank account-based PPIs, etc.

Notes: Digital lending includes personal loans (excluding credit card loans) disbursed/originated through digital channels (non-face-to-face, non-phone or non-ATM interaction) by both Fintech players and traditional institutions (banks, NBFCs, etc.). Online share is defined as share of digital lending in overall personal and consumer loans disbursals; 1. PPIs = Prepaid Payment Instruments; 2. ‘Card-based lending’ = any short term lending through a card (i.e., credit cards or PPI cards).

Source: Bain analysis.
Digital investments: Discount brokerages and robo-advisories gaining traction among India’s increasingly savvy investors

Indians’ enthusiasm for growing personal wealth has transitioned online

90M+ number of Demat accounts¹
18X growth in active discount broker users from 2019 to 2022

Focus is on unit economics as growth tapers and market volatility impacts the near-term

New digital investments ($B)

<table>
<thead>
<tr>
<th>Year</th>
<th>Online share</th>
<th>CAGR ('22-'25)</th>
<th>CAGR ('25-'30)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022²</td>
<td>80-83%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2025²</td>
<td>85-90%</td>
<td>29-30</td>
<td>41-45</td>
</tr>
<tr>
<td>2030²</td>
<td>94%+</td>
<td>72-75</td>
<td>2-3x</td>
</tr>
</tbody>
</table>

Notes: Digital investments include net flows of mutual funds made through digital channels (non-face-to-face and non-phone) by both fintech players and traditional institutions (banks, traditional brokers, etc.); Online share is defined as share of net flow of mutual funds through digital means out of total net flow of mutual funds; ¹Metrics pertain to FY22; ²Financial years.

Source: Bain analysis.
Digital investments: The path forward

Educational content on investments and community engagement critical to user acquisition

Discount brokers like Zerodha and Groww have been banking on their low-brokerage proposition to attract new investors and have been encouraging activation through community engagement forums and educational resources. Over 90% of new digital investment users are onboarded via online platforms, with the number of discount broker clients growing 129% YOY over the last four years, reaching 17M in 2022.

Digital stockbroking platforms have seen their customer-base shift from largely Metro and T1 users, to include other segments as well. Online investment platform Upstox reports that over 80% of its customers are now from T2 and T3 cities. Text message-based services offered by fund houses are key to driving mutual fund investor participation from T2 and T3.

Robo-advisories and standardised model portfolio services are on the rise

- Wealth management is shifting towards algorithm-led robo-advisors that generate viable portfolio options and financial advice with little to no human interference. While regulatory frameworks are still being developed, about 100 robo-advisory firms already exist globally.

- Standardised model portfolios are also attracting interest among retail investors, supported by affordable fees and the acceptance of small-ticket investments. Smallcase, a leading platform providing model portfolios, integrated with most leading brokerages and gained access to 95% of existing demat accounts. As a result, its user base grew 7x, from less than 1M in 2020 to 4.5M investors in 2022.

Source: Bain analysis.
Insurtech: Competition intensifying as large incumbents dial up their digital game

Indians are increasingly comfortable with buying insurance products online, especially early digital adopters like Millennials

- ~10M insurance policies have been sold through online platforms
- 2–3M health insurance policies sold online

Players across sectors (e.g., ride-hailing) increasingly leveraging customer data to cross-sell insurance, while offline players actively pursue digital opportunities

**Platform/product preferences**

- 61% bought a life insurance policy directly from the insurance providers’ app or website
- 76% bought a pure insurance product

**Entry into the category**

- 73% adopted the online life insurance route only in the last 2 years

**Perceptions**

- 93% are likely to recommend the service

**Notes:**
- Online share is defined as share of gross written premiums of life (renewal premiums and new business premiums), health, and motor insurance policies bought on online platforms; 1. Metrics pertain to CY 2022.
- Source: Bain analysis.
Bite-sized insurance segment continues to see larger adoption

Small-ticket-size policies covering specific needs such as mobile screen coverage, cab ride accident, COVID-19 infection, etc. valid for a shorter time period are finding interest and helping increase insurance proliferation across India.

Service providers are offering these instruments at the point of purchase through partnerships with online marketplaces (e.g., Acko offers a discounted extended warranty on electronics products at the time of purchase on Amazon).

Large incumbents should focus on increasing digital share

- Large players like HDFC Life and ICICI Prudential source 5-8% of individual premiums through digital channels. SBI Life has comparatively low digital share of individual premiums amongst larger peers, at 0.3%, and is taking steps to improve its digital penetration via SBI banking app YONO to cross-sell small-ticket life insurance products.
- ~90% of consumers are willing to purchase life insurance from digital channels, including policy aggregators or insurance providers, indicating the market is ready.

National Health Stack to help reduce premiums

- National Health Stack will lead to generation of more authentic health data, which in turn leads to a reduction in fraud and acquisition costs. This will help reduce policy premiums and drive health insurance penetration in lower income segments.