### Discussion Urban development around HSR station

- 1. What are the key factors to maximize the economic effects of HSR ?
- 2. The traffic volume and the modal share increased after HSR operation, and the urban developments are observed. Why the economic impacts of HSR could not be observed in the macroscopic model in the Europe ?
  - Are the HSR impacts too small compared to growth rate of economy?
  - Are the accuracy and the sensitivity of the model too small ?
  - Is the HSR demand in the Europe too small compared to in Japan ?
  - Are the increasing activities in the area just spatial transfer ?

## Difference of Modal Split With & Without HSR

### - Trip Length : Direct Distance = 200 km -



### - Trip Length : Direct Distance = 400 km -



### - Trip Length : Direct Distance = 800 km -



# Potential Demand Location of Cities (Population, Distance)



3. The economic impacts come up through the increasing demand and through the regional developments.

Is the regional development policies are usually set up with HSR development ?

What kinds of policies are usual for the spillover effects of HSR to prevent the straw effect in the Europe and Korea ?

4. The Scale of urban development around the HSR stations are usually different by the size of the city in Japan. The urban development in Saku city was special case. Is there such large scale urban development in small city with HSR development ?

- HSR increases intercity mobility
  - intercity movements like urban activities business, commuting, shopping, leisure, education, etc.
- HSR brings huge impact on the region : Economy ; Industry, tourism, urban development, etc.
  - Increase of Investment in the region
  - increase of visitors
  - expanded market for industries
  - increase of in-migration ; population
  - increase of land price

People's life ; housing, job, shopping, education, etc.

- Regional potential is up-grade and brings more impacts of HSR through regional competition.
- HSR shifts modal split then reduces the CO<sub>2</sub>.

### **Principle for Reducing Disparity** between Metropolitan Area and Peripheral Area

### Early Growth in Metropolitan Area

- Spillover Effect of MA to PA : A
  Straw Effect of MA from PA : B
- if A > B, Disparity Reducing
- If A < B, Disparity Widening

Additional regional policies are needed

### Impacts of Shinkansen on Urban Development

## Expansion of Mobility Brings Regional Competition



Commerce / Culture / Education / Medicine / Tourism



### Various types of HSR station area developments

Case 1: Wide area urban renewal around HSR Station Shin-Osaka, Shin-Yokohama, Sendai, Shinagawa, etc. Saku : special case in small city Case 2 : Large scale commercial building with station plaza and access road Kyoto, Nagoya, Fukuoka, etc. Case 3 : Station building with station plaza and access road Many examples in small cities

### Case 1: SHIN-YOKOHAMA Station : Tokaido Shinkansen





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### Case 1 : Sakudaira Station : Nagano Shinkansen

New Station on existing Railway in agricultural area Transfer the Existing Railway to Elevated Railway Development of Commercial area, and Condominium Simultaneous Land Development and Land-use



before (1991)

12

after (2007)







Case 3 : Hachinohe St. : Tohoku Shinkansen Kagoshima St. : Kyusyu Shinkansen

### New Station on Existing Railway in urbanized area Land Adjustment : Station Bld. and Station Plaza

#### Hachinohe St.



### Kagoshima St.



### The other case : Private shopping mall at Karuizawa Station Nagano Shinakansen



- 1. Different Strategy by the Location of Railway Station
  - Expansion of existing railway station
  - New station on the existing railway
  - New station
- 2. Requested Development
  - New station building, Station plaza & Access road
  - Master plan for land adjustment and land-use
  - Urban renewal project
- 3. Requested Analysis
  - Feasibility
  - Consensus of stake holders
  - Strong leadership

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## Thank you for your attention

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