LVC in Mumbai Metro Development
Potential, realisation and future planning
LVC – A nascent concept in India

- 2005 - Concept of “planning” for public transport was introduced by the reforms-led Jawaharlal Nehru National Urban Renewal Mission (JnNURM)

- 2006 - National Urban Transport Policy (NUTP) provided a roadmap to integrate mass transit in cities’ long-term strategic development and land use plans.
  - No concrete recommendations for integrating LVC in transport planning.
LVC – A nascent concept in India

• 2017 – a landmark year
  • Value Capture Finance Policy Framework
  • National TOD Policy
  • Metro Rail Policy
National TOD Policy 2017

• Affordable yet comfortable and universally accessible multimodal public transport
• Walking, cycling and other forms of NMT
• Compact, liveable, affordable and walkable communities
• LVC as an effective tool to make TOD financially viable
Value Capture Finance Policy Framework 2017

• A systematic approach for adoption of LVC to finance urban infrastructure
• Multi-stakeholder involvement
• Fine-tuning and synergising existing ULB mechanisms to generate sustainable financial resources
• Guidance Note to highlight the practical aspects of the imposition of Impact Fees.
Metro Rail Policy 2017

• Devotes a chapter to ‘Enhance Revenues’ through TOD and LVC.
• Mandates each project to contain a chapter on TOD
• Seeks firm adherence to the VCF Policy Framework guidelines
• Seeks explanation on the transfer of the financial benefits accruing in the metro influence zone to the metro rail authority
• Seeks specifications of the estimated quantum of LVC benefits to be ploughed back into the metro balance sheet.
Mumbai Metro One

Overview

• 11.40-km, connects Versova in the suburb of Andheri in the west with Ghatkopar in the east
• Inaugurated in June 2014
• Mumbai Metro One Private Limited (MMOPL)
  o An SPV incorporated jointly by MMRDA, Reliance Infrastructure and Veolia Transport France with a 35-year concession period.
  o A BOOT model PPP, MMOPL is mandated with the design, finance, construction, operations, maintenance, and eventual system transfer to the state government at the end of the concession period.
Mumbai Metro One

• At the time of completion the project cost jumped to INR 43.21 billion from the estimated INR 23.56 billion
• Viability gap funding provision of INR 6.5 billion
• A “game-changer” for the city’s suburban north-eastern fringe
• Travel time cut from 90-120 minutes to 21 minutes
• “Single-handedly account for at least 22% increase in land value” in the influence zone.
Mumbai Metro One

Inaccurate traffic demand model projections

- The PPP hinged solely on a ridership-based traffic demand model
- Impact on land value and LVC gains not factored into the metro plan
- Estimated ridership – 665,000/day by 2021 & 883,000/day by 2031
- Per day ridership has been an average of 450,000 till today.
Mumbai Metro One

Losses mounted from day 1

• Within a year, Fare Fixation Committee (FCC) recommended hike
• High Court stayed its implementation
• A new FFC was constituted in 2019; no decision on fare revision yet
• MMOPL suffers from a daily loss of INR 9 million.
Mumbai Metro One

It could have been different...

• In 2018, Curtin University, Australia, assessed land value appreciation using a Hedonic Price Model

• Properties located within 1-2 km from the metro stations recorded a gain of 14 percent – generating a cumulative alternate revenue source of US $179 million at 2017 exchange rate
Mumbai Metro One

It could have been different...

• In 2000, office stock in the CBD was 14 million sq ft, 72% of total
• SBD’s share in the metro’s influence area, the western business district, was 8 percent
• Within two years of the metro approval, it reached 23%
• Within one year of construction commencement – it reached 33%
• In 2014, when metro was inaugurated – it grew to 35%.
Mumbai Metro One

It could have been different...

• Between the project announcement and starting of construction:
  • Andheri East residential property appreciated by 185 percent, growing to INR 8,000/sq ft from INR 2,800/sq ft

• Between the construction and inauguration from 2007-08 to 2014:
  • Appreciated by a further 94 percent to INR 15,500/sq ft.
LVC for future metro corridors

- Thankfully, Mumbai Metro One is only a small fraction of Mumbai’s extensive metro development

- 14 new corridors estimated to cost INR 1.50 trillion at completion

- A range of tax- and land-based LVC tools proposed

- The 18.5-km Metro 2A and the 16.5-km Metro 7 began operations in April 2022.
Mumbai Metro – LVC tools considered

• Additional stamp duty/cess
• Land value tax
• Land-use change fee
• TDR/Incentive FSI/Additional FAR
• Development Charge/Betterment Levy/Impact Fee
Challenges to LVC

**Locational:**

- Prevalent disparities in incomes, job opportunities, the difference in the size of land parcels and civic amenities in different pockets
- Poor primary infrastructure and services and insufficient last-mile multimodal connectivity
- Fragmented and small-sized plots in the core areas make extracting the full benefits from Premium FAR/FSI difficult.
Challenges to LVC

Planning and regulatory

• Diffused decision-making because of lack of institutional structures and integrated planning
• City government in charge of long-term city development planning has no role in metro planning
• Absence of micro planning for the metro rail direct influence zones
• UMTA remains a pipedream.
Challenges to LVC

Executional:

• Time and cost overruns owing to complex procedural and legal delays have bled the public exchequer

• The perceived gains through LVC diminish as the capital expenditure increases manifold because of time overruns.
Maximising LVC gains for upcoming lines

- Institutional, policy and regulatory frameworks
- LVC+
- Understanding densification in the Indian context
- Looking beyond the influence zone
Thank you!