Railways Services Price Index (RSPI)

BACKGROUND

The Indian Railways is considered as one of the largest railway systems in the world. It is a multi-gauge system consisting of Broad gauge (1.676 Metre), Meter gauge (1metre) and Narrow gauge (0.762 to 0.610 metre). Its route length network is spread over 115,000 km, with 12,617 passenger trains carrying 23 million travellers and 7,421 freight trains carrying 3 million tonnes of freight every day. The railway network serves as an ideal, efficient and economic mode of transportation for long-distance travel and movement of bulk commodities.

Numbers of passengers originating (in millions), passenger kilometers (in millions) and passenger earnings (in crores) have increased over the decade's period as can be seen from the table given below:

Table 1: **Key statistics of passenger services of Railway**

Passenger Traffic	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
No. of passengers originating (in millions)	8,224	8,421	8,397	8,224	8,107	8,116
Passenger kms. (in millions)	1,046,522	1,098,103	1,140,412	1,147,190	1,143,039	1,149,835
Passenger earnings (in Rs crore)	28,246.43	31,322.84	36,532.25	42,189.61	44,283.20	46,280.40

Source- Ministry of Railways

From figure 2 it is clearly evident that tonnes originating (in millions), net tonne kilometers (in millions) and earnings from freight has registered a positive growth over the years during 2011-12 to 2016-17. The compound annual growth rate of earnings from freight railway services is 8.53 percent during same time period.

Table 2: **Key statistics of freight services of Railway**

Freight Traffic–	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Revenue earning traffic (in million tonnes)	969.1	1008.1	1051.6	1095.3	1101.5	1106.2
Total traffic (in million tonnes)	975.2	1014.2	1058.8	1101.1	1108.6	1111
Revenue earning traffic net tonnes kms (in millions)	667607	649645	665810	681696	654481	620175
Total traffic net tonnes kms (in millions)	668618	650625	666728	682612	655605	620858
Earnings from freight carried excl. wharfage & demurrage charges (in Rs crore)	67744	83479	91571	103100	106941	102028

Source- Ministry of Railways

METHODOLOGY

SCOPE:

The product basket of railway services has been grouped into two broad categories - Freight services and Passenger services. Under passenger services, eleven classes of services including suburban (excluding metro services), non-suburban, sleeper class, mail/express etc. are considered. Wherever applicable, further classification based on 1st class, 2nd class, A.C. First Class has been considered. Under freight services, transportation of 8 major commodities has been considered.

BASE YEAR:

Initially the base year 2004-05 was selected for the railways service price index which was later shifted to new base year 2011-12.

PRICES:

Unit price approach has been adopted for computing railway service price index. For passenger services: Unit prices are compiled by dividing the revenue accruing from passenger services by passenger KM.

For freight service: Unit prices are compiled by dividing the revenue accruing from freight services by net tonne KM.

WEIGHTS AND AGGREGATION:

Passenger Service Index- For each class, price relatives are computed by dividing the monthly unit price by the unit price of base year. Then for each month, the passenger service price index is computed by taking weighted average of the index of each class, the weights being the relative share of each class of services in total passenger KM.

*Freight Service Index-*For each commodity, price relatives are computed by dividing the monthly unit price by the unit price of base year. Then for each month, the freight service price index is computed by taking weighted average of the monthly unit price index of each commodity, the weights being the relative share of each commodity in total tonnes originating.

Composite Railways Service Price Index- The Composite railways service price index is the weighted average of passenger service price index and freight service price index, the weights being the respective share of revenue (earnings) accruing from passenger services and freight services.

*Formula-*Index is computed on a monthly basis using Laspeyre's Formula.

The weighting diagram used for RSPI Passenger services and Freight Services is as below:

Goods			Passenger		
Commodity	**2004-05**	**2011-12**	**Class**	**2004-05**	**2011-12**
Coal	45.08	47.00	Suburban		
Raw Material to steel plants	7.35	1.49	Ist Class	1.06	0.89
Pig iron & finished steel plant	2.53	3.59	IInd Class	16.97	12.87
Iron ore	6.05	10.80	Total Suburban	18.02	13.77
Cement	8.93	11.09			
Foodgrains	7.73	4.70	Non Suburban		
Fertilizers(Chemical manures)	4.77	5.44	A.C. First Class	0.11	0.17
Pol (Mineral oils)	5.31	4.24	A.C. Sleeper	1.34	1.56
Balance other goods	12.25	11.64	A.C. 3-Tier	1.91	4.33
total	100.00	100.00	Ist Class	0.33	0.15
			A.C. Chair Car	0.62	0.69
			Sleeper Class		
			Mail/Express	20.28	20.93
			Ordinary	0.24	0.31
			IInd Class		
			Mail/Express	27.02	31.20
			Ordinary	30.12	26.89
			Total Non-Suburban	81.98	86.23
			Total Sub. & Non Sub.	100.00	100.00

*From October 2007, container services category was added to the Railway Freight figures, this has been incorporated in the Balance other Goods category October 2007 onwards

DATA SOURCE

Ministry of Railways

REFERENCES

- Ministry of Railways (Railway Board)-
  http://www.indianrailways.gov.in/railwayboard/
- Indian Brand Equity Foundation (IBEF)