



BANK OF JAPAN

Services Producer Price Index for Air freight transportation



Bank of Japan
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*The views expressed in the slides are those of the author and do not necessarily represent the position of the Bank of Japan. All the examples are hypothetical.

Price surveys procedure

II-1 Surveyed “Item” selection

II-2 Preparatory work for initialization

II-3 Survey respondents initialization

II-4 Tentative price collection and follow-ups

II-5 Ongoing price surveys

We will focus on II-2 and II-3 in the following slides.



Topics

- 1 Service definition
- 2 Weight calculations
- 3 Price determining characteristics
- 4 Sample design
- 5 Pricing methods
- 6 Quality adjustments
- 7 2015 rebasing project of this price index
- 8 Index developments



1. Service definition

- The air freight transportation is defined in JSIC 461 Air transport and 462 Aircraft service, except Air transportation.
- The JSIC 461 and 462 are corresponding to the ISIC 5120 Freight Air Transportation.
- ISIC 5120 Freight Air Transportation:
Transportation freight by air over regular routes on regular schedules, Non – scheduled transport of freight by air, Launching of satellites and space vehicles, and, space transport.



1. Service definition

- Our focus is the domestic transactions defined in the Input-Output tables.

		Service Customers	
		Domestic companies	Foreign companies
Service Providers	Domestic companies	Domestic services	Export services
	Foreign companies	Import services	Third country traded services

- What focus of your price indexes depends on your countries' needs and statistics availability. It would be a good idea to discuss with SNA staff members before you start price surveys.



1. Service definition

- We publish the following price indexes:
 - International air freight transportation
Freight transportation for imported goods provided by domestic service providers.
 - Domestic air freight transportation
Freight transportation for domestically traded goods provided by domestic service providers.
 - Also, we publish aggregated “Air freight transportation” price index. For reference, we publish “International air freight transport” in the “Export Service Price Index.”



2.Weight calculations

■ Main data source

- The "Input-Output Tables" of Japan

Item	Main data source: IO-Tables
International air freight transportation	5751-011 International air transport
Domestic air freight transportation	5751-013 Domestic air freight transport

■ Market size and weight at the year 2015

Item	Market size	Weight
International air freight transportation	136billion yen	1.0/1000
Domestic air freight transportation	54billion yen	0.4/1000



3. Price determining characteristics

- Type of cargo
 - Container consolidation, vegetables, flowers
- Density of containers
 - Volumetric weight calculation system
- Airplane type
 - Cargo airplanes, passenger airplanes
- Contract type
 - Long-term contract, one time contract
- Peak time or off-peak time
- The customer status
- The provider status



4. Sample design: three steps

(1) Specify main price determining characteristics

We usually estimate the market share in “Service providers” and “Route” by using other statistics and/or approximate information from Industrial organizations.

- Services providers (X axis)
- Route (Y Axis)
 - From Tokyo to Sapporo
 - From Tokyo to Osaka

		Services providers			
		A inc. 40 %	B inc. 20%	C inc. 15%	Others 25%
Route	From Tokyo to Sapporo 40%				
	From Tokyo to Osaka 35%				
	Others 25%				

(Note) This chart is hypothetical.

Names of respondents and number of sample prices are strictly kept confidential.



4. Sample design: three steps

(2) Number of sample prices

- Number of sample prices is dependent on how big this service market is and how different price movements are in each service.
- Number of sample prices is set 10 for this example.

		Services providers			
		A inc. 40 %	B inc. 20%	C inc. 15%	Others 25%
Route	From Tokyo to Sapporo 40%	●●	●	●	
	From Tokyo to Osaka 35%	●	●●		
	Others 25%	●●		●	

(Note) This chart is hypothetical.

Names of respondents and number of sample prices are strictly kept confidential.



4. Sample design : three steps

(3) Specify survey respondents candidates

- A.inc, B.inc, and, C.inc are regarded as the respondents candidates.

		Services providers			
		A inc. 40 %	B inc. 20%	C inc. 15%	Others 25%
Route	From Tokyo to Sapporo 40%	●●	●	●	
	From Tokyo to Osaka 35%	●	●●		
	Others 25%	●●		●	

(Note) This chart is hypothetical.

Names of respondents and number of sample prices are strictly kept confidential.



II-3 Survey respondents initialization

II-3-1 Contact right people

II-3-2 Specify representative transactions

II-3-3 Select pricing methods (see section 3)

II-4-1 Collect tentative price data

II-4-2 Follow up tentative price collection

We will focus on II-3-2 and II-3-3 in the following slides.



5. Pricing methods: Unit Values Method

- At an initialization meeting, we ask respondents the following questions.
 - Representative transactions
 - Pricing mechanism
 - Fuel surcharges included or not included
 - Price determining characteristics

- For this service, we apply “Unit value method” to reflect the airlines’ pricing strategies sufficiently.



5.Pricing methods: Unit Values Method

- Multiple transactions for similar services with different quality are grouped to calculate prices, within the limit where the condition of constant quality is guaranteed.

Type of cargo : Consolidation
(mainly vegetables, auto-parts)

Departure : Dalian

Destination : Tokyo

Customer : X inc., Y inc. , and Z.inc

Provider : A inc.

Unit : Per volumetric tonnage



→ Average freight prices per volumetric tonnage are surveyed monthly.



6. Quality adjustment

- Ideally, quality adjustments for the following quality changes of the services due to technical improvements should be implemented.
 - Shorter delivery time
 - Better temperature control
 - More ecologically friendly
- However, the BOJ does not quality-adjust, since adequate information is not currently available.
- How about in your country?

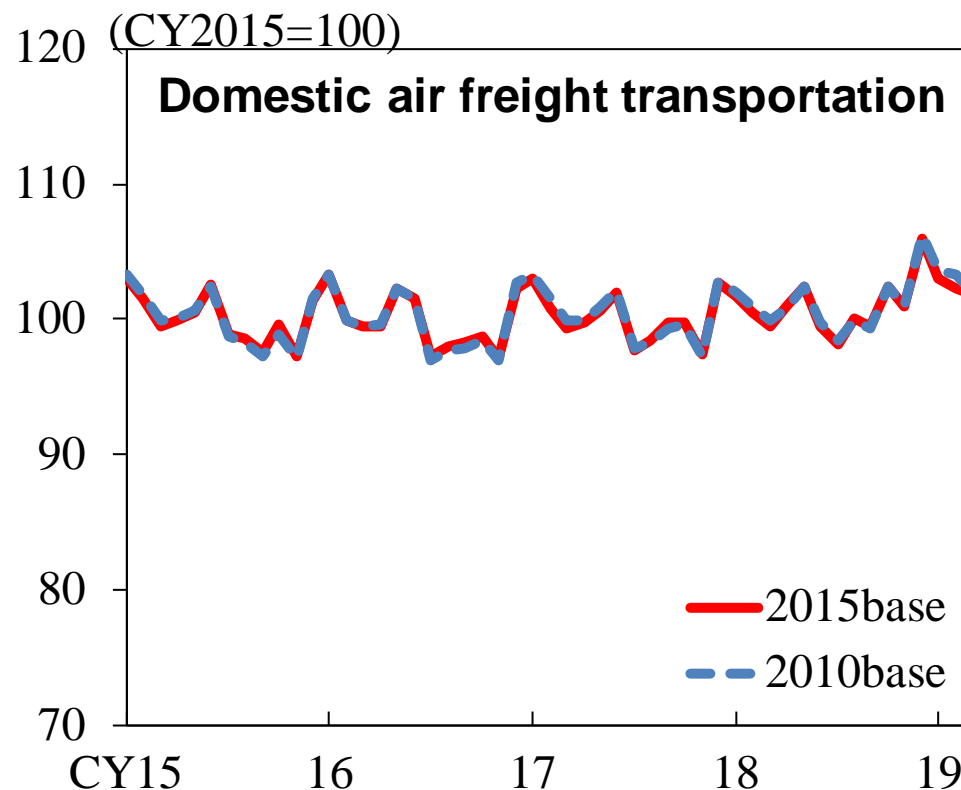
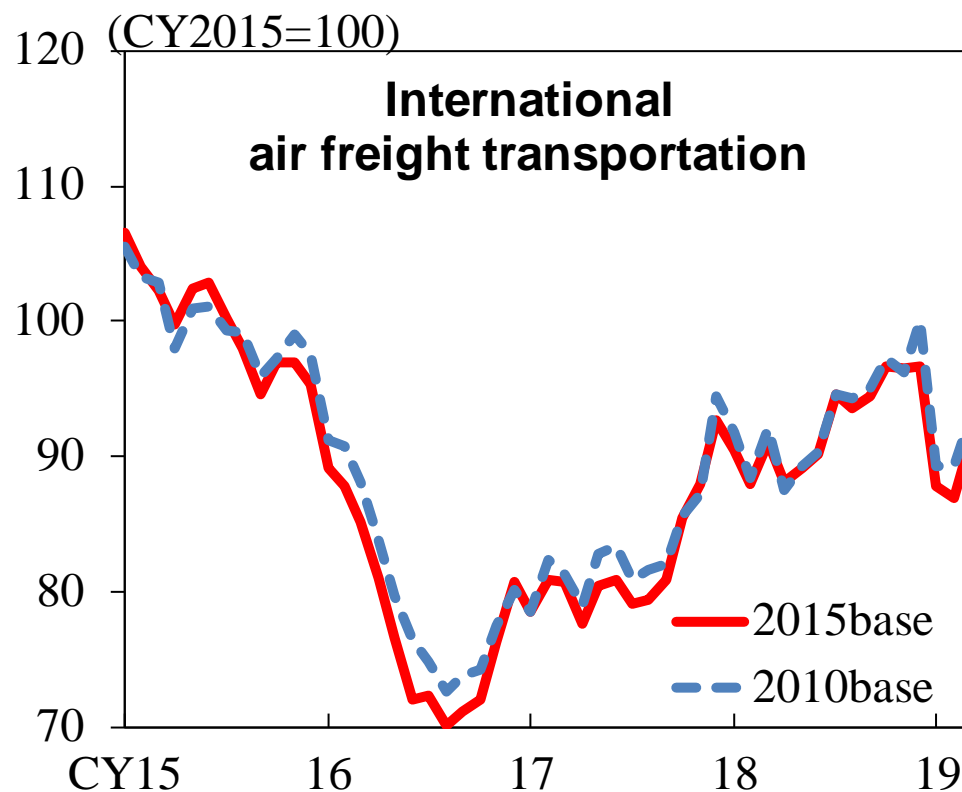


7.Rebasing

- We rebased this index from the 2010 base to the 2015 base.
- In rebasing project, we did the following things.
 - Revised existing Items
 - Updated sample design to reflect the current market situation



7. Index developments



Recently International air freight transportation prices have increased, mainly due to increase of fuel surcharges. Domestic air freight transportation prices have not increased because fuel surcharges are not included in their prices. Domestic air freight transportation have some seasonality fluctuations because prices for some cargo types have seasonality.

(Note) For comparison, the 2010 base indexes in CY 2015 are set as 100.



謝謝 ! Thank you for your attention!



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