2005 Inter-Regional Travel Survey

Ministry of Land, Infrastructure and Transport,

Government of Japan

Introduction

The 2005 Inter-regional Travel Survey is a survey that was being conducted in effort to creating a database that records the inter-regional movement of passengers in Japan. This survey integrates statistical data obtained through surveys conducted for each transportation system (basic statistics). It provides an overall picture of the traveling public's use of the transportation system from the point of departure to the destination, including transfers. The basic statistics are based on sample surveys conducted on passengers using five inter-regional transportation systems (air, rail, sea, bus, and car), which adopted choice-based sampling rather than home-based sampling.

The "Inter-regional Travel Survey in Japan" was first conducted in 1990, then again in 1995, in 2000, and for a fourth time in 2005. The fourth survey incorporated, for the first time, a one-day survey taken on a holiday (Sunday), along with a one-day survey taken on a weekday, as with previous years. This aspect was added to clarify the actual situation and any differences in the movement of passengers using inter-regional transportation systems on weekdays and holidays.

The inter-regional travel data has been used for determining and analyzing the actual situation in the movement of passengers, demand models, demand forecasts, and cost evaluations in various organizations including government agencies, local government entities, and research organizations.

This brochure introduces the 2005 Inter-regional Travel Survey conducted in Japan. It aims to present the current situation of inter-regional travel in Japan and provide a reference for similar surveys that may be conducted in other countries.

I. Outline of the 2005 Inter-regional Travel Survey

<table>
<tr><td>Objectives</td><td>To characterize the movement of passengers using the inter-regional transportation system in Japan and to provide a database for purposes such as determining transport policies and transport system improvement plans.</td></tr>
<tr><td>Implementing Institution</td><td>Ministry of Land, Infrastructure and Transport</td></tr>
<tr><td>Area Coverage</td><td>All of Japan</td></tr>
<tr><td>Target</td><td>Passengers using inter-regional transportation systems.</td></tr>
<tr><td>Description</td><td>Integrated statistics derived from basic statistics obtained through separate sample surveys taken for five inter-regional systems (air, rail, sea, bus, and car)</td></tr>
<tr><td>Data Processing Method</td><td>Combination of basic statistics for each inter-regional transportation system using augmentation and integration processes.
Augmentation: Estimated traffic using one-day sample survey taken on a weekday, one-day sample survey taken on a holiday, and annual aggregate transport statistics for each transport system.
Integration process: Process for filtering the double-counting of passengers transferring to the same or another transport mode.</td></tr>
<tr><td>Sample Size</td><td>(Thousands)<table><tr><th></th><th>Weekday</th><th>Holiday</th><th>Total</th></tr><tr><td>Air</td><td>181</td><td>196</td><td>377</td></tr><tr><td>Rail</td><td>62</td><td>65</td><td>126</td></tr><tr><td>Sea</td><td>4</td><td>6</td><td>10</td></tr><tr><td>Bus</td><td>27</td><td>36</td><td>64</td></tr><tr><td>Car</td><td>204</td><td>188</td><td>393</td></tr><tr><td>Total</td><td>478</td><td>491</td><td>970</td></tr></table>Note: The sample size used in this survey may vary from the sample size on which the basic statistics are based.</td></tr>
<tr><td>Cycle</td><td>Conducted every five years
This is the fourth in the series of surveys taken since 1990.</td></tr>
<tr><td>Period</td><td>Two days including one weekday and one holiday (Sunday) in fall
Note: Previous surveys were taken only on one weekday in fall.</td></tr>
<tr><td>Survey Items</td><td>Point of departure, destination, purpose of travel, itinerary, route, inter-regional transport system transfers, transfers to final transport mode, number of companions, gender, age, and place of residence</td></tr>
<tr><td>Database Use</td><td>Purposes such as determining and analyzing the actual status of passenger movement, demand models, demand forecasts, transport cost evaluations, etc. in various organizations including government agencies, local government entities, and research organizations</td></tr>
</table>

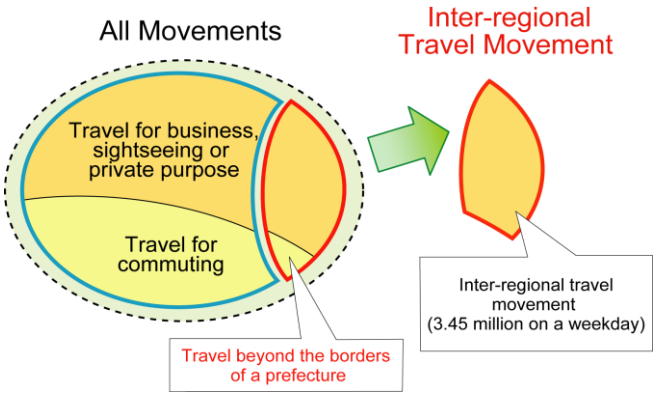
II. Scope of the 2005 Inter-Regional Travel Survey

The 2005 Inter-Regional Travel Survey targets the inter-regional movement of domestic passengers in the following four categories.

(1) The movement of passengers who use inter-regional transport systems including the airlines, inter-city high-speed rail services such as the Shinkansen, and long-distance buses.

"Inter-regional transport system" refers to the transport mode used for travel beyond the borders of a prefecture, such as:

Air : Domestic scheduled airline services
Rail : Shinkansen (bullet train), JR limited express train, and some private long-distance rail services
Sea : Sea lines including ferries
Bus : Inter-city buses and long-distance buses
Car : Private cars, taxi, etc.



(2) Movement from actual point of departure to destination

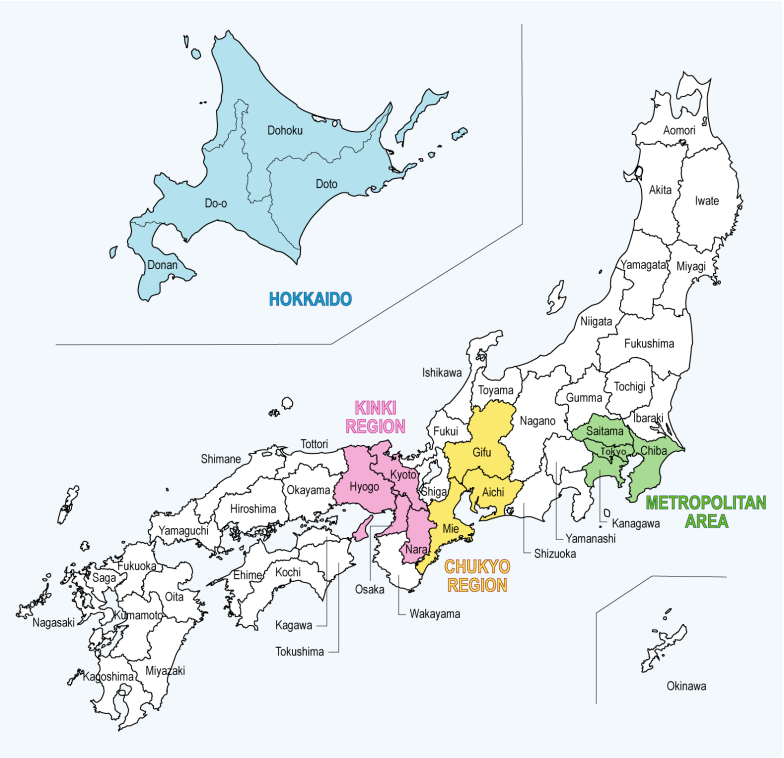
"Inter-regional travel" refers to movement from the actual point of departure to a destination without any transfer to another transportation system.

(3) Travel for purposes other than commuting

Travel for commuting is excluded, with the major purposes for travel being business, sightseeing, or visiting one's home town.

(4) Travel of passengers beyond the borders of a prefecture

Inter-regional travel refers to travel beyond the borders of a prefecture. Travel within a major city area including the Tokyo metropolitan area, Chukyo area, and Kinki area is regarded as being day-to-day travel within a prefecture and is thus excluded from the survey.



Inter-prefectural zones that are not based on prefectural boundaries

HOKKAIDO:
Dohoku, Doto, Do-o, Donan
METROPOLITAN AREA:
Tokyo, Kanagawa, Chiba, Saitama
CHUKYO REGION:
Aichi, Gifu, Mie
KINKI REGION:
Osaka, Kyoto, Hyogo, Nara

III. Procedure for producing inter-regional travel data

The 2005 Inter-regional Travel Survey was optimized through augmentation and synthesizing processes using the following five types of data as the survey results.

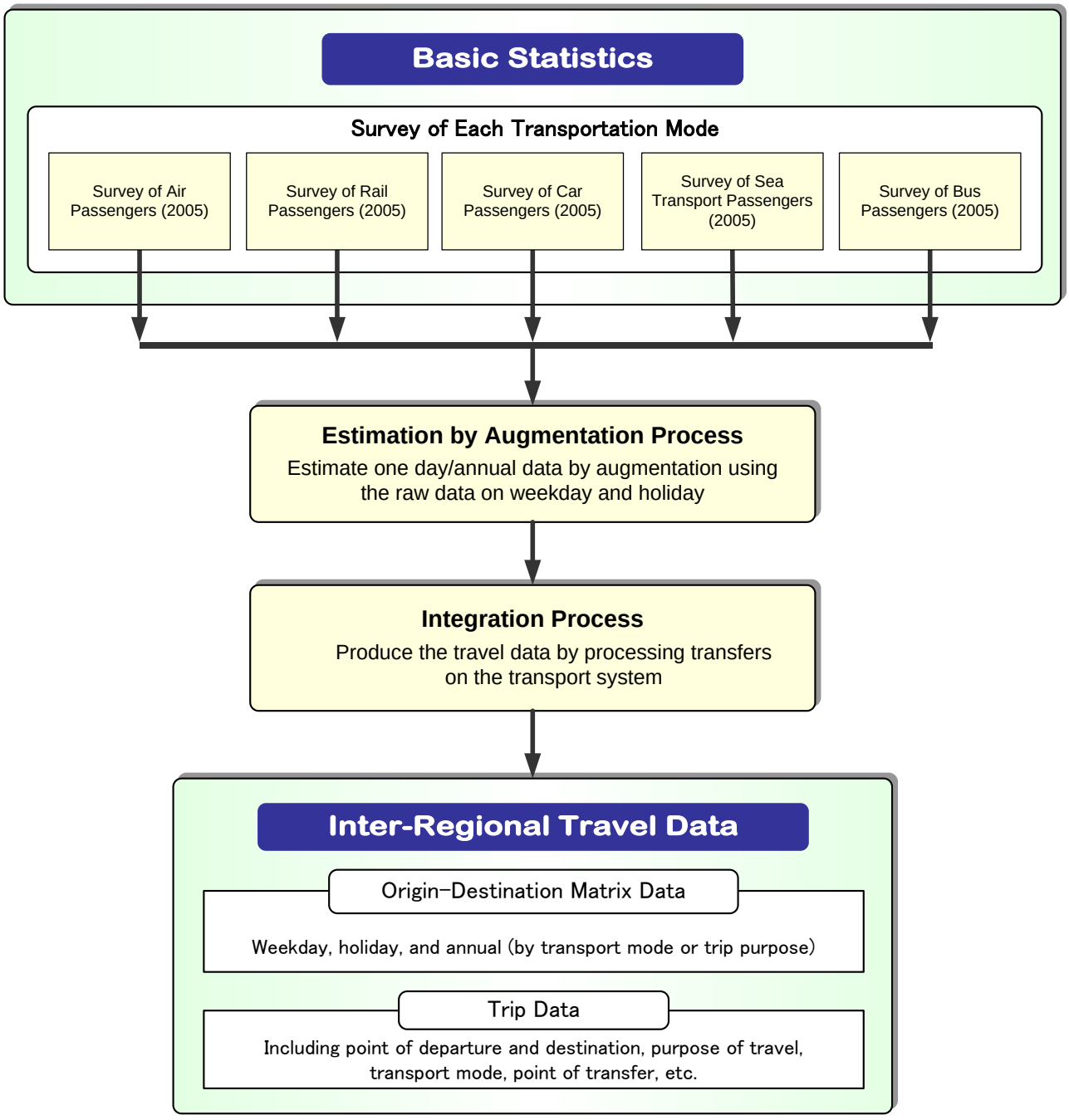


Figure 1 Procedure for producing inter-regional travel data, as used in the fourth survey

IV. Survey Results

1. Travel using each of the major transportation systems

- The volume of inter-regional travel registered 3,452,000 on a weekday and 5,847,000 on a holiday. Thus, the number of people traveling on a holiday is approximately 1.7 times as many as that on a weekday.
- The volume of cars on a holiday is approximately twice of that on a weekday.
- Inter-regional travel on a weekday consisted of 69% by car, about 21% by rail, and about 8% by air.
- The annual volume of inter-regional travel traffic in 2005 registered 1.62 billion, equivalent to 12.7 times/year/person (with a round trip being counted as “two times”).

* A priority system is applied to handle a passenger transferring from one mode to another, in the order of: (1) Air (2) Rail (3) Sea (4) Bus (5) Car. So, for example, if a passenger transfers to an airline from the railroad, it would be assumed that the major transportation system used by the passenger was “Air.”

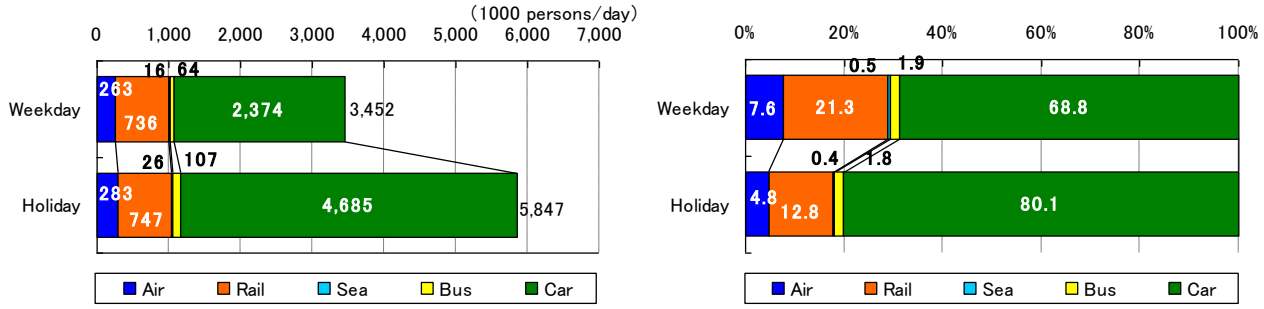


Figure 2 Volume of inter-regional travel on each major transportation system/Distribution (weekday/holiday)

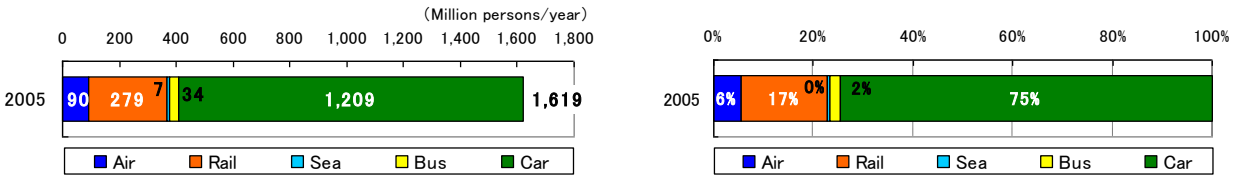


Figure 3 Volume of inter-regional travel on each major transportation system/Distribution (year-round)

2. Purpose of travel

- Upon comparing the purposes of travel on a weekday and a holiday, it is found that there are more business trips being made on a weekday, whereas there are more pleasure-related trips being made on a holiday.
- Considering the distribution of the transport mode by purpose of travel, public transportation systems such as a rail and air are used more for business trips while cars are used more for pleasure-related trips.

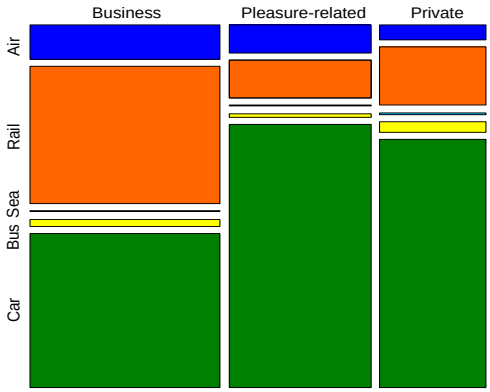
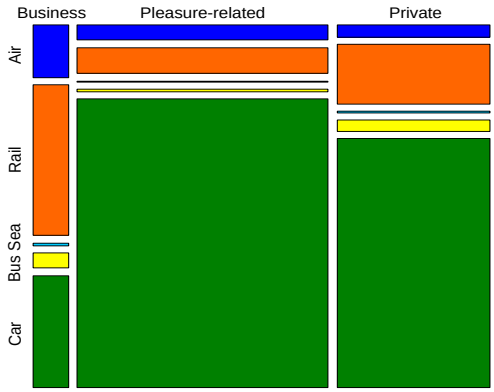


Figure 4 Traffic volume by purpose of travel/Distribution (weekday)



Note) Travel with no defined purpose is excluded .

Figure 5 Traffic volume by purpose of travel/Distribution (holiday)

3. Distribution by distance

- Considering the transport modes and the distance traveled on a weekday, it is apparent that cars are mostly used for short-distance travel of less than 300 km, rail is used for middle-distance travel of 300 to 700 km, and air is used for long-distance travel in excess of 700 km.
- Upon comparing the distribution of transportation on a weekday and a holiday, cars are used more on a holiday especially for the traveling distance of 300 to 500 km.

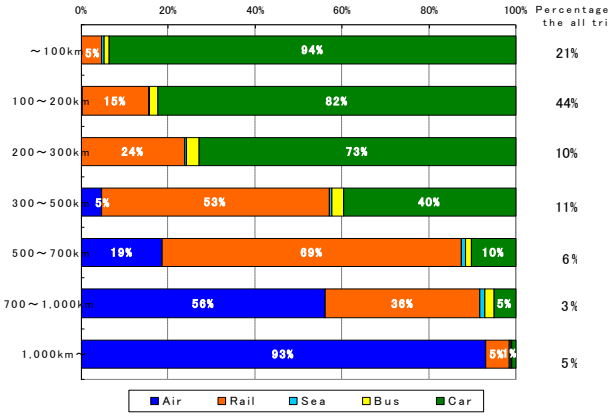


Figure 6 Distribution by distance (weekday)

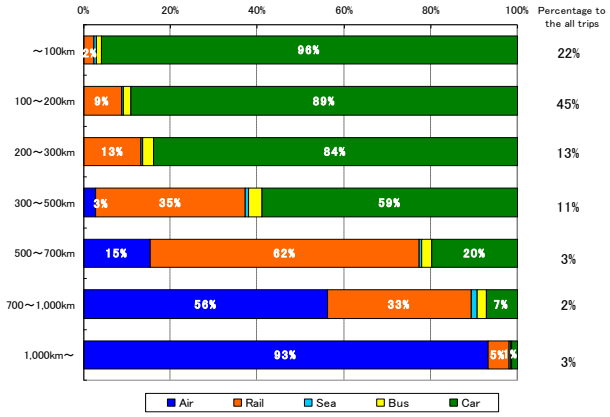
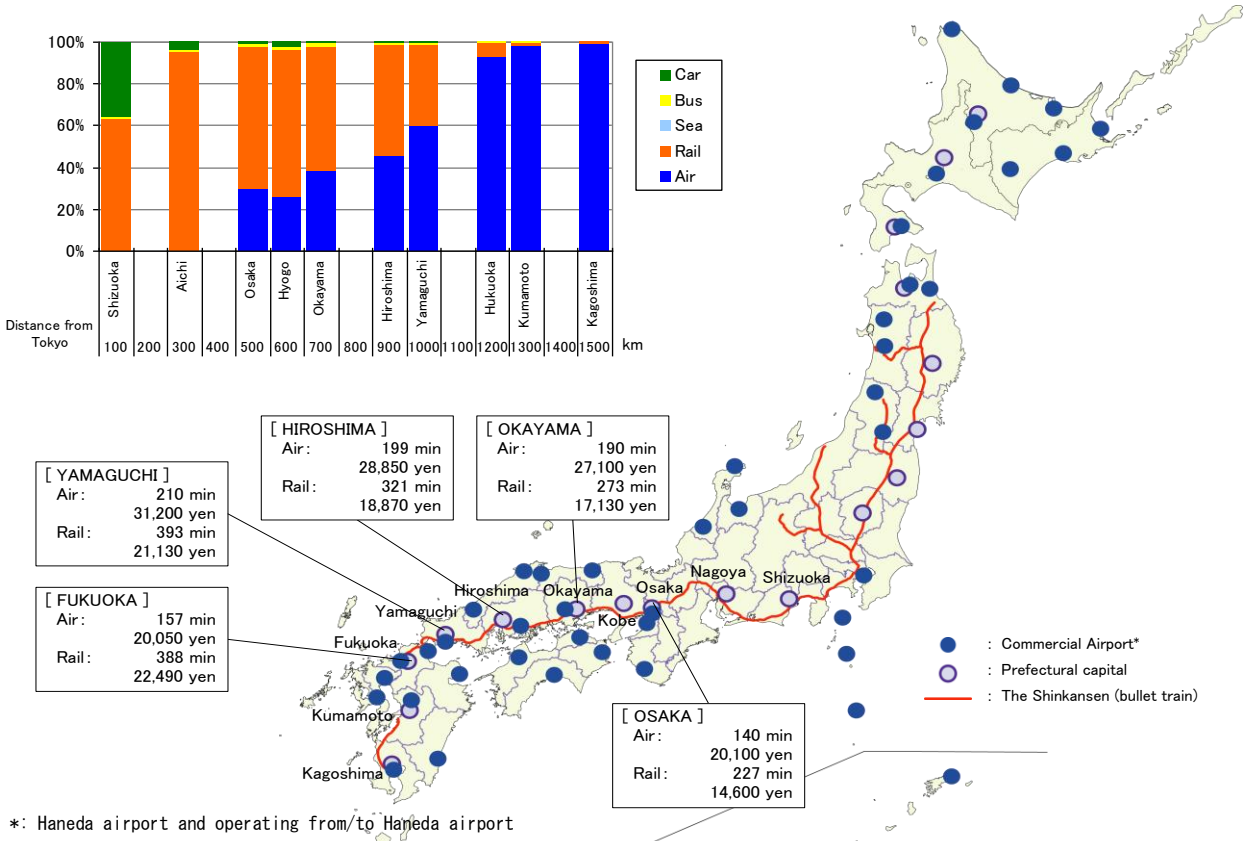


Figure 7 Distribution by distance (holiday)

4. Distribution of major transportation systems used between the Tokyo metropolitan area and each prefecture

- Considering the distribution of transportation system use for travel between the Tokyo metropolitan area (Tokyo and three prefectures) and areas along the Tokaido/Sanyo Shinkansen route, we find that cars are used mostly for short-distance travel, railroads for middle-distance travel, and airlines for trips involving long-distance travel.
- The rail and air modes compete with each other on distances of about 700 to 1,000 km from the Tokyo metropolitan area, such as Okayama, Hiroshima, and Yamaguchi.



*: Haneda airport and operating from/to Haneda airport

Figure 8 Distribution of major transportation systems for travel between the Tokyo metropolitan area and each prefecture (weekday)

V. Use of the data (download)

The inter-regional travel data introduced in this brochure can be downloaded from the homepage of the Ministry of Land, Infrastructure and Transport of the Government of Japan. It is being offered in this way to make it available to a wide range of audiences.
(http:/www.mlit.go.jp/seisakutokatsu/jyunryuudou/)

Available Data

- Chart of travel data between prefectures on available transport systems (weekday)
- Chart of travel data between prefectures by major transport modes (weekday)
- Chart of travel data between prefectures by purpose of travel (weekday)
- Chart of travel data between prefectures by major transport modes and purpose of travel (weekday)

- Chart of travel data between prefectures on available transport systems (holiday)
- Chart of travel data between prefectures by major transport modes (holiday)
- Chart of travel data between prefectures by purpose of travel (holiday)
- Chart of travel data between prefectures by major transport modes and purpose of travel (holiday)

- Chart of travel data between prefectures on available transport systems (annual)
- Chart of travel data between prefectures by major transport modes (annual)

- Code Table 1 (50 Prefectures Code)
- Code Table 2 (Purpose Code)

【Data Format】

Example: Chart of travel between prefectures by transportation mode and purpose of travel (Weekday)

Departure Code	Departure Name	Dest. Code	Dest. Name	Purpose Code	Purpose	Movement of Passengers					
						Air	Rail	Sea	Bus	Car	ALL
1	Dohoku	2	Aomori	1	Business	xxx	xxx	xxx	xxx	xxx	xxx
…	…	…	…	…	…	…	…	…	…	…	…

Note) You may download the data in text format from the homepage of the Ministry of Land, Infrastructure and Transport of the Government of Japan.

Contact: Policy Unification Officer's Counselor
TEL: +81-3-5253-8111 (Extension 53114),
Ministry of Land, Infrastructure and Transport, Government of Japan
2-1-3 Kasumigaseki, Chiyoda-ku, Tokyo 100-8918, Japan