

1. FREQUENCY OF TRAINS
2. FREQUENCY OF FLIGHTS AND NUMBER OF PASSENGERS
3. FREQUENCY OF SAILINGS AND NUMBER OF PASSENGERS

**1. Frequency of Trains**

Of the total length of railways in use as of March 1989, 20,919 km were maintained by JR, whose double track rate was 31.1% and electrification rate 50.1%, while 6,535.2km was maintained by private railway companies other than JR. The number of passengers carried by JR during the one-year period from April 1988 to March 1989 was 7,767,240,000 persons (of which 227,760,000 persons were carried by Sinkansen) and 12,980,790,000 persons by other privately-owned railways, totalling 20,748,040,000 persons. The distance travelled was 217,600,000,000 person km (of which 64,400,000,000 person km by Sinkansen) by JR and 144,200,000,000 person km by other railways, totalling 361,800,000,000 person km. The weight of freight carried was 55,700,000 t by JR and 26,640,000 t by other railways, totalling 82,340,000 t. The distance travelled was 23,030,000,000 tkm by JR and 450,000,000 tkm by other railways, totalling 23,480,000,000 tkm.

The proportion of the volume of railway transportation to the total volume of transportation in Japan was as follows—for passenger: 28.4% of the number of passengers and 30.4% of person km; for freight: 1.3% by volume and 4.9% in tkm.

Japan National Railway, which had a history of 100 years and was a basic form of transportation in Japan, was divided into six passenger railway companies (JR) and one freight railway company (JR Freight) under private management on April 1, 1987, thus beginning a new era in railway management. In spring of 1988, the Seto Bridge to Sikoku and the Seikan Tunnel to Hokkaido were completed, connecting the four major islands by rail.

**[Salient Points of the Legend and Map Compilation]**

This map shows the frequency of trains. Frequency of trains refers to the number of times a passenger train of an ordinary railway passed through stations per week day in January 1989. Frequency of trains is the total number of passes by regular, express and super express trains (up trains and down trains were each counted as one), not including seasonal trains or temporary trains. Short lines (less than 3 km) and some complicated city lines for which frequency cannot be indicated were omitted.

**2. Frequency of Flights and Number of Passengers**

As of March 31, 1987, the Japanese domestic regular air service consisted of 13 main lines connecting Tokyo, Sapporo, Osaka, Hukuoka and Okinawa, and 151 local lines operated by seven regular service air transportation companies.

As for passenger flights by regular service airlines for the one-year period from January to December 1986, the number of flights was 383,405 times, the flight km, 235,690,892 km and the flight hours, 463,125 hours and 23 minutes. The number of passengers carried was 45,121,204 persons (34,244,782,000 person km). The average rate of seat occupation was 60.0%. The ratio of the volume of passenger transportation by air to the total volume of domestic passenger transportation was 0.08% by person and 4.0% by person km. The volume of transportation has been increasing steadily because of reasons such as an increase in preference for high speed travel; an increase in transportation ability due to the installation of double or triple tracks to local lines, a practice which has been promoted since 1986; the laying down of new lines; and an increase in the number of jet flights.

When passenger transportation is viewed by line, for the Tokyo-Sapporo (Titose) line, the number of flights per year was 18,879 (the average daily frequency in April being 47.1 times) and the number of passengers was 4,787,041 persons; for the Osaka-Koti line, 15,541 flights (41.7 times) and 774,988 passengers; for the Tokyo-Hukuoka line, 15,266 flights (41.3 times) and 3,564,557 passengers; and for the Tokyo-Osaka line, 10,941 flights (30.0 times) and 3,284,946 passengers.

When the number of passengers is viewed by airport, it was 25,067 thousand for

Tokyo (27.8% of the total number of passengers), followed by Osaka with 13,155 thousand and Titose with 8,130 thousand.

As well as regular service airlines, commuter airlines (passenger transportation between two places by a small air plane managed by irregular service air transportation companies) also exist. As of March 31, 1987, there were 19 such lines operated by five companies, many of which are for island distant from the mainland. The number of passengers carried by those airlines was approximately 190 thousand persons per year.

**[Salient Points of the Legend and Map Compilation]**

This map shows the average daily frequency of passenger flights by regular service airlines in April 1986 and the number of passengers boarding and alighting at airports for the one-year period from January to December, 1986. In calculating the frequency of flights, departures and arrivals were each counted as one. Four airlines for passenger transportation between two places managed by regular air transportation companies are shown as regular service airlines.

**3. Frequency of Sailings and Number of Passengers**

There were 1,299 passenger shipping lines for domestic sea transportation as of April 1, 1987 (of which 648 were regular shipping lines for general passengers), operated by 812 companies (of which 457 companies provided regular service shipping lines for general passengers). There were 2,358 vessels operating on these lines (of which 1,473 vessels belonged to regular service shipping lines for general passengers), weighing 1,071,236 gross tons (of which 1,053,210 gross tons was for regular service shipping lines for general passenger). Of these, 253 shipping lines (249 of which were regular shipping lines for general passengers) were vehicle transportation shipping lines (ferryboats) managed by 178 companies, with 499 vessels weighing 909,453 gross tons. Of ferryboat shipping lines, 20 were for 48 long distance ferryboats (with a sailing distance of 300 km and over and which acted as a bypass of land transportation), weighing 430 thousand gross tons and covering 14,689 km of sailing distance. About 80% of regular service shipping lines for general passengers consisted of lines whose sailing distance was less than 50 km. There were also four international shipping lines which connected Japan with Nakhodka, Shanghai, Pusan, Keelung and Kaohsiung.

The volume of passengers carried by domestic sea transport for the one-year period from April 1986 to March 1987 was 150 million persons (of which 130 million persons were carried by regular shipping lines for general passengers), 5,680 million person km (of which 5,470 million person km were for regular shipping lines for general passengers). Of these, long distance ferryboats carried four million persons, 1,900 million person km. The ratio of the volume of passenger transportation by ship to the total volume of domestic passenger transportation was 0.3% by person and 0.6% by person km.

When the weekly frequency of regular service shipping lines for general passengers as of April 1986 is viewed by line, it was high for the Kagosima-Tarumizu line and the Kobe-Tuna line at 448 times, followed by the Ujina-Kure-Mituhama line at 392 times and the Kobe-Sumoto line at 378 times. As for long distance shipping lines, the frequency was high for the Kagosima-Naha line at 94 times. As for long

distance ferryboats, frequency was high for the Kobe-Kokura line at 40 times, followed by the Osaka-Mozi line and the Osaka-Bepu and the Kobe-Matuyama-Oita lines at 28 times.

When the number of the passengers board and alighting for the one-year period from January to December 1986 is viewed by harbor, Kobe had 7,849,000, Takamatu, 7,355,000 and Uno, 5,711,000 persons.

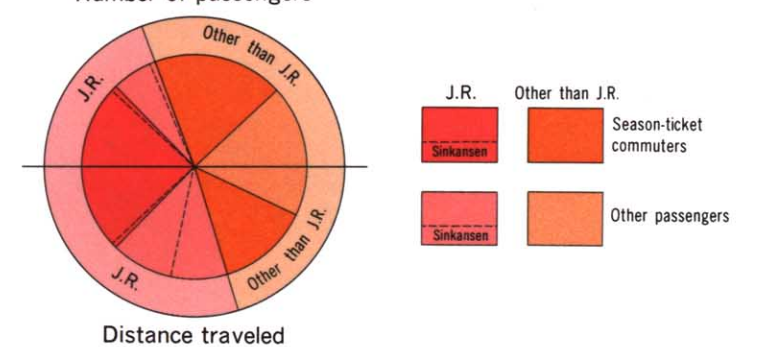
**[Salient Points of the Legend and Map Compilation]**

This map shows the weekly frequency, as of April 1986, of the regular service shipping lines for general passengers with a sailing distance of 50 km and over. Harbors for which the number of passengers boarding and alighting from domestic lines numbered 100 thousand and over for the one-year period from January to December 1986 are shown. In the calculation of the weekly frequency, departures and arrivals are each counted as one time and passengers include those on irregular lines in operation only for specific periods.

**[Sources]**

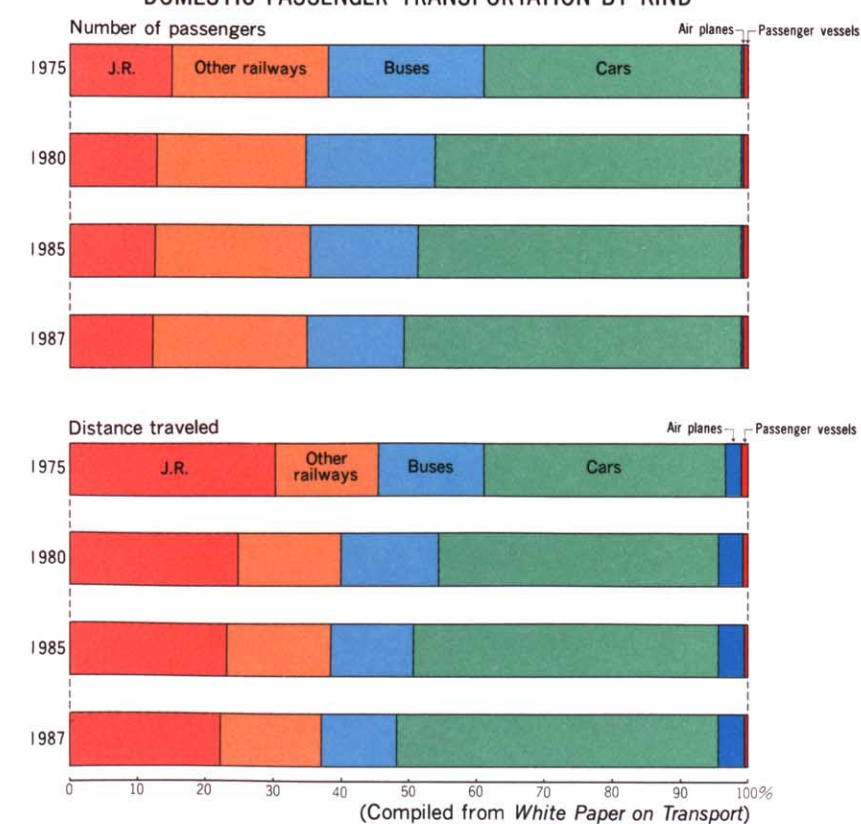
1. Japan Travel Bureau, *JTB Time Table*, January 1989
2. Ministry of Transport, *Annual Report on Railway Transport Statistics*, 1987
3. Ministry of Transport, *Annual Report on Air Transport Statistics*, 1986
4. Japan Passenger Shipping Association, *All Japan Ferryboat passenger Shipping Guide*, July-December, 1986
5. Ministry of Transport, *Statistics on Harbors*, 1986
6. Japan Maritime Affairs Advertisement Association, *Marine Transportation and Shipping Shown in Figures*, 1989

**RATIO OF PASSENGER TRANSPORTATION BY RAILWAYS (1988)**  
Number of passengers

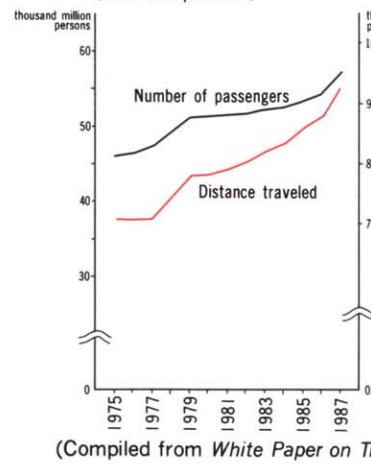


(Compiled from Ministry of Transport data)

**RATIO OF THE VOLUME OF DOMESTIC PASSENGER TRANSPORTATION BY KIND**

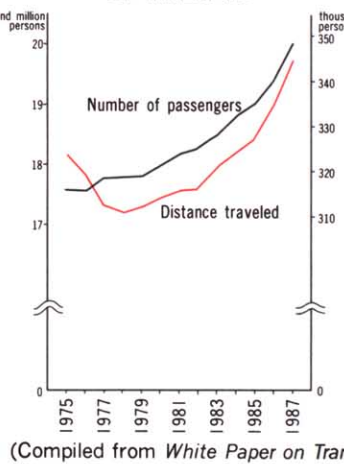


**CHANGE IN THE VOLUME OF DOMESTIC PASSENGER TRANSPORTATION (Total transportation)**



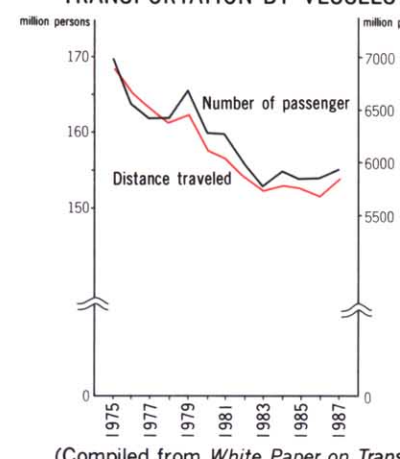
(Compiled from White Paper on Transport)

**CHANGE IN THE VOLUME OF PASSENGER TRANSPORTATION BY RAILWAYS**



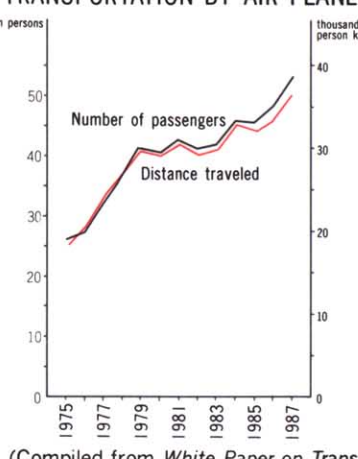
(Compiled from White Paper on Transport)

**CHANGE IN THE VOLUME OF DOMESTIC PASSENGER TRANSPORTATION BY VESSELS**

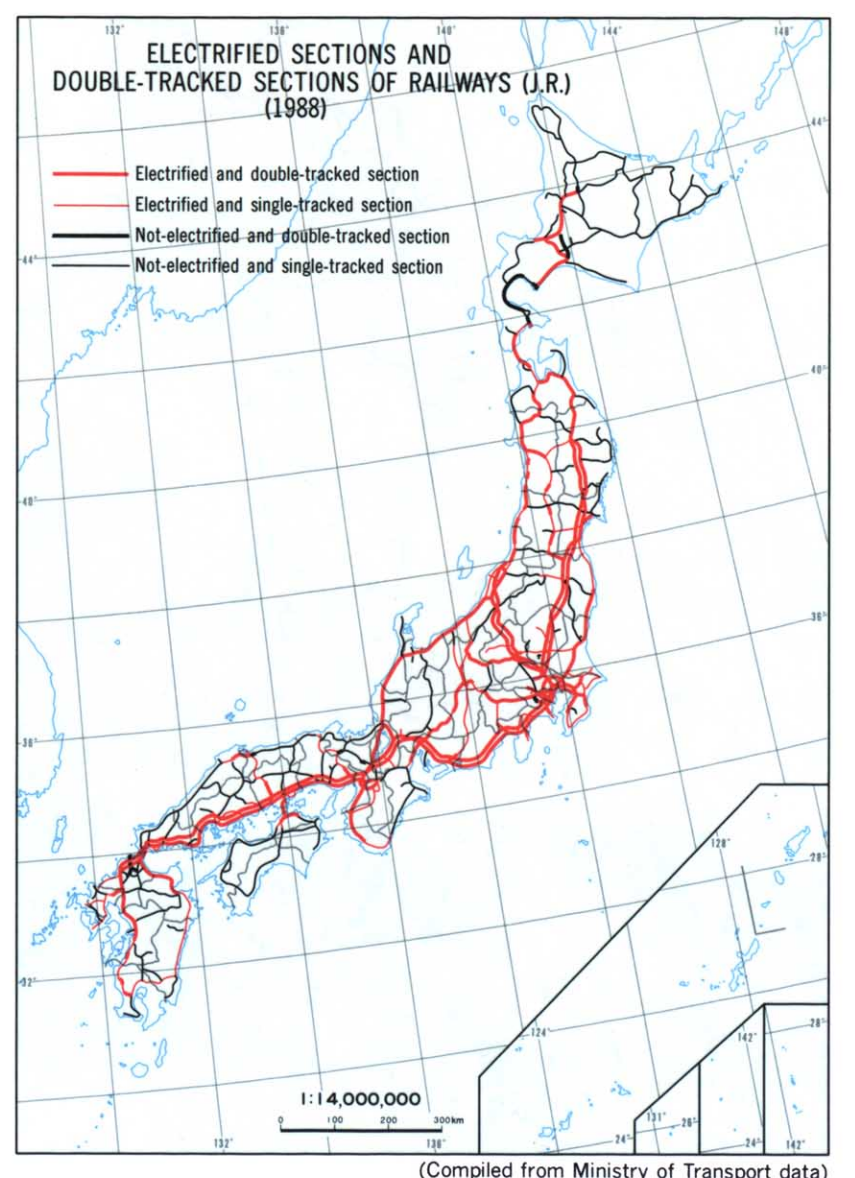


(Compiled from White Paper on Transport)

**CHANGE IN THE VOLUME OF DOMESTIC PASSENGER TRANSPORTATION BY AIR PLANE**



(Compiled from White Paper on Transport)



(Compiled from Ministry of Transport data)





