

# How can we sustain urban railway?

## From the perspective of relationship between operator and local government and creating shared value

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# Motivation

- ❑ Questions of financial and economic sustainability of urban railway
  - Some difficult situations surrounding public transport (e.g. non-profitable but necessary routes, population decrease, aging society)
  - How can we support public transport sustainably with financial and economic stability?
- ❑ Appearance of various organisational structures which are mix of private and public entities
  - Considerable changes in the organisation of local and regional public transport
  - Can we find how private and public entities collaborate to sustain public transport in a creative way?

# Purpose

- ❑ To explore what the value of the local area to sustain existing networks of urban railway is and its definition
  - Define the value of the local area in the context of transportation and strategic management
  - Consider why the value of the local area is worth to be concerned based on creating shared value
- ❑ To consider role of operators and local governments (authorities) to sustain railway through supporting local area
  - Explore where the shared value of operators and local government are
  - Shed light on how the collaboration of two players works for sustainability of railways in terms of the value of the local area

# Railway operators in Japan

## 187 passenger railway operators

- Type 1: infrastructure + operation
- Type 2: operation only
- Type 3: infrastructure only

### JR

- 6 operators
- Privatised from national railway
- Three JR companies own HSR

### Public

- 10 operators
- Municipal subways and part of trams
- Subsidised by authorities

### Private

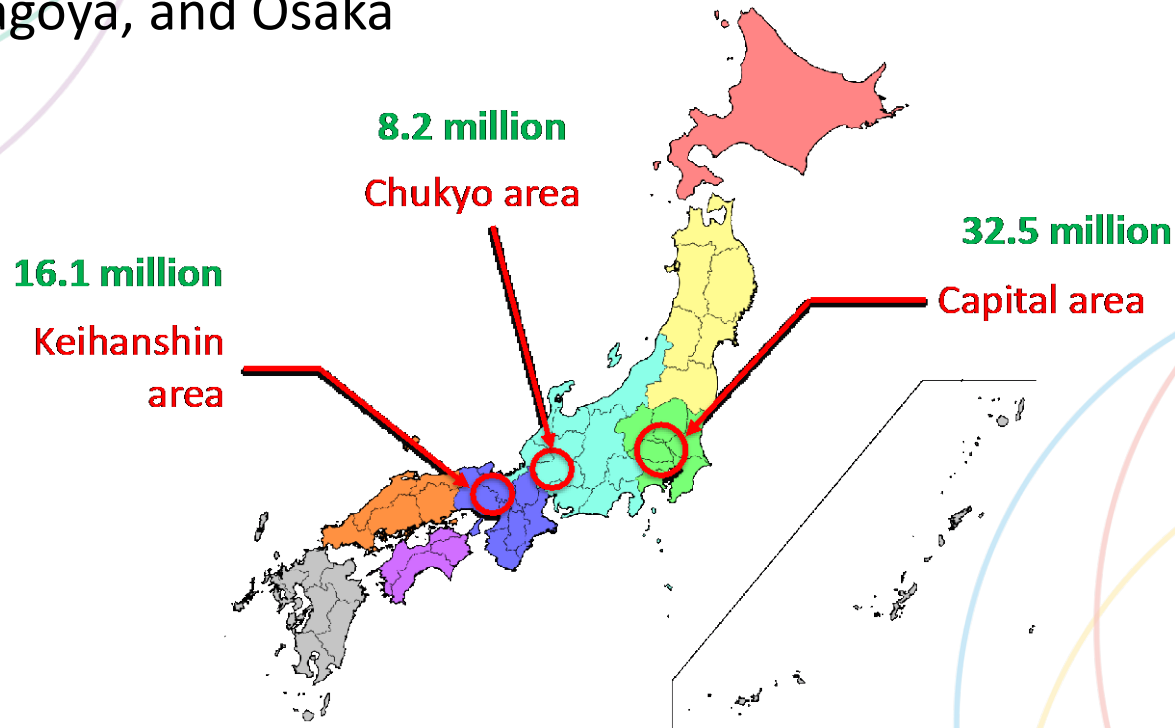
- 171 operators
- Of these, 16 (large) operators is distinguished
- Includes quasi-public sectors

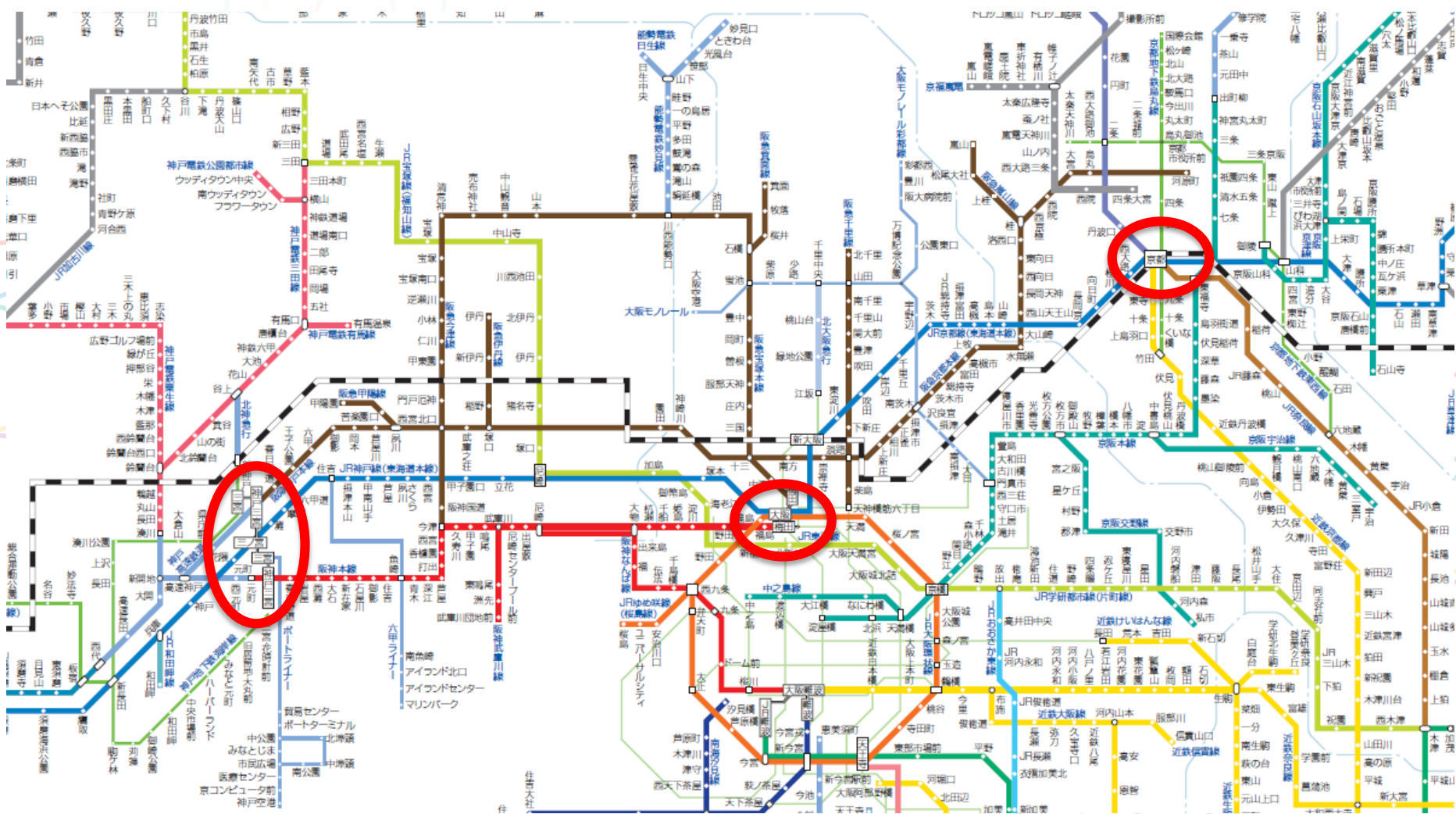
## Major 16 operators

- Large network size and transported volume due to large demand
- Independent of government in terms of service design and delivery
- But still regulated in market entry, fares (full-cost pricing), and safety standards

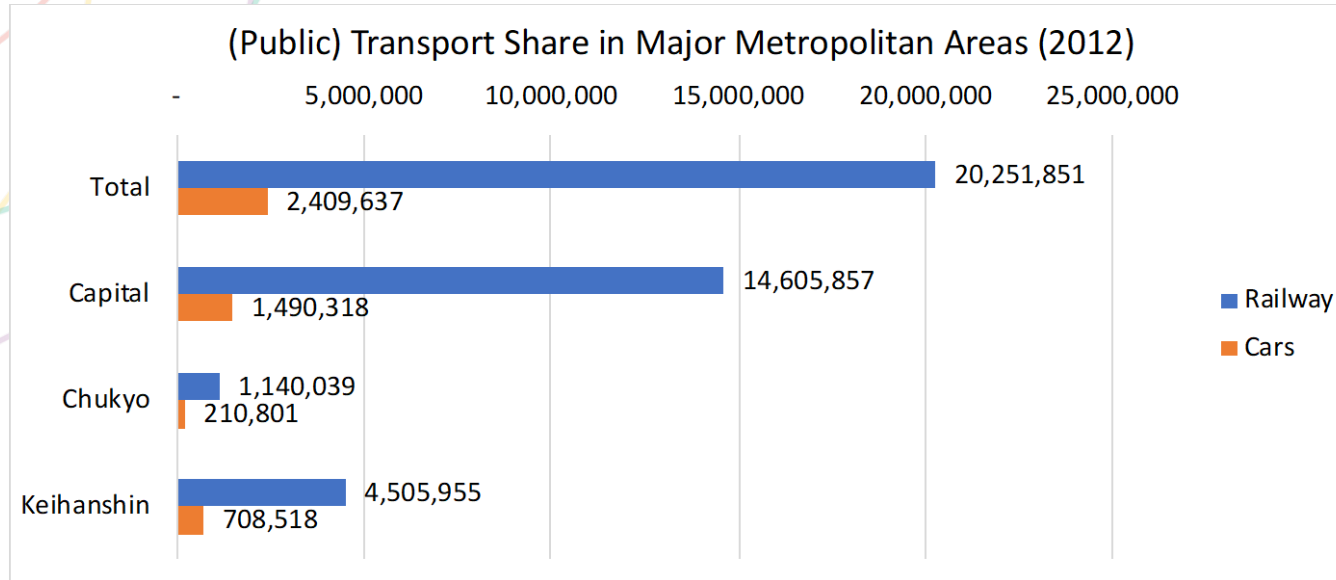
# Three major metropolitan area in Japan

- Major metropolitan areas are surrounding areas of three big cities – Tokyo, Nagoya, and Osaka





# Massive demand for railway



Source: MLIT of Japan (2016)

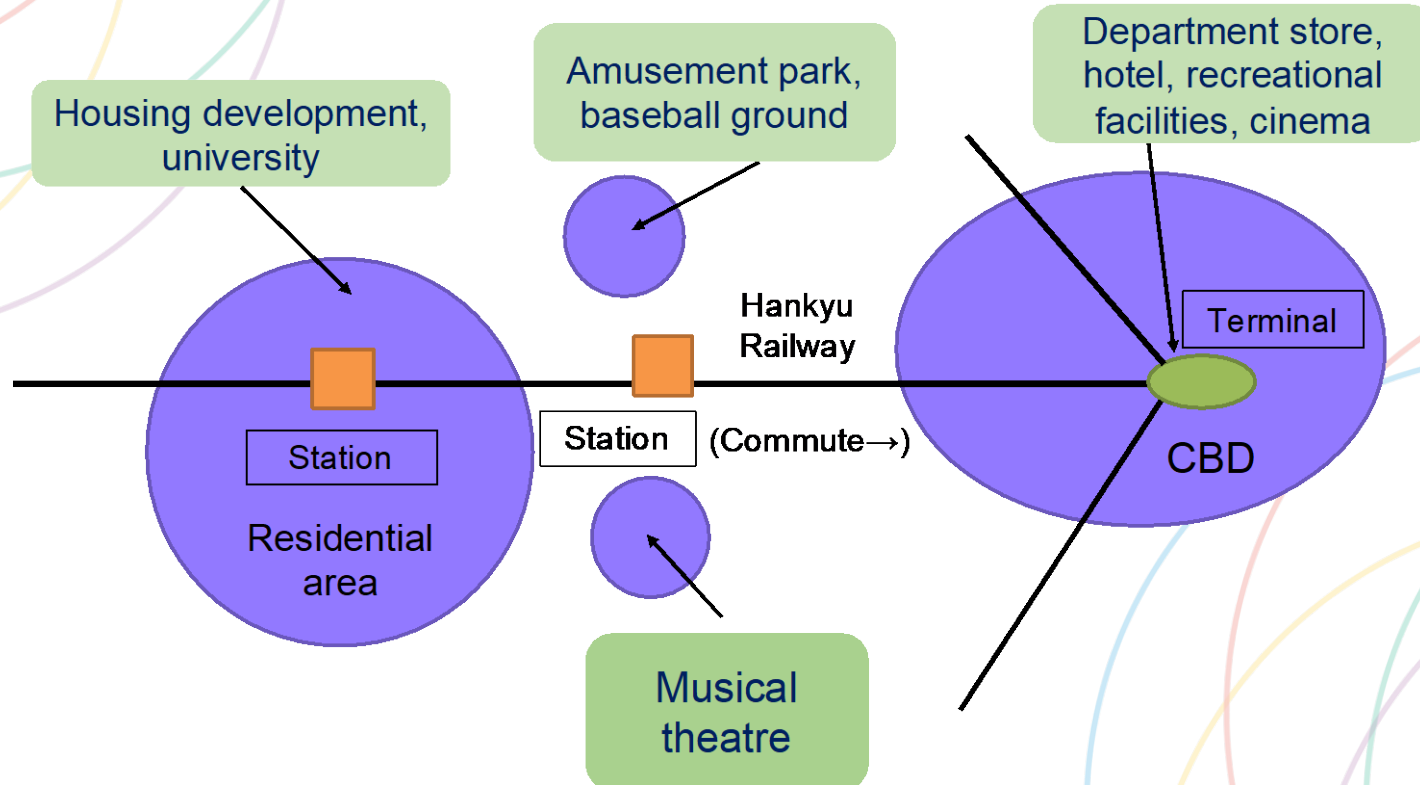
- ❑ Railway is overwhelming public transportation in large urban areas in Japan
  - About 20.2 billion passengers are using railway for a year in three metropolitan areas (55 million passengers per day)

# Initial Business Model of Major Private Operators

- ❑ Diversification into several businesses other than railway is the most distinguishing feature
  - With the start of the firm, the operators diversified to create railway demand
  - Why? Commencing the operation in the low-density populated area due to The Railway Nationalisation Law (1906)
  - Creating railway demand is the important motivation of diversification
- ❑ Operator-driven development of housing and recreational facilities
  - Private operators led the development projects based on their own plan, thus local governments (authorities) rarely involved
  - Ex) Business model of Hankyu Railway in the beginning



# Business Model of Hankyu Railway



# Business Model of Hankyu Railway

- ❑ Combining railway service and housing business
  - Make a virtuous growth cycle for the railway business
  - Enable the firm to **internalise positive externalities from development**
  - Income from the passengers contributes to recovery of investment in development
- ❑ The operator proposed ***'The new lifestyle'*** in suburban area
  - State-of-the-art and comfortable living style with innovative residential facilities provided by Hankyu Railway
  - Proposed the image of ideal living style to be thought and promoted to move to the suburban area along its railway lines
- ❑ Eventually, differentiate the local areas along the lines by providing special ***'value'***
  - Other major operators followed soon after success results of Hankyu and Tokyu
  - Represent the business model of major operators at the early year

# Development and Railway



# The Value of the Local Area along Railway Lines

- ❑ Emphasise *how this area is attractive as a community and a residential area* rather than aiming increase of property price or land value
  - Found in Initial business model of major private operators in Japan
- ❑ Operator as a designer of the community and the area and a ‘lifestyle developer’
  - Operators develop *amenities and educational institute* to support a good quality of living constantly and to increase vitality of the community
  - Deeply involved in everywhere of users’ life (e.g. Redevelopment of Tama Plaza by Tokyu Railway) and engaged in non-profit activities
- ❑ Mentioned as top of the agenda in management strategies of any major operators
  - In fact, it has been concerned from the early stage continually
  - Aging society and population decrease → Cannot expect dramatic increase of railway demand and expansion of market

# Differences in Concept

- ❑ Value capture and TOD – capturing positive economic impact from public transport and utilise as a funding source
  - Railway causes positive effect on property values (Debrezion et al., 2007) and local positive externalities like economic growth (Cervero et al., 2002; Chatman and Noland, 2001)
  - Value capture programmes and transit-oriented development (TOD) to provide potential funding source to finance public transportation (Mulley et al., 2016; Yu et al., 2018)
- ❑ The value of the local area – to support *existing network* and to sustain *the market*
  - The operators take the initiative in realisation of public interest (e.g. healthy community) rather than maximisation of short-term profit based on monopolistic condition
  - The local area as a market *supports* sustainability of the railway

# Creating Shared Value (CSV)

- ❑ CSV focuses on the connections between societal and economic progress (Porter and Kramer, 2011)
  - Shared value gives the firm economic benefits
- ❑ The value of local area along railway lines is improved by *satisfying societal needs* which is to revitalise the community
  - Strategic change to housing remodelling, renovating old properties, supporting local business and invigorating community
  - Prevent the outflow of population and attract new residents
  - Increased population can support railway market and sustainability of network
- ❑ Realising shared value encourages the operators to collaborate with local governments
  - Revitalising the community is common issues of the operators and local government
  - Due to changes in business environment the operators cannot adhere to initial business model

# Collaboration with local governments

- ❑ Moving toward the same direction – easy to collaborate?
  - The operators need understanding in administrative procedure to implement projects
  - The local governments suffer from lack of human resources, know-how and experience and funds, and difficulties in project management
- ❑ Interviews with five major private operators
  - Face-to-face, onsite and semi-structure interviews are the principal methods
  - Other secondary data such as annual reports, corporate handbook and working documents are used to understand backgrounds
  - Interviews were conducted with ten managers in five private railway companies in Tokyo capital and Osaka metropolitan regions

# Collaboration with local governments

- ❑ Ask how the operators and local government collaborate in terms of below perspectives
  - Cooperative relationship with local government for projects
    - ✓ Enhancing various service
    - ✓ Participation in community development
    - ✓ Property and land development
    - ✓ Safety and accessibility
    - ✓ Utilisation of holding assets
    - ✓ Area strategy
    - ✓ Facilitation of tourism
  - Organisation and system for collaboration
  - Sharing and building network inside company
  - Sharing same philosophy with local government to improve the value of the areas along railway lines
  - Utilisation of the cooperation and collaboration agreement



# Collaboration with local governments

## □ From the interview...

- Although it depends on the case, the local governments are not always cooperative to the operators although both are pursuing the same goals because of the fairness issue
- Discrepancies on future plans of the area hinder the collaboration
- The local governments are sometimes likely to show lack of understanding profitability and economic impact of the project
- Official platform to encourage collaboration such as partnership agreement definitely speeds up administrative procedure for development while it cannot be easily said that is is necessity of collaboration
- While interaction between the operators and the local government allows build the human network, in many cases, this network does not tend to be shared inside

# Conclusion and Implication

- ❑ Expanded operators' role in providing service and building community
  - Service design is not only role of railway operator
  - Long-term relationship may contribute to building trust between operators and other players and it enables them to lead designing the local area
- ❑ Importance of the local area to sustain railway in the era of population decrease
  - Competition between the area along the railway lines of each operator
  - Keep the local area along the railway line vibrant
  - Losing energy in the local area eventually causes losing stable demand for railway

# Conclusion and Implication

- ❑ The value of the local area along the railway lines as shard value beyond direct economic benefit
  - Improving the value is closely linked with satisfying societal needs and exploring new source for profit
- ❑ Collaboration with local governments does not always work smoothly even under same goals
  - Fairness in jurisdiction (local government) vs. Concentration to the area only surrounding railway lines
  - Conflicts between political intention and real interests
  - Need to understand each other's position and status especially in terms of financial issues