India’s Digital Changemakers
Anil K. Gupta
Share of World GDP (%)

IMF, January 2019
Mastering the game of Go without human knowledge

**AlphaGo Zero goes solo**

To beat world champions at the game of Go, the computer program AlphaGo has relied largely on supervised learning from millions of human expert moves. David Silver and colleagues have now produced a system called **AlphaGo Zero**, which is based purely on reinforcement learning and learns solely from self-play. Starting from random moves, it can reach superhuman level in just a couple of days of training and five million games of self-play, and can now beat all previous versions of AlphaGo.
India’s Digital Revolution

McKinsey
The Future is Cashless

Credit Suisse: Digital payments market in India: $200 billion (2018) → $1 trillion (2023)
Digitization’s Gifts

- Information inclusion
- Financial inclusion
- Education inclusion
- Health care inclusion
- Gender inclusion
## Tech Startup Ecosystem

<table>
<thead>
<tr>
<th></th>
<th># Unicorns Mid-2019</th>
<th>2019 GDP (US$ t)</th>
<th>Unicorns/ $t GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>172</td>
<td>21.3</td>
<td>8.1</td>
</tr>
<tr>
<td>EU</td>
<td>35</td>
<td>18.7</td>
<td>1.9</td>
</tr>
<tr>
<td>China</td>
<td>90</td>
<td>14.2</td>
<td>6.3</td>
</tr>
<tr>
<td>Japan</td>
<td>1</td>
<td>5.2</td>
<td>0.2</td>
</tr>
<tr>
<td>India</td>
<td>16</td>
<td>3.0</td>
<td>5.3</td>
</tr>
</tbody>
</table>
Data is the new oil: The story of Reliance Jio
India’s Wireless Market - 2015

- 1 billion mobile phone users
- But mostly voice telephony
- 2G/3G, mostly GSM
- Very low spend = $1.90/user/month
- Bottom 10% of countries in per capita data consumption

Top 3 Operators – Market Shares (%): Airtel 24, Vodafone 19, Idea 17
Reliance Jio’s Launch Strategy

- Big bang launch – Sep 4, 2016
- $20b investment → 4G LTE
- Data-centric model, free voice
- New smartphone brand – LYF ($40-200) with free Jio SIM & free Internet and voice for one year
- 100m customers in 4 months

Jio Data Prices vs. Top 3 Competitors’ Average

- 1GB: -25%
- 2GB: -31%
- 4GB: -39%
Jio adds millions of subscribers every month

Millions

Source: Telecom Regulatory Authority of India
© FT
Oct 2017:

- Launches JioPhone
- Hybrid feature phone + smartphone
- $20 deposit, refundable after 3 years
- $2.50/month – unlimited calls and data
Recent Developments

Aug 2019:
- Sells 20% stake in petrochem business to Saudi Aramco
- For $15 billion
- Helps reduce $30 billion debt

Sep 2019:
- Launches JioFiber broadband services
- 1 year target: 20m homes, 15m businesses (vs current market 18m)
- 13-23% lower pricing than competitors
- Free HDTV and set-top box for annual subscribers
- Partners with Microsoft for cloud services
Jio is on its way to a 50 per cent share of India's telecoms market

Share of India telecoms market by subscribers (%)

Source: Bernstein
© FT
Vijay Sharma, India’s Digital Payments King
One97:
Mobile Value Added Services

2000

Paytm:
Pay through mobile

2010
Mid-2019

- $15b valuation
- 350m registered users
- 12m merchants
- 300m monthly transactions
- 60% share of merchant segment
- Key investors: Softbank, Alibaba Group, Berkshire Hathaway
Mobile phone bills and SIM recharging

- One vertical at a time but rapidly
- 75000-person Paytm Force
- $2 merchant acquisition cost

E-commerce + other transactions

Fast-food transactions

Small merchant transactions

Transportation-related payments
Onward, Upward
Number of transactions made through mobile wallets in India

Source: Reserve Bank of India
THE WALL STREET JOURNAL.
While India has several startups that have grown by copying Western models, Oyo is the first to try to take a homegrown business model world-wide.

- WSJ, June 23, 2019
### Market Structure

<table>
<thead>
<tr>
<th>% Hotels</th>
<th>India</th>
<th>China</th>
<th>US</th>
<th>Europe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Branded</td>
<td>4</td>
<td>19</td>
<td>70</td>
<td>40</td>
</tr>
<tr>
<td>Independent</td>
<td>96</td>
<td>81</td>
<td>30</td>
<td>60</td>
</tr>
</tbody>
</table>

**Indian Market:**
- > 7% CAGR in GDP
- > 10% CAGR in travel
- > 90% of travelers stay with friends/relatives (not always by choice)
- Very poor quality and unreliability at low end
$10 \text{ b valuation}

Investors:
- Softbank (Japan)
- Sequoia (Silicon Valley)
- Lightspeed (Silicon Valley)
- Didi (China’s “Uber”)
- Grab (ASEAN “Uber”)
The Creator

• Ritesh Agarwal
• College dropout
• Launched in 2013 at age 19
• 1st Thiel Fellow from India
• “Be unique”
• “Think big”
• “Never fear the big chains”
• “Invest in culture”
Business Model

- Standardized low cost accommodation
- Agreement → Rebrand in 14 days
- Basic standardization:
  - Spotless linen
  - Clean washrooms
  - AC + TV
  - Free wifi
  - Free breakfast
- Staff training
- Leverage network scale
- Renovation at owner’s expense
- Branding + Reservation system
Value Creation and Value Capture

Customers:
- Assurance of quality

Owners:
- Significant ramp up in occupancy

OYO:
- 20% cut of revenue
Key Role: OYO Captain

- ≈ 15 properties, 200 rooms
- Constant data on customer feedback (via Customer App + social media)
- Knows where to visit and check
- In emergency, can reach any hotel in ≤ 30 minutes
- Evaluated partly on customer satisfaction
- Rate each room: Green, Yellow, Black
1200 software engineers

Own operating system + 20 apps (customers, captains, reception, cleaners, sales staff)

On Customer App, use ML to optimize # of photos, photo angles, furniture arrangements

Customer App: book room, order room service, pay, contact OYO captain if needed, provide feedback

Use ML for dynamic pricing (prices change every 4 hours)

One app allows agents to make on-the-spot offers to hotel owners

Integrate hotels with Grofers and Big Bazaar (India’s largest online grocers) → online orders, cashless billing, reduced pilferage
Global Expansion - China

• Entered 2017
• July 2019:
  ❖ 300 cities
  ❖ 10,000 hotels
  ❖ 500,000 rooms
• Basic strategy:
  ❖ Hyper-speed scale-up
  ❖ Buying market share
• July 2019:
  ❖ 21 states, 60 cities
  ❖ 112 hotels
• Basic strategy:
  ❖ View as “home market”
  ❖ Good quality “value chic”
  ❖ Add 1 hotel/day
• May 2019:

- Buys @Leisure, Netherlands-based short-term property rental company for € 370m
- CEO of @Leisure to become President, OYO Rental Properties Division
1. Unique, bold, disruptive
2. Think “future back”
3. Beware the “digital lipstick” syndrome
4. Never be afraid of “old-line” incumbents
5. Experiment-experiment-experiment
6. Scale at speed
7. Imagination without execution = Fool’s paradise
8. Strong cohesive culture