

Handbook on Price and Volume Measures in National Accounts

PREFACE	(i)
1. INTRODUCTION	1
1.1. Background and aim of this handbook	1
1.2. Scope of this handbook	2
1.3. The distinction between price, volume, quantity and quality	3
1.4. The A/B/C classification	4
1.5. How to read this handbook	5
2. A/B/C METHODS FOR GENERAL PROCEDURES	7
2.1. The use of an integrated approach	7
2.1.1. An accounting approach to constant price estimations	7
2.1.2. Advantage of balancing constant price data	9
2.1.3. Valuation problems	10
2.1.4. The case of price discrimination	11
2.2. The three principles from the Commission Decision	12
2.2.1. The elementary level of aggregation	12
2.2.2. The choice of index formula and base year	13
2.2.3. The non-additivity problem	15
2.3. Criteria for appropriate price and volume indicators	17
2.4. Quality changes	18
2.4.1. The problem of quality changes	18
2.4.2. Accounting for quality changes in price indices	19
2.4.3. Accounting for quality change in volume indicators	22
2.4.4. A, B and C methods	22
2.5. Unique products	23
2.6. Unit values versus price indices	24
3. A/B/C METHODS BY TRANSACTION CATEGORY	27
3.1. Market and non-market output	27
3.1.1. Market output and output for own final use	27
3.1.1.1. Price deflation methods	27
3.1.1.2. Volume extrapolation methods	29
3.1.1.3. A, B and C methods	30
3.1.2. Other non-market output	31
3.1.2.1. Input, activity, output and outcome	31
3.1.2.2. Taking quality changes into account	34
3.1.2.3. A, B and C methods	34
3.1.3. Special topic: Products provided without charge to the user	35
3.2. Intermediate consumption	36
3.3. Value added	37
3.4. Final consumption expenditure	39
3.4.1. Final consumption expenditure by households	39
3.4.2. Final consumption expenditure by government and NPISHs	41
3.5. Gross fixed capital formation	42
3.6. Changes in inventories	44
3.6.1. Introduction	44
3.6.2. Some important definitions and relations	45

3.6.3.	If perfect information is available	46
3.6.4.	If only information of values of inventories is available	46
3.6.5.	If no information is available at all	47
3.6.6.	A, B and C methods	47
3.7.	Acquisition less disposals of valuables	48
3.7.1.	Introduction	48
3.7.2.	Some important definitions and relations	48
3.7.3.	Different types of transaction	49
3.7.4.	A, B and C methods	49
3.8.	Exports and imports of goods and services	50
3.8.1.	Introduction	50
3.8.2.	Goods	50
3.8.3.	Services	53
3.9.	Taxes and subsidies on products	54
3.9.1.	Taxes and subsidies related to quantities of products	54
3.9.2.	Taxes and subsidies related to values of products	55
3.9.3.	Collection rate issues	56
3.9.4.	A, B and C methods	57
3.10.	Components of value added	57
3.10.1.	Other taxes and subsidies on production	57
3.10.2.	Compensation of employees	59
3.10.3.	Consumption of fixed capital	62
4.	A/B/C METHODS FOR OUTPUT BY PRODUCT	65
4.1.	CPA A and B - Products of agriculture, hunting and forestry; fish and other fishing products; services incidental to fishing	65
4.2.	CPA C - Products from mining and quarrying	66
4.3.	CPA D - Manufactured products	67
4.3.1.	General recommendations for manufactured products	67
4.3.2.	Large equipment goods	68
4.3.3.	Computers	71
4.4.	CPA E - Electrical energy, gas, steam and hot water	73
4.5.	CPA F - Construction work	74
4.6.	CPA G - Wholesale and retail trade services; repair services of motor vehicles, motorcycles and personal and household goods	76
4.6.1.	Wholesale and retail trade margins	76
4.6.2.	Other products of CPA 50 - Trade, maintenance and repair services of motor vehicles and motorcycles; retail trade services of automotive fuel	81
4.6.3.	Other products of CPA 51 - Wholesale trade and commission trade services, except of motor vehicles and motorcycles	81
4.6.4.	Other products of CPA 52 - Retail trade services, except of motor vehicles and motorcycles; repair of personal and household goods	82
4.7.	CPA H - Hotel and restaurant services	82
4.8.	CPA I - Transport, storage and communication services	83
4.8.1.	CPA 60, 61 and 62 - Transport by land, water and air	83
4.8.1.1.	Passenger transport	83
4.8.1.2.	Freight transport	85
4.8.2.	CPA 63 - Supporting and auxiliary transport services; travel agency services	87

4.8.3.	CPA 64 - Post and telecommunications services	88
4.8.3.1.	Post and courier services	88
4.8.3.2.	Telecommunication services	89
4.9.	CPA J - Financial intermediation services	91
4.9.1.	CPA 65 - Financial intermediation services, except insurance and pension funding services	91
4.9.2.	CPA 66 - Insurance and pension funding services, except compulsory social security services	94
4.9.3.	CPA 67 - Services auxiliary to financial intermediation	96
4.10.	CPA K - Real estate, renting and business services	96
4.10.1.	CPA 70 - Real estate services	97
4.10.2.	Dwelling services of owner-occupiers	99
4.10.3.	CPA 71 - Renting services of machinery and equipment without operator and of personal and household goods	100
4.10.4.	CPA 72 - Computer and related services	101
4.10.5.	CPA 73 - Research and development services	104
4.10.6.	CPA 74 - Other business services	105
4.10.6.1.	CPA 74.11 - Legal services	105
4.10.6.2.	CPA 74.12 - Accounting, book-keeping and auditing services; tax consultancy services	106
4.10.6.3.	CPA 74.14 - Business and management consultancy services	107
4.10.6.4.	CPA 74.15 - Management holding services	108
4.10.6.5.	CPA 74.2 - Architectural, engineering and related technical consultancy services	108
4.10.6.6.	CPA 74.4 - Advertising services	109
4.10.6.7.	CPA 74.5 - Labour recruitment and provision of personnel services	110
4.10.6.8.	CPA 74.6 - Investigation and security services	111
4.10.6.9.	CPA 74.7 - Industrial cleaning services	111
4.10.6.10.	Remaining other business services	112
4.11.	CPA L - Public administration and defence services, compulsory social security services	112
4.12.	CPA M - Education services	114
4.13.	CPA N - Health and social work services	116
4.14.	CPA O - Other community, social and personal services	121
4.14.1.	CPA 90 - Sewage and refuse disposal services, sanitation and similar services	122
4.14.2.	CPA 91 - Membership organisation services n.e.c.	122
4.14.3.	CPA 92 - Recreational, cultural and sporting services	123
4.14.3.1.	Services provided to an audience	123
4.14.3.2.	Libraries	124
4.14.3.3.	Gambling and betting services	125
4.14.3.4.	Production and processing of films, radio and TV services	126
4.14.3.5.	News Agencies	127
4.14.3.6.	Sports facilities	128
4.14.4.	CPA 93 - Other services	128
4.15.	CPA P - Private households with employed persons	129
5.	APPLICATION TO QUARTERLY ACCOUNTS	131
5.1.	Introduction	131

5.2.	Data availability	131
5.3.	Specific issues	132
5.3.1.	Agricultural Output	132
5.3.2.	Seasonal products and product differentiation	133
5.3.3.	Non-market services	133
5.3.4.	Inventories	134
5.3.5.	Tourism	135
5.4.	Use of price data	136
5.5.	The classification of indirect methods	136
5.6.	Choice of chaining method	137
5.7.	Seasonality	140
5.8.	Conclusion	140
USEFUL REFERENCES AND LINKS		141
	General references	141
	Chaining, index formulae and the level of aggregation	141
	Producer Price Indices and Consumer Price Indices	142
	Quality changes and new products	143
	Computers, other high technology goods and capital goods	143
	Market services	144
	Non-market services	144