

**Working Notes
on the Proposed Methodologies
for Volume Measures of Services
and Service Industries**

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WORKING NOTES ON THE PROPOSED METHODS AND GUIDELINES FOR VOLUME MEASURES OF SERVICES AND SERVICE INDUSTRIES

Introduction

1. This paper deals with two aspects of the preparatory work on the formulation of international guidelines on volume measures of services and service industries.¹ Firstly, the paper sets out supplementary recommendations on constant-price methods and also seeks to establish a standard format for the guidelines in respect of the scope of industry and product coverage, nomenclature and definitions; and the methods of constant-price measurement of output and value-added. The other aspect of the preparatory work is to obtain comments on the recommendations as well as to take into consideration what methods countries use for their own purposes.

The purposes of the paper

2. The purposes of the 'Working Notes' are to facilitate consultations on issues relating to: (1) setting out in as much detail as possible the proposed methodologies for volume measures in distribution, hotels and restaurants, transportation, storage and communications; (2) providing a framework for countries to recommend specific methodologies based on their practical experiences with constant-price methods; and (3) establishing appropriate nomenclatures and definitions for service products and activities.

3. The term "methodologies for volume measures" refers to the most relevant information needed for decomposing current values or value indicators into their price and volume components. The proposed methodologies are presented in the form of general recommendations on the scope of industry and product coverage and encompass descriptions of the product approach to measuring value added in service activities, the valuation of the output of services, the deflators of output and input as well as the volume indicators used for extrapolation.

A framework for the proposed methodologies

4. The framework used for presenting the proposed methodologies for the volume measures of service and service industries is outlined on the next page; it consists of five integrated sets of information.

¹ Flottum, E., Volume measures of services and service industries. Draft international guidelines. Paper presented at the fifth meeting of the Voorburg Group, Paris, 1990.

VOLUME MEASURES OF SERVICE INDUSTRIES AND SERVICES

Industry and Product Coverage

ISIC Sections G, H and I

- G: Wholesale and Retail Trade**
- H: Hotels and Restaurants**
- I: Transport, Storage and Communications**

CPC Sections 6 and 7

- 6: Trade Services, Hotels and Restaurants Services**
- 7: Transport, Storage and Communications Services**

Nomenclature and Definitions

- Activity Groups, 3-digit**
- Product Classes, 4-digit**

Value Added, Method of Current Price Estimation

Value Added, Main Method of Constant Price Estimation

Double Indicator Method

- Volume Output**
- Volume Input**

Single Indicator Method (deflation, extrapolation)

Output Measurement in current and constant prices

- CPC Product Classes**
- Valuation of Output**
- Volume Output**

shown at the 3-digit levels of ISIC Rev.3 and at the 4-digit levels respectively. This is followed by descriptions of the scope of industry and product coverage.

6. The third and fourth sets of information refer to the measurement of value added at current and constant prices in each 3-digit activity group. Specifically, the third set deals with the product approach to measuring value added in current prices. The fourth set of information describes the double and single indicator methods of constant-price estimation, including the derivation of volume output and input.

7. Finally, the framework includes details on the valuation of the output of services as well as volume measures in respect of CPC classes. The information on output value and volume is presented whenever the coverage of an ISIC 3-digit group is described in terms of constituent product groups.

Organization of the 'Working Notes'

8. The 'Working Notes' are organised into three separate parts comprising (i) volume measures for wholesale and retail trade, (ii) volume measures for hotels and restaurants and (iii) price and volume measures for transport, storage and communications. Further, each part contains two sections: A and B.

9. The A section sets out the classification of the corresponding services at the 4-digit level of the Central Product Classification (CPC) and shows the originating industry at the 3-digit level of the International Standard Industrial Classification (ISIC), Rev.3.

10. The B section describes the proposed methodologies for price and volume measures in terms of the industry and product coverage, value added, output value and volume. The shaded segments of the proposed methodologies draw attention to the urgent need to improve the descriptions in regard to volume output.

11. The B section also contains a margin which allows national statistical offices to comment on whether or not the nomenclatures and definitions for service products and activities are useful for survey organisation, as well as to describe the methods used for deriving their constant price measures of output or value added.

**I.A. TRADE SERVICES BY ACTIVITY GROUPS (3-DIGIT LEVELS)
AND PRODUCT CLASSES (4-DIGIT LEVELS)**

ISIC Rev.3 3-digit	CPC 4-digit	ACTIVITY GROUPS AND PRODUCT CLASSES	ISIC Rev.3 3-digit	CPC 4-digit	ACTIVITY GROUPS AND PRODUCT CLASSES
501		SALE OF MOTOR VEHICLES	505		RETAIL SALE OF AUTOMOBILE FUEL
	5111	Sales of motor vehicles(4)		6130	Retail sales of motor fuel(9)
502		MAINTENANCE AND REPAIR OF MOTOR VEHICLES	511		WHOLESALE ON A FEE OR CONTRACT BASIS
	5112	Maintenance and repair services of motor vehicles(5)		6211	Commission agents' services(10)
503		SALE OF MOTOR VEHICLE PARTS AND ACCESSORIES	512		WHOLESALE OF AGRICULTURAL RAW MATERIALS, LIVE ANIMALS, FOOD, BEVERAGES AND TOBACCO ...(11)
	5113	Sales of parts and accessories of motor vehicles(6)		6221	Wholesale trade services of agricultural raw materials and live animals(11)
504		SALE, MAINTENANCE AND REPAIR OF MOTOR CYCLES AND RELATED PARTS AND ACCESSORIES ... (7)		6222	Wholesale trade services of food, beverages and tobacco(12)
	5121	Sales of motorcycles and snowmobiles and related parts and accessories(8)			
	5122	Maintenance and repair services of motorcycles and snowmobiles....(8)	513		WHOLESALE OF HOUSEHOLD GOODS(13)
				6223	Wholesale trade services of textiles, clothing and footwear(13)

() the numbers in parentheses refer to the text page.

ISIC Rev.3 3-digit	CPC 4-digit	ACTIVITY GROUPS AND PRODUCT CLASSES
	5224	Wholesale trade services of household appliances, articles and equipment ...(14)
	5225	Wholesale trade services of pharmaceutical and medical goods and cosmetics ...(14)
	5226	wholesale trade services of miscellaneous consumer goods ...(15)
514		WHOLESALE OF NON-AGRICULTURAL INTERMEDIATE PRODUCTS, WASTE AND SCRAP
	5227	Wholesale trade services of intermediate products other than agricultural: wholesale trade services of waste and scrap and materials for recycling ...(16)
515		WHOLESALE OF MACHINERY, EQUIPMENT AND SUPPLIES
	5228	Wholesale trade services of machinery, equipment and supplies ...(17)
519		OTHER WHOLESALE ...(18)

ISIC Rev.3 3-digit	CPC 4-digit	ACTIVITY GROUPS AND PRODUCT CLASSES
521		NON-SPECIALISED RETAIL TRADE IN STORES
		Retail sale in non-specialised stores ...(19)
522		RETAIL SALE OF FOOD, BEVERAGES AND TOBACCO IN SPECIALIZED STORES
	6310	Retail sales of food, beverages and tobacco ...(20)
523		OTHER RETAIL TRADE OF NEW GOODS IN SPECIALIZED STORES
		...(21)
		Non-food retailing services
	6321	Retail sales of pharmaceutical and medical goods and cosmetics ...(22)
	6322	Retail sales of textiles, clothing, footwear and leather goods ...(22)
	6323	Retail sales of household appliances, articles and equipment ...(23)
	6324	Retail sales of hardware, paints, varnishes and lacquers, glass and articles of glass and do-it-yourself material and equipment ...(24)

ISIC		
Rev.3	EPC	ACTIVITY GROUPS AND
<u>3-digit</u>	<u>4-digit</u>	<u>PRODUCT CLASSES</u>
	5329	Other specialized retail sales of non-food products ...(25)
524		RETAIL SALE OF SECOND-HAND GOODS IN STORES ...(26)
525		RETAIL TRADE NOT IN STORES ...(27)
526	5330	REPAIR SERVICES OF PERSONAL AND HOUSEHOLD GOODS ...(28)

	I.B.	PROPOSALS FOR PRICE AND VOLUME MEASURES (Industry and Product Coverage; Value Added; Output Value and Volume)
SIC	501	SALE OF MOTOR VEHICLES
PC	6111	SALES OF MOTOR VEHICLES
activity		Wholesale and retail sale of new and used passenger motor vehicles including specialized passenger motor vehicles. Wholesale and retail sale of lorries, trailers and semi-trailers. Also: Wholesale and retail sale of motor vehicles to negotiate unusual terrain (jeeps, etc.) Wholesale and retail sale by commission agents.
products		Wholesale trade services of motor vehicles Retail sales of motor vehicles
value added		Trade margins on sales of motor vehicles less intermediate consumption for this activity
double indicator method		Mixed double deflation, i.e., output extrapolation and input deflation.
volume output		(a) Volume output is extrapolated by number of motor vehicles registered, or number of motor vehicles actually sold, as volume indicator. The indicator is to be weighted by base-year values after stratification by classes (small and large passenger motor vehicles, lorries, trailers, semi-trailers, etc.). (b) Volume output is derived as the product of base-year margin rates (i.e. the ratio of gross margin to sales) and sales deflated by relevant components of CPI.
volume input		Deflation of input value indicator, using price indices by commodity, i.e., relevant price indices for major inputs of ISIC 501, or for more aggregated industry if necessary (ISIC 50).
single indicator methods		
deflation		Deflation of value added by specific producer price and consumer price indices.
extrapolation		Extrapolation of base-year value added by sales deflated by producer and consumer price indices.

SIC	502	MAINTENANCE AND REPAIR OF MOTOR VEHICLES
IPC	6112	MAINTENANCE AND REPAIR SERVICES OF MOTOR VEHICLES
Activity	Maintenance and repair of motor vehicles Also: Washing, polishing, spraying and painting, repair of radios, repair of screens and windows, anti-rust treatment, towing, tyre repair of motor vehicles	
Products	Maintenance and repair services of motor vehicles	
Value added	Value of maintenance and repair of motor vehicles less intermediate consumption for this activity.	
Double indicator method		
Volume output	Deflation of gross output value indicator, using CPI component of maintenance and repair of motor vehicles as deflator. Stratification is kept within the CPI component itself.	
Volume input	Deflation of input value indicator, using price indices by commodity, i.e., relevant price indices for major inputs of ISIC 502 (or ISIC 50 if necessary)	
Single indicator method		
Deflation	Deflation of value added by specific consumer price indexes	
Extrapolation	Extrapolation of base-year value added by receipts deflated by relevant components of the consumer price index.	

SIC	503 SALE OF MOTOR VEHICLE PARTS AND ACCESSORIES
IPC	6113 SALES OF PARTS AND ACCESSORIES OF MOTOR VEHICLES
Activity	Wholesale and retail sale of all kind of parts, components and accessories for motor vehicles; tyres, shock absorbers, installation of parts and accessories.
Products	Sales of parts and accessories of motor vehicles
Value added	Trade margins on sales of motor vehicle parts and accessories less intermediate consumption for this activity.
Double indicator method	
Volume output	Deflation of gross output value indicator, using CPI component of motor vehicle parts and accessories as deflator. Stratification is kept within the CPI component itself.
Volume input	Deflation of input value indicator, using price indices by commodity, i.e., relevant price indices for major inputs of ISIC 503 (or ISIC 50 if necessary).
Single indicator method	
Deflation	Deflation of value added by specific producer and consumer price indexes
Extrapolation	Extrapolation of value added by an output volume index of sales deflated by producer and consumer price indexes.

SIC	504 SALE, MAINTENANCE AND REPAIR OF MOTORCYCLES AND RELATED PARTS AND ACCESSORIES
PC	Product classes: 6121, 6122
Activity	Wholesale and retail trade of big and small motorcycles including mopeds. Sale of parts and accessories for motorcycles. Maintenance and repair of motorcycles.
Value added	Trade margins on sales of motorcycles, etc., and related parts and accessories, plus value of maintenance and repair of motorcycles, etc., less intermediate consumption of this activity.
Double Deflation	
Volume output	Deflation of gross output value indicator , using as deflator the respective price indices of the two products (see below).
Volume input	Deflation of input value indicator, using price indices by commodity, i.e., relevant price indices for major inputs of ISIC 504 (or ISIC 50 if necessary).
Single indicator	
Deflation	Deflation of value added by specific producer and consumer price indices.
Extrapolation	Extrapolation of value added by sales and receipts deflated by producer and consumer price indices.

SIC	504
PC	6121 SALES OF MOTORCYCLES AND SNOWMOBILES AND RELATED PARTS AND ACCESSORIES
Products	Sales of motorcycles and snowmobiles and related parts and accessories.
Value output	Trade margins on sales of motorcycles, etc..
Volume output	Direct volume extrapolation by number of motorcycles and snowmobiles registered, or number of motorcycles and snowmobiles sold, as volume indicator, stratified if possible.
SIC	504
PC	6122 MAINTENANCE AND REPAIR SERVICES OF MOTORCYCLES AND SNOWMOBILES
Products	Maintenance and repair services of motorcycles and snowmobiles.
Value output	Value of maintenance and repair services of motorcycles and snowmobiles.
Volume output	Deflation of gross output value indicator, using CPI component of maintenance and repair of motor vehicles as deflator (same price index as for CPC class 6112)

SIC	505	RETAIL SALE OF AUTOMOTIVE FUEL
IPC	6130	RETAIL SALES OF MOTOR FUEL
Activity	Retail sale of fuel for motor vehicles and motorcycles. Also: Retail sale of automotive fuel combined with sales of lubricating products, cooling products, cleaning and all other kinds of products for motor vehicles.	
Products	Retail sales of motor fuel.	
Value added	Trade margins on retail sales of motor fuel less intermediate consumption for this activity.	
Double indicator	Mixed double deflation, i.e., output extrapolation and input deflation.	
Volume output	Direct volume extrapolation by number of litres petrol and diesel sold as volume indicator.	
Volume input	Deflation of input value indicator, using price indices by commodity, i.e., relevant price indices for major inputs of ISIC 505 (or ISIC 50 if necessary).	

SIC	511	WHOLESALE ON A FEE OR CONTRACT BASIS
IPC	6211	COMMISSION AGENTS' SERVICES
Activity	Commission agents, commodity brokers and auctioneers and all other wholesalers who trade on behalf and on the account of others; bringing sellers and buyers together or undertaking commercial transactions on behalf of a principal.	
Products	Sales on a fee or contract basis of (1) agricultural raw materials and live animals (2) food products, beverages and tobacco, (3) fuels, metals, ores, timber, building materials and industrial and technical chemicals, (4) machinery, industrial equipment and vehicles other than motor vehicles, bicycles and motorcycles, (5) furniture, household goods, hardware and ironmongery, (6) textiles, clothing and footwear, (7) pharmaceutical and medical goods and cosmetics, and (8) goods n.e.c.	
Value added	Value from sales (wholesale) on a fee or contract basis less intermediate consumption for this activity.	
Double indicator method		
Volume output	<p>a) Deflation of gross output value indicator, using wholesale price index as deflator.</p> <p>b) Merchant wholesalers' margin rates times sales deflated by components of the producer price index.</p>	
Volume input	Deflation of input value indicator, using price indices by commodity, i.e., relevant price indices for major inputs of ISIC 511 (or ISIC 51 if necessary).	
Single indicator method		
Deflation	Deflation of value added by relevant producer or wholesale price indexes.	
Extrapolation	Extrapolation of value added by an index of constant price sales of wholesale enterprises at a physical quantity output index.	

ISIC	512 WHOLESALE OF AGRICULTURAL RAW MATERIALS, LIVE ANIMALS, FOOD, BEVERAGES AND TOBACCO
PC	Product classes: 6221, 6222
Activity	Wholesale of agricultural raw materials and live animals. Wholesale of food, beverages and tobacco.
Value added	Trade margins on wholesale of food, beverages and tobacco, less intermediate consumption for this activity.
Double indicator method	
Volume output	<p>(a) Deflation of gross output value indicator, using as deflator the respective price indices of the two products (see below).</p> <p>(b) Volume output is derived as the producer of base year margin rate (i.e.) the ratio of gross margin to sales) and sales deflated by producer price indexes.</p>
Volume input	Deflation of input value indicator, using price indices by commodity, i.e., relevant price indices for major inputs of ISIC 512 (or ISIC 51 if necessary).
Single indicator method	
Deflation	Deflation of current value added by relevant wholesale or producer price indices.
Extrapolation	Extrapolation of current value added by constant price sales or turnover of wholesale enterprises and physical quantity output index.

SIC	512
PC	6221 WHOLESALE TRADE SERVICES OF AGRICULTURAL RAW MATERIALS AND LIVE ANIMALS
Products	Wholesale trade services of (1) grain, oilseeds and oleaginous fruits, seeds and animal feed, (2) flowers and plants, (3) unmanufactured tobacco, (4) live animals, (5) hides and skins and leather, and (6) agricultural raw materials n.e.c.
Value output	Trade margins on wholesale of agricultural raw materials and live animals.
Volume output	Deflation of gross output value indicator, using as deflator the relevant wholesale price index, i.e., wholesale price index for agricultural raw materials and live animals, or weighted wholesale price index for goods related to (possibly all or most of) the six products listed above.
SIC	512
PC	6222 WHOLESALE TRADE SERVICES OF FOOD, BEVERAGES AND TOBACCO
Products	Wholesale trade services of (1) fruit and vegetables, (2) dairy products, eggs and edible oils and fats, (3) meat, poultry and game, (4) fishery products, (5) sugar, sugar and flour confectionery and bakery products, (6) beverages, (7) coffee, tea, cocoa and spices, (8) tobacco products, and (9) food products n.e.c.
Value output	Trade margins on wholesale of food, beverages and tobacco.
Volume output	Deflation of gross output value indicator, using as deflator the relevant wholesale price index, i.e., wholesale price index for food, beverages, tobacco or weighted wholesale price index related to goods of (possibly all or most of) the nine products listed above.

SIC	513 WHOLESALE OF HOUSEHOLD GOODS
PC	Product classes: 6223-6226
Activity	Wholesale of household goods
Value added	Trade margins on wholesale of household goods, less intermediate consumption for this activity.
Double indicator method	
Volume output	Deflation of gross output value indicator , using as deflator the respective price indices of the four products (see below).
Volume input	Deflation of input value indicator, using price indices by commodity, i.e., relevant price indices for major inputs of ISIC 513 (or ISIC 51 if necessary).
SIC	513
PC	6223 WHOLESALE TRADE SERVICES OF TEXTILES, CLOTHING AND FOOTWEAR
Products	Wholesale trade services of (1) textiles, (2) household linens, (3) articles of clothing, (4) fur articles, (5) footwear, and (6) clothing accessories.
Value output	Trade margins on wholesale of textiles, clothing and footwear.
Volume output	Deflation of gross output value indicator , using as deflator the relevant wholesale price index, i.e., wholesale price index for textiles, clothing and footwear, or weighted wholesale price index related to goods of (possibly all or most of) the six products listed below.

SIC	513
PC	6224 WHOLESALE TRADE SERVICES OF HOUSEHOLD APPLIANCES, ARTICLES AND EQUIPMENT
Products	Wholesale trade services of (1) household furniture, (2) household appliances, (3) cutlery, domestic metal ware and lighting articles and equipment, (4) radio and television equipment, musical instruments and records, music scores and tapes, (5) wickerwork, cork goods, cooper's ware and other wooden ware, (7) wallpaper and floor coverings, and (8) household appliances, articles and equipment n.e.c.
Value output	Trade margins on wholesale of household appliances, articles and equipment.
Volume output	Deflation of gross output value indicator, using as deflator the relevant wholesale price index, i.e., wholesale price index for household appliances, articles and equipment, or weighted wholesale price index related to goods of (possibly all or most of) the eight products listed above.
SIC	513
PC	6225 WHOLESALE TRADE SERVICES OF PHARMACEUTICAL AND MEDICAL GOODS AND COSMETICS
Products	Wholesale trade services of (1) pharmaceutical and medical goods, (2) surgical and orthopaedic instruments and devices, and (3) perfumery, cosmetics and soaps.
Value output	Trade margins on wholesale of pharmaceutical and medical goods and cosmetics.
Volume output	Deflation of gross output value indicator, using as deflator the relevant wholesale price index, i.e., wholesale price index for pharmaceutical and medical goods and cosmetics, or weighted wholesale price index related to goods of (possibly all of) the three products listed above.

SIC	513
IPC	6226 WHOLESALE TRADE SERVICES OF MISCELLANEOUS CONSUMER GOODS
Products	Wholesale trade services of 91) paper and paperboard, (2) books, magazines, newspapers and stationery, (3) photo-graphic and optical goods, (4) games and toys, (5) watches, clocks and jewellery, (6) sports goods, (7) leather goods and travel accessories, (8) cleaning materials, (9) miscellaneous consumer goods n.e.c.
Value output	Trade margins on wholesale of miscellaneous goods.
Volume output	<u>Deflation of gross output value indicator</u> , using as deflator the relevant wholesale price index, i.e., wholesale price index of miscellaneous consumer goods, or weighted wholesale price index related to good of (possibly all or most of) the nine products listed above.

ISIC	514
PC	6227 WHOLESALE OF NON-AGRICULTURAL INTERMEDIATE PRODUCTS, WASTE AND SCRAP WHOLESALE TRADE SERVICES OF INTERMEDIATE PRODUCTS, OTHER THAN AGRICULTURAL; WHOLESALE TRADE SERVICES OF WASTE AND SCRAP AND MATERIALS FOR RECYCLING
Activity	Wholesale of non-agricultural intermediate products, waste and scrap.
Products	Wholesale trade services of (1) solid, liquid and gaseous fuels and related products, (2) metal ores and metals in primary forms, (3) wood in the rough and products of primary processing of wood, (4) paints, varnishes and lacquers, (5) construction materials, fittings and fixtures and flat glass, (6) basic industrial chemicals, fertilizers, synthetic resins and plastic material in primary forms, (7) textile fibres, (8) waste and scrap and materials from recycling, (9) intermediate products, other than agricultural, n.e.c.
Value added	Trade margins on wholesale of non-agricultural intermediate products, waste and scrap, less intermediate consumption for this activity.
Double indicator method	
Volume output	Deflation of gross output value indicator , using as deflator the relevant wholesale price index, i.e., wholesale price index for non-agricultural intermediate products, or weighted wholesale price index related to goods of (possibly all or most of) the nine products listed above.
Volume input	Deflation of input value indicator, using price indices by commodity, i.e., relevant price indices for major inputs of ISIC 514 (or ISIC 51 if necessary).

SIC	515
PC	6228 WHOLESALE OF MACHINERY, EQUIPMENT AND SUPPLIES WHOLESALE TRADE SERVICES OF MACHINERY, EQUIPMENT AND SUPPLIES
Activity	Wholesale of machinery, equipment and supplies.
Products	Wholesale trade services of (1) agricultural machinery and equipment including tractors, (2) transport equipment other than motor vehicles, motorcycles and bicycles, (3) construction and civil engineering machinery and equipment, (4) office machinery and equipment including office furniture, (5) machinery and equipment for the textile industry, (6) machinery and equipment for the wood and metal industries, (7) machinery and equipment related supplies, and (8) other machinery and equipment for use in industry and commerce, etc.
Value added	Trade margins on wholesale of machinery, equipment and supplies, less intermediate consumption for this activity.
Double indicator method	
Volume output	Deflation of gross output value indicator , using as deflator the relevant wholesale price index, i.e., wholesale price index of machinery, equipment and supplies, or weighted wholesale price index related to goods of (possibly all or most of) the eight products listed above.
Volume input	Deflation of input value indicator, using price indices by commodity, i.e., relevant price indices for major inputs of ISIC 515 (or ISIC 51 if necessary).

SIC	519 OTHER WHOLESALE
IPC	n.a.
Activity	Specialized wholesale not covered in one of the previous categories. Wholesale in a variety of goods without any particular specialization.
Value added	Trade margins on other wholesale, less intermediate consumption for this activity.
Double indicator method	
Volume output	Deflation of gross output value indicator , using total wholesale price index as deflator.
Volume input	Deflation of input value indicator, using price indices by commodity, i.e., relevant price indices for major inputs of ISIC 519 (or ISIC 51 if necessary).

SIC	521 RETAIL SALE IN NON-SPECIALIZED STORES
PC	n.a.
Activity	Retail sale of a large variety of goods. Activities of general stores and activities of departmental stores carrying a general line of merchandise.
Value added	Trade margins on retail sale in non-specialized stores, less intermediate consumption for this activity.
Double indicator method	
Volume output	Deflation of gross output value indicator, using as deflator total price index for retail sale.
Volume input	Deflation of input value indicator, using price indices by commodity, i.e., relevant price indices for major inputs of ISIC 521 (or ISIC 52 if necessary).

SIC	522 RETAIL SALE OF FOOD, BEVERAGES AND TOBACCO IN SPECIALIZED STORES
IPC	6310 RETAIL SALES OF FOOD, BEVERAGES AND TOBACCO
Activity	Retail sale of food, beverages and tobacco in specialized stores.
Products	Retail sales of (1) fruit and vegetables, (2) dairy products and eggs, (3) meat and meat products, (4) fish and other seafood and products thereof, (5) bread and flour confectionery, (6) sugar confectionery, (7) beverages not consumed on the spot, (8) tobacco products, and (9) specialized retail sales of food products n.e.c.
Value added	Trade margins on retail sales of food, beverages and tobacco in specialized stores, less intermediate consumption for this activity.
Double indicator method	
Volume output	<p>(a) Deflation of gross output value indicator, using preferably as deflator price index of retail sale of food, beverages and tobacco in specialized stores (ISIC 522) or CPI component for food, beverages and tobacco. Stratification is kept within the CPI component itself, otherwise weighted by sales figures of food, beverages and tobacco respectively.</p> <p>(b) Base year margin rate, i.e. the ratio of gross margin to sales times sales deflated by CPI.</p>
Volume input	Deflation of input value indicator, using price indices by commodity, i.e., relevant price indices for major inputs of ISIC 522 (or ISIC 52 if necessary).
Single indicator method	
Deflation	Deflation of value added by a consumer price index.
Extrapolation	Extrapolation of value added by indices of constant price turnover or sales of retail establishments.

ISIC	523 RETAIL SALE OF NEW GOODS IN SPECIALIZED STORES
PC	Product classes: 6321-6325, 6329
Activity	Real sale of pharmaceutical and medical goods, cosmetic and toilet articles. Other retail sale of new goods in specialized stores.
Value added	Trade margins on retail sale of new goods in specialized stores, less intermediate consumption for this activity.
Double indicator method	
Volume output	Deflation of gross output value indicator , using preferably as deflator price index of retail sale in ISIC 523, or weighted price index of CPI components for consumer goods other than food, beverages and tobacco (see below).
Volume input	Deflation of input value indicator, using price indices by commodity, i.e., relevant price indices for major inputs of ISIC 523 (or ISIC 52 if necessary).

ISIC	523	
PC	6321	RETAIL SALES OF PHARMACEUTICAL AND MEDICAL GOODS AND COSMETICS
Products		Retail sales of (1) pharmaceutical medical and orthopaedic goods, and (2) perfumery articles, cosmetic articles and toilet soaps.
Value output		Trade margins on retail sales of pharmaceutical and medical goods and cosmetics.
Volume output		Deflation of gross output value indicator , using as deflator weighted CPI components of pharmaceutical and medical goods and cosmetics. Adjustment is suggested to reconcile with use of price index of retail sale in ISIC 523 as overall industry deflator (see above).
ISIC	523	
PC	6322	RETAIL SALES OF TEXTILES, CLOTHING, FOOTWEAR AND LEATHER GOODS
Products		Retail sales of (1) textiles, (2) articles of clothing, articles of fur and clothing accessories, (3) footwear, and (4) leather goods and travel accessories.
Value output		Trade margins on retail sales of textiles, clothing, footwear and leather goods.
Volume output		Deflation of gross output value indicator , using as deflator weighted CPI components of textiles, clothing, footwear and leather goods. Adjustment is suggested to reconcile with overall industry deflator (see above).

SIC	523	
PC	6323	RETAIL SALES OF HOUSEHOLD APPLIANCES, ARTICLES AND EQUIPMENT
products		Retail sales of (1) household furniture, (2) household appliances, (3) miscellaneous household utensils, cutlery, crockery, glassware, china and pottery, (4) radio and television equipment, musical instruments and records, music scores and tapes, (5) articles for lighting, (6) curtains, net curtains and divers household articles of textile materials, (7) wood, cork goods and wickerwork goods, and (8) household appliances, articles and equipment n.e.c.
value output		Trade margins on retail sales of household appliances, articles and equipment.
value output		Deflation of gross output value indicator , using as deflator weighted CPI components of household appliances, articles and equipment. Adjustment is suggested to reconcile with overall industry deflator (see above).

SIC	523	
PC	6324	RETAIL SALES OF HARDWARE, PAINTS, VARNISHES AND LACQUERS, GLASS AND ARTICLES OF GLASS AND DO-IT-YOURSELF MATERIAL AND EQUIPMENT
Products		Retail sales of (1) hardware, (2) paints, varnishes and lacquers, (3) glass and articles of glass, and (4) do-it-yourself material and equipment.
Value output		Trade margins on retail sales of hardware, paints, varnishes and lacquers, glass and articles of glass and do-it-yourself material and equipment.
Volume output		Deflation of gross output value indicator, using as deflator weighted CPI components of hardware, paints, varnishes and lacquers, glass and articles of glass and do-it-yourself material and equipment. Adjustment is suggested to reconcile with overall industry deflator (see above).
SIC	523	
PC	6325	RETAIL SALES OF OFFICE EQUIPMENT, BOOKS, NEWSPAPERS AND STATIONARY AND PHOTOGRAPHIC, OPTICAL AND PRECISION EQUIPMENT
Products		Retail sales of (1) office supplies and equipment, (2) computers and non-customized software, (3) books, newspapers, magazines and stationery, and (4) photographic, optical and precision equipment.
Value output		Traded margins on retail sales of office equipment, books, newspapers and stationary and photographic, optical and precision equipment.
Volume output		Deflation of gross output value indicator, using as deflator weighted CPI components of the four products listed above. Adjustment is suggested to reconcile with overall industry deflator (see above).

SIC	523
IPC	6329 OTHER SPECIALIZED RETAIL SALES OF NON-FOOD PRODUCTS
Products	Retail sales of (1) cleaning materials, wallpaper and floor coverings, (2) watches, clocks and jewellery (3) sports goods, (4) games and toys, (5) flowers, plants, seeds, fertilizers and pet animals, (6) souvenirs, (7) fuel oil, bottles gas, coal and wood, and (8) specialized retail sales of non-food products n.e.c.
Value output	Trade margins on other specialized retail sales of non-food products.
Volume output	Deflation of gross output value indicator , using as deflator weighted CPI components of (all or most of) the eight products listed above. Adjustment is suggested to reconcile with overall industry deflator (see above).

ISIC	524 RETAIL SALE OF SECOND-HAND GOODS IN STORES
IPC	n.a.
Activity	Retail sale of second-hand goods, antiques, etc. Retail sale of second-hand books. Also: Pawn shop activities.
Value added	Trade margins on retail sale of second-hand goods in stores, less intermediate consumption for this activity.
Double indicator method	
Volume output	Deflation of gross output value indicator, using as deflator total price index for retail sales.
Volume input	Deflation of input value indicator, using price indices by commodity, i.e., relevant price indices for major inputs of ISIC 524, or rather ISIC 52, which in this case probably would be the finest disaggregation basis in practice.

SIC	525 RETAIL SALE NOT IN STORES
IPC	n.a.
Activity	Retail sale via mail order houses. Retail sale via stalls and markets. Other non-store retail sale, by sales person from home to home, by vending machines, mobile bakers, greengrocers, etc.
Value added	Trade margins on retail sale outside stores, less intermediate consumption for this activity.
Double indicator method	
Volume output	Deflation of value added indicator directly, using as deflator total price index for retail sale.

SIC	526 REPAIR OF PERSONAL AND HOUSEHOLD GOODS
IPC	6330 REPAIR SERVICES OF PERSONAL AND HOUSEHOLD GOODS
Activity	Repair of personal and household goods when not done in combination with manufacture, wholesale or retail sale of these goods.
Products	Footwear and leather goods repair services. Repair services of electrical household appliances. Watches, clocks, and jewellery repair services. Garment and household textile repair services, personal and household goods repair services n.e.c.
Value added	Value of repair of personal and household goods, less intermediate consumption for this activity.
Double indicator method	
Volume output	Deflation of gross output value indicator, using as deflator weighted CPI components of most or possibly all products listed above.
Volume input	Deflation of input value indicator, using price indices by commodity, i.e., relevant price indices for major inputs of ISIC 526 (or ISIC 52 if necessary).

II. A. HOTEL AND RESTAURANT SERVICES
BY ACTIVITY GROUPS (3-DIGIT LEVELS) AND PRODUCT CLASSES (4-DIGIT LEVELS)

<u>ISIC</u> <u>Rev.3</u> <u>3-digit</u>	<u>CPC</u> <u>1-digit</u>	<u>ACTIVITY GROUPS AND</u> <u>PRODUCT CLASSES</u>	<u>ISIC</u> <u>Rev.3</u> <u>3-digit</u>	<u>CPC</u> <u>4-digit</u>	<u>ACTIVITY GROUPS AND</u> <u>PRODUCT CLASSES</u>
551		HOTELS, CAMPING SITES AND OTHER PROVISION OF SHORT-STAY ACCOMMODATION ... (30)	552		RESTAURANTS, BARS AND CANTEENS
	6411	Hotel lodging services ... (31)		6421	Meals serving services with full restaurant service ... (33)
	6412	Motel lodging services ... (31)		6422	Meals serving services in self-service establishments ... (34)
	6419	Other lodging services ... (32)		6423	Caterer services, providing meals from outside ... (35)
				6429	Other food serving services ... (35)
				6431	Beverages serving services without entertainment ... (36)
				6432	Beverages serving services with entertainment ... (36)

	II.B PROPOSALS FOR PRICE AND VOLUME MEASURES (Industry and Product Coverage; Value Added; Output Value and Volume)
SIC	551 HOTELS, CAMPING SITES AND OTHER PROVISION OF SHORT STAY ACCOMMODATION
IPC	Product classes: 6411-6419
Activity	<p>Provision on a fee basis of short-term lodging, whether open to the general public or restricted to members of a particular organization. Activities of hotels, motels and inns. Provision on a fee basis of camping space and camping facilities, whether open to the general public or restricted to members of a particular organization. Activities of school dormitories, residence halls, rooming houses, guest home and houses, youth hostels, mountain shelter, etc.</p> <p>Also: Restaurant facilities operated in connection with the provision of lodging. Sleeping facilities offered by railway companies and other transport facilities which are operated as independent activities.</p>
Value added	Value of hotel services, less intermediate consumption for this activity.
Double indicator method	
Volume output	<p>Deflation of gross output value indicator, using as deflator CPI component of hotel accommodation services, or the respective price indices of the three products (see below). Stratification is kept within the CPI component itself, or by weighing the three products listed below.</p>
Volume input	Deflation of input value indicator, using price indices by commodity, i.e., relevant price indices for major inputs of ISIC 551 (or ISIC 55 if necessary).
Single indicator methods	
Deflation	Deflation of value added by CPI components or implicit price index of private consumption
Extrapolation	Value added is extrapolated by using physical quantity output indices; volume output indices, including constant price turnover and constant price private final consumption expenditures; or an index of persons employed.

SIC	551
IPC	6411 HOTEL ACCOMMODATION SERVICES
Products	Hotel lodging services
Value output	Value of motel accommodation services, i.e., value of expenditures incurred at hotels.
Volume output	<p>(a) Deflation of gross output value indicator, using as deflator CPI component of hotel accommodation services. Stratification is either kept within the CPI component itself, or provision must be made for combining separate price indices by type of hotels using appropriate weights.</p> <p>(b) Deflation of receipts for hotel accommodation service by room-rate index.</p>
SIC	551
IPC	6412 MOTEL LODGING SERVICES
Products	Motel accommodation services
Volume output	Value of hotel accommodation services, i.e., value of expenditures incurred at motels.
Volume output	<p>(a) Deflation of gross output value indicator, using as deflator an appropriate CPI component, which is likely to be CPI component of hotel accommodation services (same as CPC 6411), but there might be possible to distinguish separate sub-items of this component.</p> <p>(b) Deflation of receipts for motel accommodation services by room-rate index.</p>

SIC	551
IPC	6419 OTHER LODGING SERVICES
Products	Children's holiday camp services. Holiday centres and holiday homes services. Letting services of furnished accommodation. Youth hostels and mountain shelters services. Camping and caravanning sites services. Sleeping car services and sleeping services in other transport media. Other accommodation services n.e.c.
Value output	Value of other accommodation services (expenditures for provision of accommodation other than in hotels and motels).
Volume output	Deflation of gross output value indicator , using as deflator a relevant price index. The stratification technique is preferred, i.e., deflating each of the products by most appropriate price indices available, e.g., price index for camping site tariffs. If not possible, resort to overall deflation using the CPI component of hotel accommodation services as price index.

ISIC	552 RESTAURANTS
PC	Product classes: 6421-6432
Activity	Restaurants, bars and canteens Catering Also: Dining car activities of railway companies and other passenger transport, facilities which are operated as independent activities. Ice cream parlours. Refreshment stands in cinemas, in arenas.
Value added	Value of restaurant services (full expenditures incurred in restaurants), less intermediate consumption for this activity.
Double deflation	
Volume output	Deflation of gross output value indicator, using as deflator CPI component of restaurant services or rather restaurant expenditures (see below).
Volume input	Deflation of input value indicator, using price indices by commodity, i.e., relevant price indices for major inputs of ISIC 552 (or ISIC 55 if necessary).
Single indicator method	
Deflation	Deflation of value added by CPI components.
Extrapolation	Extrapolation of value added by constant price turnover and constant price private consumption expenditure indices. Other extrapolators are a volume index of deflated sales (H2, LU), indexes of numbers employed (SP) and physical quantity output indexes.

SIC	552
PC	6421 MEALS SERVING SERVICES WITH FULL RESTAURANT SERVICE
Products	Meals serving services with full restaurant service.
Value output	Value of expenditures for meals serving services with full restaurant service.
Volume output	Deflation of gross output value indicator , using as deflator CPI component of restaurant services (eating out, expenses at restaurants, etc., or similar relevant index). In distinguishing the six CPC classes, of which this first one is probably most important, stratification should be pursued in order to avoid resorting to the use of same CPI for overall restaurant services in each case. This stratification may be obtained through separate price indices for relevant sub-items of restaurant services.

SIC	552
PC	6422 MEALS SERVING SERVICES IN SELF-SERVICE ESTABLISHMENTS
Products	Meals serving services in self-service establishments.
Value output	Value of expenditure for meals serving services in self-service establishments.
Volume output	Deflation of gross output value indicator , using as deflator the relevant sub-component of CPI component of restaurant services, based on prices obtained from hamburger chain stores, cafeterias, etc. If not available, resort to the overall CPI component of restaurant services.

SIC	552
PC	6423 CATERER SERVICES, PROVIDING MEALS FROM OUTSIDE
Products	Caterer services, providing meals from outside.
Value output	Value of expenditures on caterer services, providing meals from outside.
Volume output	Deflation of gross output value indicator, using as deflator a relevant price index for caterer services. If no specific price index is available, resort to the overall CPI component of restaurant services, or a general price index such as CPI component of food.
SIC	552
PC	6429 OTHER FOOD SERVING SERVICES
Products	Other food serving services.
Value output	Value of expenditures on other food serving services.
Volume output	Deflation of gross output value indicator, using as deflator a relevant price index, however difficult to obtain, resort to CPI component of restaurant services, or a general price index such as CPI component of food.

SIC	552
'PC	6431 BEVERAGES SERVING SERVICES WITHOUT ENTERTAINMENT
'roducts	Beverages serving services for consumption on the premises, without entertainment.
'alue output	Value of expenditures on beverages serving services without entertainment.
'olume output	Deflation of gross output value indicator , using as deflator CPI component of beverages served in restaurants. Stratification is kept within or outside the CPI component, in latter case by weighing price indices for non-alcoholic and various alcoholic beverages served, using base-year values as weights.
SIC	552
'PC	6432 BEVERAGES SERVING SERVICES WITH ENTERTAINMENT
'roducts	Beverages serving services for consumption on the premises, with entertainment.
'alue output	Value of expenditures on beverages serving services with entertainment.
'olume output	Deflation of gross output value indicator , using as deflator same price index as for beverages serving services without entertainment, i.e., CPI component of beverages served in restaurants. It is unlikely that separate price information are recorded for the two CPC products.

III.A. TRANSPORT, STORAGE AND COMMUNICATIONS SERVICES
BY ACTIVITY GROUPS (3-DIGIT LEVELS) AND PRODUCT CLASSES (4-DIGIT LEVELS)

ISIC Rev.3 3-digit	CPC 4-digit	ACTIVITY GROUPS AND PRODUCT CLASSES	ISIC Rev.3 3-digit	CPC 4-digit	ACTIVITY GROUPS AND PRODUCT CLASSES
601		TRANSPORT VIA RAILWAYS ... (40)	611		SEA AND COASTAL WATER TRANSPORT ... (48)
	/111	Passenger transportation ... (41)		7211	Passenger transportation by sea-going vessels ... (49)
	/112	Freight transportation ... (41)		7212	Freight transportation by sea-going vessels ... (50)
	/113	Pushing or towing services ... (42)		7213	Rental of sea-going vessels with crew ... (50)
602		OTHER LAND TRANSPORT ... (43)		7214	Towing and pushing services ... (51)
	/121	Other scheduled passenger transportation ... (45)	612		INLAND WATER TRANSPORT ... (52)
	/122	Other non-scheduled passenger transportation ... (45)		7221	Passenger transportation ... (53)
	/123	Freight transportation ... (46)		7222	Freight transportation ... (53)
	/124	Rental of commercial vehicles with operator ... (46)		7223	Rental of non-sea-going vessel with crew ... (54)
603		TRANSPORT VIA PIPELINES ... (47)		7224	Towing and pushing services ... (54)
	/131	Transportation of fuels ... (47)	621		SCHEDULED AIR TRANSPORT ... (55)
	/139	Transportation of other goods ... (48)		7311	Scheduled passenger transportation by scheduled airlines ... (56)

ISIC Rev.3 3-digit	CPC 1-digit	ACTIVITY GROUPS AND PRODUCT CLASSES	ISIC Rev.3 3-digit	CPC 4-digit	ACTIVITY GROUPS AND PRODUCT CLASSES
622		NON-SCHEDULED AIR TRANSPORT ...(58)	630	7422	Storage services of liquids or gases ...(63)
	/312	Non-scheduled transportation ...(59)		7429	Other storage or warehouse services ...(64)
621	/321	Mail transportation by air ...(57)		7430	Supporting services for railway transport ...(64)
	/322	Transportation of containerized freight by air ...(57)		7441	Bus station services ...(65)
622	/329	Transportation of other freight by air ...(59)		7442	Highway, bridges and tunnel operation services ...(66)
	/330	Transportation via space ...(60)		7443	Parking services ...(66)
	/340	Rental of aircrafts with crew ...(60)		7449	Other supporting services for road transport ...(67)
630		SUPPORTING AND AUXILIARY TRANSPORT ACTIVITIES; ACTIVITIES OF TRAVEL AGENCIES ...(61)		7451	Port and waterway operation services (excl. cargo handling) ...(67)
	/411	Container handling services ...(62)		7452	Pilotage and berthing services ...(68)
	/419	Other cargo handling services ...(62)		7453	Navigation aid services ...(68)
	/421	Storage services of frozen or refrigerated goods ...(63)		7454	Vessel salvage and refloating services ...(69)
				7459	Other supporting services for water transport ...(69)

ISIC Rev.3 3-digit	CPC 4-digit	ACTIVITY GROUPS AND PRODUCT CLASSES
630	7461	Airport operation services (excl. cargo handling) ...(70)
	7462	Air traffic control services ...(70)
	7469	Other supporting services for air transport ...(71)
	7471	Travel agencies and tour operators services ...(71)
	7472	Tourist guides services ...(72)
	7480	Freight transport agency services ...(72)
	7490	Other supporting and auxiliary transport services ...(73)
641		POSTAL AND COURIER ACTIVITIES ...(74)
	7511	Postal services ...(75)
	7512	Courier services ...(75)
642		TELECOMMUNICATIONS ...(76)
	7521	Public telephone services ...(77)
	7522	Business network services ...(77)
	7523	Data transmission services ...(77)

ISIC Rev.3 3-digit	CPC 4-digit	ACTIVITY GROUPS AND PRODUCT CLASSES
642	7524	Programme transmission ...(78)
	7525	Interconnection services ...(78)
	7529	Other telecommunication services ...(79)

III.B. PROPOSALS FOR PRICE AND VOLUME MEASURES

(Industry and Product Coverage; Value Added; Output Value and Volume)

SIC	601 TRANSPORT VIA RAILWAYS
PC	Product Classes: 7111-7113
Activity	Passenger and freight transport by interurban railways.
Value added	Value of transport services via railways, less intermediate consumption for this activity.
Double indicator method	
Volume output	Deflation of gross output value indicator, using respective price indices of the three products as deflator, i.e., direct price deflator for passenger transport and implicit price deflator following volume extrapolation for freight transport (see below).
Volume input	Deflation of input value indicator, using price indices by commodity, i.e., relevant price indices for major inputs of ISIC 601.
Single indicator method	
Deflation	Deflation of current value added by relevant components of consumer price indices.
Extrapolation	Extrapolation of base-year value added by (a) volume measures based on quantity index of passenger kilometers and revenue tonne kilometers; and (b) output volume indexes derived from current price output deflated by a price index of passenger fares.

SIC	601/602
PC	7111 PASSENGER TRANSPORTATION BY RAIL
Products	Interurban passenger transportation. Urban and suburban passenger transportation.
Value output	Value of passenger transportation by rail (regular railways, subways, trams, etc.).
Volume output	Deflation of gross output value indicator , using as deflator CPI component of passenger transportation by rail. Stratification on interurban railway transport and urban and suburban railway transport is either kept within the CPI component itself, or by weighing price indices of the two products. Stratification also involves taking due account to the various forms of tariffs by groups of persons transported.
SIC	601
PC	7112 FREIGHT TRANSPORTATION BY RAIL
Products	Transportation of (1) frozen and refrigerated goods, (2) bulk liquids or gases, (3) containerized freight, (4) mail, and (5) other freight.
Value output	Value of freight transportation by rail.
Volume output	Volume output is extrapolated by using the number of ton-kilometres (or ton miles) of freight carried by rail as volume indicator. If only number of tons carried is available, an estimated adjustment should be made for year-to-year changes in distances carried.

SIC	601
IPC	7113 PUSHING OR TOWING SERVICES BY RAIL
Products	Pushing or towing services by rail.
Value output	Value of pushing or towing services by rail.
Volume output	Deflation of gross output value indicator, using as deflator cost or input price index, such as wage rate index of transport via rail (ISIC 601).

SIC	602 OTHER LAND TRANSPORT
IPC	Product classes: 7121-7124
Activity	<p>(1) Other scheduled passenger land transport, (2) taxi operation, (3) other non-scheduled road passenger transport such as rental of private cars with operator, charters, excursions and other occasional coach services, (4) other land passenger transport such as passenger transport by man or animal drawn vehicles, and (5) freight transport by road. Also: Operation of school buses, town-to-airport or town-to-station lines, picking up and setting down passengers at normally fixed stops.</p> <p>Furniture removal.</p> <p>Renting of trucks with driver or operator.</p> <p>Freight transport by man or animal drawn vehicles.</p>
Double indicator method	
Value added	Value of other land transport services than by rail (scheduled and non-scheduled), less intermediate consumption for this activity.
Volume output	<u>Deflation of gross output value indicator</u> , using as deflator the respective price indices of the four products, i.e., using direct price deflators for both passenger transport and freight transport (see below).
Single indicator method	
Deflation	Deflation of current value added using tariff indices, relevant components of consumer or producer price indices and output implicit price deflator.
Extrapolation	Extrapolation of value added by volume measures obtained by deflation, including turnover of operators deflated by specific consumer price index; constant price final expenditure index for buses, trains and taxis; current price output deflated by consumer price index for public transport; and current price output deflated by consumer price indices.

/olume input

Deflation of input value indicator, using price indices by commodity, i.e., relevant price indices for major inputs of ISIC 602.

SIC	602
PC	7121 OTHER SCHEDULED PASSENGER TRANSPORTATION BY ROAD
Products	Urban and suburban transportation, regular and special. Interurban transportation, regular and special. Other scheduled passenger transportation n.e.c.
Value output	Value of other scheduled passenger transportation by road (bus transport, etc.)
Volume output	Deflation of gross output value indicator , using as deflator CPI component of bus transport or other relevant price indices for scheduled passenger transportation by road. Stratification is either kept within the CPI component itself, or by deflating each type of passenger transportation by separate price indices (bus fares, etc.)
SIC	602
PC	7122 OTHER NON-SCHEDULED PASSENGER TRANSPORTATION BY ROAD
Products	Taxi services Rental of (1) private cars with operator, and (2) buses and coaches with operator. Passenger transportation by man- or animal-drawn vehicles. Other non-scheduled passenger transportation n.e.c.
Value output	Value of other non-scheduled passenger transportation by road (taxis, sight-seeing buses, etc.).
Volume output	Deflation of gross output value indicator , using as deflator CPI component of non-scheduled passenger transportation or other relevant price indices. Stratification is either kept within the CPI component itself, or by deflating each passenger transportation by separate price indices (taxi fares, rental fares, tariffs for sight- seeing buses, etc.) using base-year value weights.

SIC	602
PC	7123 FREIGHT TRANSPORTATION BY ROAD
Products	Transportation of (1) frozen or refrigerated goods, (2) bulk liquids or gases, (3) containerized freight, (4) furniture, (5) mail and (6) other freight. Freight transportation by man- or animal-drawn vehicles.
Value output	Value of freight transportation services by road (carried out by transport enterprises).
Volume output	Deflation of gross output value indicator , using relevant price indices as deflator, based on rates or average revenue per ton kilometre, relevant tariffs, etc. Stratification should take into account the various types of freight transportation listed as products above and base-year value weights.

SIC	602
PC	7124 RENTAL OF COMMERCIAL VEHICLES WITH OPERATOR
Products	Rental of commercial vehicles with operator.
Value output	Value of rental of commercial vehicles with operator.
Volume output	Deflation of gross output value indicator , using as deflator specific rental price indices; if not possible, resort to cost or input price index such as wage rate index for other land transport (ISIC 602).

SIC	603 TRANSPORT VIA PIPELINE
IPC	Product Classes: 7131, 7139
Activity	Transport of gases, liquids, slurry and other commodities via pipelines. Operation of pump stations. Specialized maintenance of pipelines.
Value added	Value of transport services via pipelines, less intermediate consumption for this activity.
Double indicator method	
Volume output	Volume output is extrapolated by using preferably ton-kilometres or volume of oil, natural gas, etc., transported as volume indicator.
Volume input	Deflation of input value indicator, using price indices by commodity, i.e., relevant price indices for major inputs of ISIC 603.
SIC	603
IPC	7131 TRANSPORTATION OF FUELS
Products	Transportation of fuels via pipelines.
Value output	Value of transportation of fuels via pipelines, in particular of oil and natural gas.
Volume output	Direct volume extrapolation by number of ton-kilometres or cubic-metres of fuels as volume indicator; if not available, resort to capacity measure of cubic-metres, preferably making adjustment for new capacity not yet in use.

SIC	603
IPC	7139 TRANSPORTATION OF OTHER GOODS VIA PIPELINES
Products	Transportation of other goods than fuels via pipelines
Value output	Value of transportation of other goods than fuels via pipelines.
Volume output	Direct volume extrapolation by number of ton-kilometres or capacity measure of cubic-metres as volume indicator.
SIC	611 SEA AND COASTAL WATER TRANSPORT
IPC	Product Classes: 7211-7214
Activity	Transport of passenger or freight overseas including via great lakes and coastal water transport.
Double indicator method	
Value added	Value of sea and coastal water transport, less intermediate consumption for this activity.
Volume output	Deflation of gross output value indicator, using as deflator relevant price indices for both freight transportation and passenger transportation (see below).
Volume input	Deflation of input value indicator, using price indices by commodity, i.e., relevant price indices for major inputs of ISIC 611.
Single indicator methods	
Deflation	Deflation of current value added, using implicit output price deflator calculated from current price gross output and volume of cargo transported. Current value added is also deflated by relevant components of consumer price indices gross domestic price deflators.

Extrapolation	Extrapolation of value added by an output volume index calculated as international passenger revenue deflated by consumer price index; physical quantity index of volume of cargo and number of passenger transported.
SIC	611
IPC	7211 PASSENGER TRANSPORTATION BY SEA-GOING VESSELS
Products	<p>Passenger transportation by ferries as sea-going vessels (overseas, coastal, great lakes)</p> <p>Other passenger transportation such as operation of excursion, cruise or sightseeing boats by sea-going vessels (overseas, coastal, great lakes).</p>
Value output	Value of passenger transportation by sea-going vessels.
Volume output	<p>Deflation of gross output value indicator, using as deflator CPI component of boat and ferry transport or other price indices for ferries, etc. If cruise transport is important, deflation of gross output of cruise transport should be made separately by using an appropriate price deflator such as unit value index (expenditure and number of cruise passengers or possibly passenger kilometres).</p>

SIC	611
PC	7212 FREIGHT TRANSPORTATION BY SEA-GOING VESSELS
Products	Transportation by sea-going vessels of (1) frozen or refrigerated goods, (2) bulk liquids or gases, (3) containerized freight, and (4) other freight.
Value output	Value of freight transportation by sea-going vessels.
Volume output	Deflation of gross output value indicator , using as deflator appropriate indices of freight rates, carrier tariffs, etc. Stratification by various types of freight transportation should be made, taking into account composition of freight transportation and variation in freight rate indices.
SIC	611
PC	7213 RENTAL OF SEA-GOING VESSELS WITH CREW
Products	Rental of sea-going vessels with crew.
Value output	Value of rental of sea-going vessels with crew.
Volume output	Deflation of gross output value indicator , using as deflator specific rental price indices; if not possible, resort to cost or input price index such as wage rate index of sea and coastal water transport (ISIC 611).

SIC	611
PC	7214 TOWING AND PUSHING SERVICES BY SEA-GOING VESSELS
Products	Towing and pushing services, i.e., of barges, oil rigs, etc., by sea-going vessels.
Value output	Value of towing and pushing services by sea-going vessels.
Volume output	Deflation of gross output value indicator, using as deflator cost or input price indices, such as wage rate index of sea and coastal water transport (ISIC 611).

SIC	612 INLAND WATER TRANSPORT
IPC	Product Classes: 7221-7224
Activity	Transport of passengers or freight via rivers, canals, lakes and other inland waterways including inside harbours and docks.
Value added	Value of inland water transport, less intermediate consumption for this activity.
Double indicator method	
Volume output	Deflation of gross output value indicator, using as deflator relevant price indices for both passenger and freight transportation (see below).
Volume input	Deflation of input value indicator, using price indices by commodity, i.e., relevant price indices for major inputs of ISIC 612.
Single indicator methods	
Deflation	Deflation of current value added by output implicit price deflators.
Extrapolation	Extrapolation of value added by a physical quantity output index of passengers transported; output volume index calculated as receipts deflated by specific outprice index or price index of freight rates; or physical quantity output index of tonnage transported.

SIC	612
IPC	7221 PASSENGER TRANSPORTATION BY NON-SEA-GOING VESSELS
Products	Passenger transportation by ferries as non-sea-going vessels. Other passenger transportation by non-sea-going vessels.
Value output	Value of passenger transportation by non-sea-going vessels.
Volume output	Deflation of gross output value indicator, using as deflator CPI component of inland water transportation or other specific price indices; if not available, resort to same price index as for CPC 7211 (or combined with 7221).
SIC	612
IPC	7222 FREIGHT TRANSPORTATION BY NON-SEA-GOING VESSELS
Products	Transportation of non-sea-going vessels of (1) frozen or refrigerated goods, (2) bulk liquids or gases, and (3) other freight.
Value output	Value of freight transportation by non-sea-going vessels.
Volume output	Deflation of gross output value indicator, using as deflator preferably relevant price indices. If specific price indices are not available, resort to same price index as for CPC 7212, possibly for coastal water transport only.

SIC	612
IPC	7223 RENTAL OF NON-SEA-GOING VESSELS WITH CREW
Products	Rental of non-sea-going vessels with crew
Value output	Value of rental of non-sea-going vessels with crew.
Volume output	Deflation of gross output value indicator, using as deflator specific rental price indices; if not possible, resort to cost or input price index such as wage rate index of inland water transport (ISIC 612)

SIC	612
IPC	7224 TOWING AND PUSHING SERVICES BY NON-SEA-GOING VESSELS
Products	Towing and pushing services by non-sea-going vessels.
Value output	Value of towing and pushing services by non-sea-going vessels.
Volume output	Deflation of gross output value indicator, using as deflator cost or input price indices, such as wage rate index of inland water transport (ISIC 612).

SIC	621 SCHEDULED AIR TRANSPORT
IPC	Product Classes: 7311, 7321, 7322
Activity	Transport of passengers or freight by air over regular routes and on regular schedules.
Value added	Value of scheduled air transport, less intermediate consumption for this activity.
Double indicator method	
Volume output	Deflation of gross output value indicator , using as deflator the respective price indices for each of the three products, i.e., by using direct price deflator for passenger transportation and implicit price deflator following volume extrapolation for freight transportation (see below).
Volume input	Deflation of input value indicator, using price indices by commodity, i.e., relevant price indices for major inputs of ISIC 621.

SIC	621
IPC	7311 PASSENGER TRANSPORTATION BY SCHEDULED AIRLINES
Products	Passenger transportation by scheduled airlines.
Value output	Value of passenger transportation by scheduled airlines.
Volume output	<p>Deflation of gross output value indicator, using as deflator CPI component for air transport (air fares) or similar price indices. For international flights, deflator may be based on unit value index (revenues and passengers or possibly passenger kilometres). Stratification may be kept within the CPI component itself and distinguishing between domestic and international flights, but stratification also involves taking due account to the various forms of tariffs by groups of persons transported.</p>

SIC	621
IPC	7321 MAIL TRANSPORTATION BY AIR
Products	Mail transportation by air.
Value output	Value of mail transportation by air.
Volume output	Direct volume extrapolation by number of ton-kilometres as volume indicator (same volume indicator as for CPC 7322 and 7329). More specific volume indicators such as number of letters, parcels, etc., shipped by air are normally not available, but should be preferred if available.

SIC	621
IPC	7322 TRANSPORTATION OF CONTAINERIZED FREIGHT
Products	Transportation of containerized freight by air.
Value output	Value of transportation of containerized freight by air.
Volume output	Direct volume extrapolation by number of ton-kilometres as volume indicator (same volume indicator as for CPC 7321 and 7329).

SIC	622 NON-SCHEDULED AIR TRANSPORT AND SPACE TRANSPORT
IPC	Product Classes: 7312, 7329, 7330, 7340
Activity	Non-scheduled transport of passengers or freight by air. Also: Regular, scheduled charter flights. Launching of satellites and space vehicles. Space transport of physical goods and passengers.
Value added	Value of non-scheduled air transport and space transport, less intermediate consumption for this activity.
Double indicator method	
Volume output	Deflation of gross output value indicator , using as deflator relevant price and cost indices. Stratification is necessary as space transport should be treated separately by using cost or input price index, whereas unit value index may be used as deflator for charter flights (see below).
Volume input	Deflation of input value indicator, using price indices by commodity, i.e., relevant price indices for major inputs of ISIC 622 (or ISIC 621 if necessary).

SIC	622
IPC	7312 PASSENGER TRANSPORTATION BY NON-SCHEDULED AIRLINES
Products	Passenger transportation by non-scheduled airlines.
Value output	Value of passenger transportation by non-scheduled transport, in particular charter flights.
Volume output	Deflation of gross output value indicator, using as deflator unit value index (expenditure per charter flight or similar measures, possibly based on number of charter flight passengers).

SIC	622
IPC	7329 TRANSPORTATION OF OTHER FREIGHT BY AIR
Products	Transportation of other freight by air
Value output	Value of transportation of other freight by air
Volume output	Direct volume extrapolation by number of ton-kilometres as volume indicator (same volume indicator as for CPC 7321 and 7322).

SIC	622
PC	7330 TRANSPORTATION VIA SPACE
Products	Transportation via space
Value output	Value of transportation via space, in particular the launching of satellites and space vehicles.
Volume output	Deflation of gross output value indicator , using as deflator cost or input price indices, such as wage rate index for non-scheduled air transport and space transport (ISIC 622, or ISIC 621 if necessary).
SIC	622
PC	7340 RENTAL OF AIRCRAFTS WITH CREW
Products	Rental of aircrafts with crew.
Value output	Value of rental of aircrafts with crew.
Volume output	Deflation of gross output value indicator , using as deflator specific rental price indices; if not possible, resort to cost or input price index such as wage rate index of air transport (ISIC 621 or 622).

SIC	630 SUPPORTING AND AUXILIARY TRANSPORT ACTIVITIES; ACTIVITIES OF TRAVEL AGENCIES
CPC	Product Classes: 7411-7490
Activity	Cargo handling, i.e., loading and unloading of goods or passengers' luggage irrespective of the mode of transport used for transportation, and stevedoring. Storage and warehousing, i.e., operation of storage facilities for all kinds of goods, storage of goods in foreign trade zones. Other supporting activities for (1) land transport of passengers and freight, (2) water transport of passengers and freight, and (3) air transport of passengers and freight. Activities of travel agencies, tour operators and tourist guides. Activities of other transport agencies including forwarding of freight, organization or arrangement of transport on behalf of the skipper or consignee, receiving and acceptance of freight, transport document preparation, consolidation and break-bulk of freight, freight brokerage, custom house brokerage, bill auditing and freight rate information, brokerage for ship and aircraft space, packing and crating and unpacking and decrating, inspection, weighing and sampling of freight.
Value added	Value of supporting and auxiliary transport activities and activities of travel agencies, i.e., various services incidental to transport, and including storage and warehousing, less intermediate consumption for this combined activity.
Double indicator method	
Volume output	Deflation of gross output value indicator , using as deflator the respective price indices of the many CPC classes, some of which being represented by other similar CPC class within this wide activity group (see below).
Volume input	Deflation of input value indicator, using price indices by commodity, i.e., relevant price indices for major inputs of ISIC 630
Single indicator methods	

Deflation	Deflation of current value added with relevant components of CPI for railway station services and travel agencies; and tariff indices for stevedoring, forwarding and ports.
Extrapolation	Extrapolation of value added in base year by volume index calculated as turnover deflated by consumer price index; and output volume index of rail, land freight, sea and air transport based on tonnage handled.
SIC	630
IPC	7411 CONTAINER HANDLING SERVICES
Products	Container cargo handling services, i.e., loading and unloading of goods in containers.
Value output	Value of container handling services, i.e., loading and unloading of goods in containers.
Volume output	Direct volume extrapolation by number of tons of freight loaded and unloaded as volume indicator (possibly referring to all or most freight handled, or otherwise resorting to freight handled in harbours). It is unlikely that stratification could be made to distinguish between containers and other means in terms of direct volume measures.
SIC	630
IPC	7419 OTHER CARGO HANDLING SERVICES
Products	Other cargo handling services, i.e., loading and unloading of goods and luggage other than in containers, and stevedoring.
Value output	Value of other cargo handling services.
Volume output	Direct volume extrapolation by number of tons of freight loaded and unloaded as volume indicator (same volume indicator as for CPC 7411).

SIC	630
IPC	7421 STORAGE SERVICES OF FROZEN OR REFRIGERATED GOODS
Products	Storage services of frozen or refrigerated goods, in refrigerated warehouses, etc.
Value output	Value of storage services of frozen or refrigerated goods in warehouses, etc.
Volume output	Deflation of gross output value indicator , using as deflator cost or input price indices, such as wage rate index of supporting and auxiliary transport services (ISIC 630), or if possible, referring specifically to the activity of storage 30 (e.g. wage rate index of warehouse workers). It is unlikely that stratification could be made to distinguish between storage of the three different types that are represented by 4-digit CPC classes as far as volume measures are concerned.

SIC	630
IPC	7422 STORAGE SERVICES OF LIQUIDS OR GASES
Products	Storage services of liquids or gases, including warehousing of gas and oil and chemicals.
Value output	Value of storage services of liquids or gases.
Volume output	Deflation of gross output value indicator , using as deflator cost or input price indices, such as wage rate index of supporting and auxiliary transport services (ISIC 630), or if possible, referring specifically to the activity of storage in that respect (same deflator as for CPC 7421).

SIC	630
PC	7429 OTHER STORAGE OF WAREHOUSING SERVICES
Products	Other storage or warehousing services such as operation of grain silos, general merchandise warehouses, warehousing of furniture, automobiles, lumber, textile, etc.
Value output	Value of other storage of warehousing services.
Volume output	Deflation of gross output value indicator , using as deflator cost or input price indices, such as wage rate index of supporting and auxiliary transport services (ISIC 630), or if possible, referring specifically to the activity of storage in that respect (same deflator as for CPC 7421 and 7422)

SIC	630
PC	7430 SUPPORTING SERVICES FOR RAILWAY TRANSPORT
Products	Supporting services for railway transport such as operation of railway stations.
Value output	Value of supporting services for railway transport (operation of railway stations, etc.).
Volume output	Deflation of gross output value indicator , using as deflator cost or input price indices, such as wage rate index of transport via railways (ISIC 601).

SIC	630
PC	7441 BUS STATION SERVICES
Products	Operation of bus stations
Value output	Value of bus station services (operation of bus stations).
Volume output	Deflation of gross output value indicator, using as deflator cost or input price indices, such as wage rate index of other land transport (ISIC 602).

SIC	630
PC	7442 HIGHWAY, BRIDGES AND TUNNEL OPERATION SERVICES
Products	Operation of roads, bridges and tunnels.
Value output	Value of highway, bridges and tunnel operation services (operation of roads, bridges and tunnels).
Volume output	Deflation of gross output value indicator, using as deflator cost or input price indices, such as wage rate index of other land transport (ISIC 602), i.e., same deflator as for CPC 7441.

SIC	630
PC	7443 PARKING SERVICES
Products	Operation of parking lots and garages.
Value output	Value of parking services (operation of parking lots and garages).
Volume output	Deflation of gross output value indicator, using as deflator cost or input price indices, such as wage rate index of other land transport (ISIC 602), i.e., same deflator as for CPC 7441 and 7442 ISIC.

SIC	630
CPC	7449 OTHER SUPPORTING SERVICES FOR ROAD TRANSPORT
Products	Other supporting services for road transport including stations for the handling of goods; maintenance and minor repair of transport equipment other than motor vehicles and road traffic control activities.
Value output	Value of other supporting services for road transport.
Volume output	Deflation of gross output value indicator , using as deflator cost or input price indices, such as wage rate index of other land transport (ISIC 602), i.e., same deflator as for preceding CPC classes 7441, 7442 and 7443.
SIC	630
CPC	7451 PORT AND WATERWAY OPERATION SERVICES
Products	Operation of terminal facilities such as harbours and piers, and operation of waterways locks.
Value output	Value of port and waterway operation services.
Volume output	Deflation of gross output value indicator , using as deflator cost or input price indices, such as wage rate index of total water transport (ISIC 611 and 612, using appropriate weights between the two industries).

SIC	630
IPC	7452 PILOTAGE AND BERTHING SERVICES
Products	Pilotage and berthing services
Value output	Value of pilotage and berthing services
Volume output	Deflation of gross output value indicator, using as deflator cost or input price indices, such as wage rate index of total water transport (ISIC 611 and 612, using appropriate weights between the two), i.e., apart from the latter variable weights, using same deflator as for preceding item CPC 7451.
SIC	630
IPC	7453 NAVIGATION AID SERVICES
Products	Navigation aid services
Value output	Value of navigation aid services
Volume output	Deflation of gross output value indicator, using as deflator cost or input price indices, such as wage rate index of total water transport (ISIC 611 and 612), using appropriate weights between the two), i.e., apart from the latter variable weights, using same deflator as for preceding items CPC 7451 and 7452.

SIC	630
PC	7454 VESSEL SALVAGE AND REFLOATING SERVICES
Products	Vessel salvage and refloating services.
Value output	Value of vessel salvage and refloating services.
Volume output	Deflation of gross output value indicator , using deflator cost or input price indices, such as wage rate index of total water transport (ISIC 611 and 612, using appropriate weights between the two), i.e., apart from the latter variable weights, using same deflator as for the preceding items CPC 7451, 7452 and 7453.
SIC	630
PC	7459 OTHER SUPPORTING SERVICES FOR WATER TRANSPORT
Products	Other supporting services for water transport including lighterage, water traffic control activities, and maintenance and minor repair of water transport equipment.
Value output	Value of other supporting services for water transport.
Volume output	Deflation of gross output value indicator , using as deflator cost or input price indices, such as wage rate index of total water transport (ISIC 611 and 612, using appropriate weights between the two), i.e., apart from the latter variable weights, using same deflator as for the four preceding items CPC 7451 - 7454.

SIC	630
CPC	7461 AIRPORT OPERATION SERVICES
Products	Airport operation services, excluding cargo handling.
Value output	Value of airport operation services.
Volume output	Deflation of gross output value indicator , using as deflator cost or input price indices, such as wage rate index of scheduled air transport (ISIC 621).
SIC	630
CPC	7462 AIR TRAFFIC CONTROL SERVICES
Products	Air traffic control services.
Value output	Value of air traffic control services.
Volume output	Deflation of gross output value indicator , using as deflator cost or input price indices, such as wage rate index of scheduled air transport (ISIC 621), i.e., same deflator as for airport operation services (CPC 7461).

SIC	630
PC	7469 OTHER SUPPORTING SERVICES FOR AIR TRANSPORT
Products	Other supporting services for air transport including ground service activities on airfields, and maintenance and minor repair of air transport equipment.
Value output	Value of other supporting services for air transport.
Volume output	Deflation of gross output value indicator , using as deflator cost or input price indices, such as wage rate index of scheduled air transport (ISIC 621), i.e., same deflator as for preceding items CPC 7461 and 7462.
SIC	630
PC	7471 TRAVEL AGENCIES AND TOUR OPERATORS SERVICES
Products	Furnishing of travel information, advice and planning. Arranging of made to measure tours, accommodation and transportation for travellers and tourists. Furnishing of tickets, sale of packaged tours. Activities of tour operators.
Value output	Value of travel agencies and tour operators services, i.e., the service charge of agencies, not full expenditures of travellers.
Volume output	Deflation of gross output value indicator , using as deflator CPI components of hotels and passenger transportation, stratified and weighted between the various types of travel (scheduled air transport, charter flights, railway travel, travel by bus and coaches, travel by boat and ferries, etc.). The weights may be based on base-year values; if not possible, based on number of travellers (tourists) in each of these categories.

SIC	630
CPC	7472 TOURIST GUIDES SERVICES
Products	Tourist guides services
Value output	Value of tourist guides services
Volume output	Deflation of gross output value indicator, using as deflator CPI components of hotels and passenger transportation, same deflator as for travel agencies and tour operators services (CPC 7471). It is unlikely that separate indicators are available for the two CPC classes.
SIC	630
CPC	7480 FREIGHT TRANSPORT AGENCY SERVICES
Products	Forwarding of freight. Organization or arrangement of transport on behalf of the skipper or consignee. Receiving and acceptance of freight (including local pick-up and delivery). Transportation document preparation. Consolidation and break-bulk of freight. Freight brokerage, custom house brokerage. Bill auditing and freight rate information.
Value output	Value of freight transport agency services.
Volume output	Deflation of gross output value indicator, using as deflator relevant price indices of freight transportation, stratified and weighted between the various types of freight transportation (transport by rail, other land, water, air, etc.). The weights may be based on base-year values of the respective CPC classes. The relevant price indices are those already available for CPC 7112 (rail, implicit deflator), CPC 7123 (other land, direct deflator), CPC 7212 (sea and coastal, direct deflator) and CPC 7322 (air, implicit deflator).

SIC	630
IPC	7490 OTHER SUPPORTING AND AUXILIARY TRANSPORT SERVICES
Products	Other supporting and auxiliary transport services, including brokerage for ship and aircraft space, packing and crating and unpacking and de-crating, inspection, weighing and sampling of freight.
Value output	Value of other supporting and auxiliary transport services, in particular brokerage, controls and inspection.
Volume output	Deflation of gross output value indicator , using as deflator cost or input price indices, such as wage rate index of ISIC 630, or if possible, referring specifically to the activity of brokerage and inspection of freight.

SIC	641 POST AND COURIER ACTIVITIES
IPC	Product Classes: 7511, 7512
Activity	National post activities, including pick-up, transport and delivery of mail and parcels, sale of postage stamps, collection of mail and parcels from public letter boxes or from post office, distribution and delivery of mail and parcels, mail sorting, mailbox rental, poste restante. Courier activities other than national post activities, including picking-up, transport and delivery of letters and mail-type parcels and packages by firms other than the national post.
Value added	Value of post and courier activities, less intermediate consumption for this activity.
Double indicator method	
Volume output	Deflation of gross output value indicator, using as deflator CPI component of postage or similar price indices of postal charges, mail delivery, etc. No special treatment is normally available for courier activities (applying same indicator as for regular post activities).
Volume input	Deflation of input value indicator, using price indices by commodity, i.e., relevant price indices for major inputs of ISIC 641 (or ISIC 641 and 642 combined if necessary).

SIC	641
CPC	7511 POSTAL SERVICES
Products	Postal services related to letters. Postal services related to parcels. Post office counter services. Other postal services.
Value output	Value of postal services.
Volume output	Deflation of gross output value indicator , using as deflator CPI component of postage or similar price indices of postal charges, mail delivery, etc. Stratification is either kept within the CPI component itself, or taken into account by weighing various types of postal services.
SIC	641
CPC	7512 COURIER SERVICES
Products	Multi-modal courier services Other courier services.
Value output	Value of courier services.
Volume output	Deflation of gross output value indicator , using same deflator as for postal services, i.e., CPI components of postage or similar price indices of postal charges, mail delivery, etc.

SIC	642 TELECOMMUNICATIONS
PC	Product Classes: 7521-7525, 7529
Activity	Transmission of sound, images, data or other information via cables, broadcasting, relay or satellite.
Value added	Value of telecommunication services, less intermediate consumption for this activity.
Double indicator method	
Volume output	Deflation of gross output value indicator , using as deflator CPI component of telephone charges or similar and other price indices of telecommunication tariffs, charges, etc. (see below).
Volume input	Deflation of input value indicator, using price indices by commodity, i.e., relevant price indices for major inputs of ISIC 642 (or ISIC 641 and 642 combined if necessary).
Single indicator method	
Deflation	Deflation of current value added by indices related to tariffs for telephone, telex, telegrammes and mail.
Extrapolation	Extrapolation of base-year value added by volume measures of telephone calls, telegramme and telex messages.

SIC	642
PC	7521 TELEPHONE SERVICES
Products	Telephone services
Value output	Value of telephone services.
Volume output	Deflation of gross output value indicator , using as deflator CPI component of telephone charges or similar price indices. Stratification by tariffs is either kept within the CPI component itself, of taken into account separately. If CPI is not specified for telephone services alone, resort to CPI component of some wider coverage, e.g. including telegrams or other telegraph services.
SIC	642
PC	7522 TELEGRAPH SERVICES
Value output	Value of telegraph services
Volume output	Deflation of gross output value indicator , using as deflator CPI component of telegraph charges or similar price indices. If CPI is not specified for telegraph services alone, resort to CPI component also including telephone services.
SIC	642
PC	7523 DATA TRANSMISSION SERVICES
Products	Data transmission services.
Value output	Value of data transmission services.
Volume output	Deflation of gross output value indicator , using as deflator relevant price indices for data transmission services; if not possible, resort to cost or input price indices, such as wage rate index of telecommunications (ISIC 642).

SIC	642
IPC	7524 PROGRAMME TRANSMISSION SERVICES
Products	Radio and television cable services
Value output	Value of radio and television cable services.
Volume output	Deflation of gross output value indicator, using as deflator relevant price indices for radio and television cable services; if not possible, resort to cost or input price indices, such as wage rate index of telecommunications (ISIC 642).

SIC	642
IPC	7525 INTERCONNECTION SERVICES
Products	Sound and images transmission services by satellite. Other sound and images transmission services, (1) via air, and (2) via cable.
Value output	Value of sound and images transmission services on a fee or contract basis.
Volume output	Deflation of gross output value indicator, using as deflator relevant price indices for sound and images transmission services, e.g., based on fees charged; if not possible, resort to cost or input price indices, such as wage rate index of telecommunications (ISIC 642).

ISIC	642
PC	7529 OTHER TELECOMMUNICATION SERVICES
Products	Other telecommunication services, including maintenance of the network.
Value added	Value of other telecommunication services.
Volume output	Deflation of gross output value indicator, using as deflator cost or input price indices, such as wage rate index of telecommunications (ISIC 642).