Statistiska centralbyrån Statistics Sweden

Understanding national accounts

Chapter 3, Comparisons

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V = p * q

- Value in current price can be split on a price- and a volyme component (price/unit*number of units)
- When adding different products they have to be weighted together and the term volume is used instead of quantity
- Price- and volyme indicators must be compiled separately for each aggegate of transactions so that
- Change in value=price change*volyme change
- The price component must **only** reflect the price change, so volume=quantity*quality

GDP change 1990 – 2007

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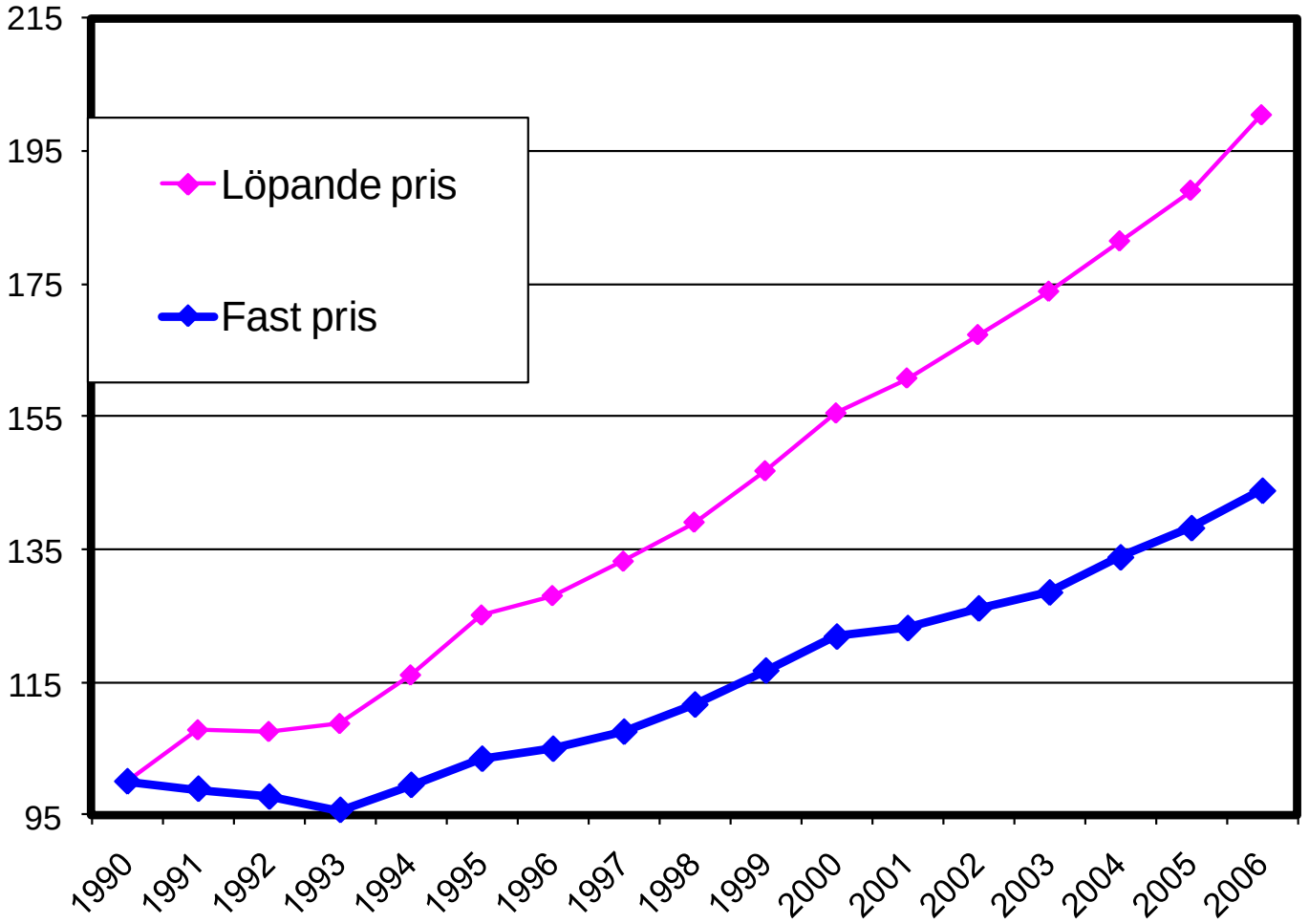
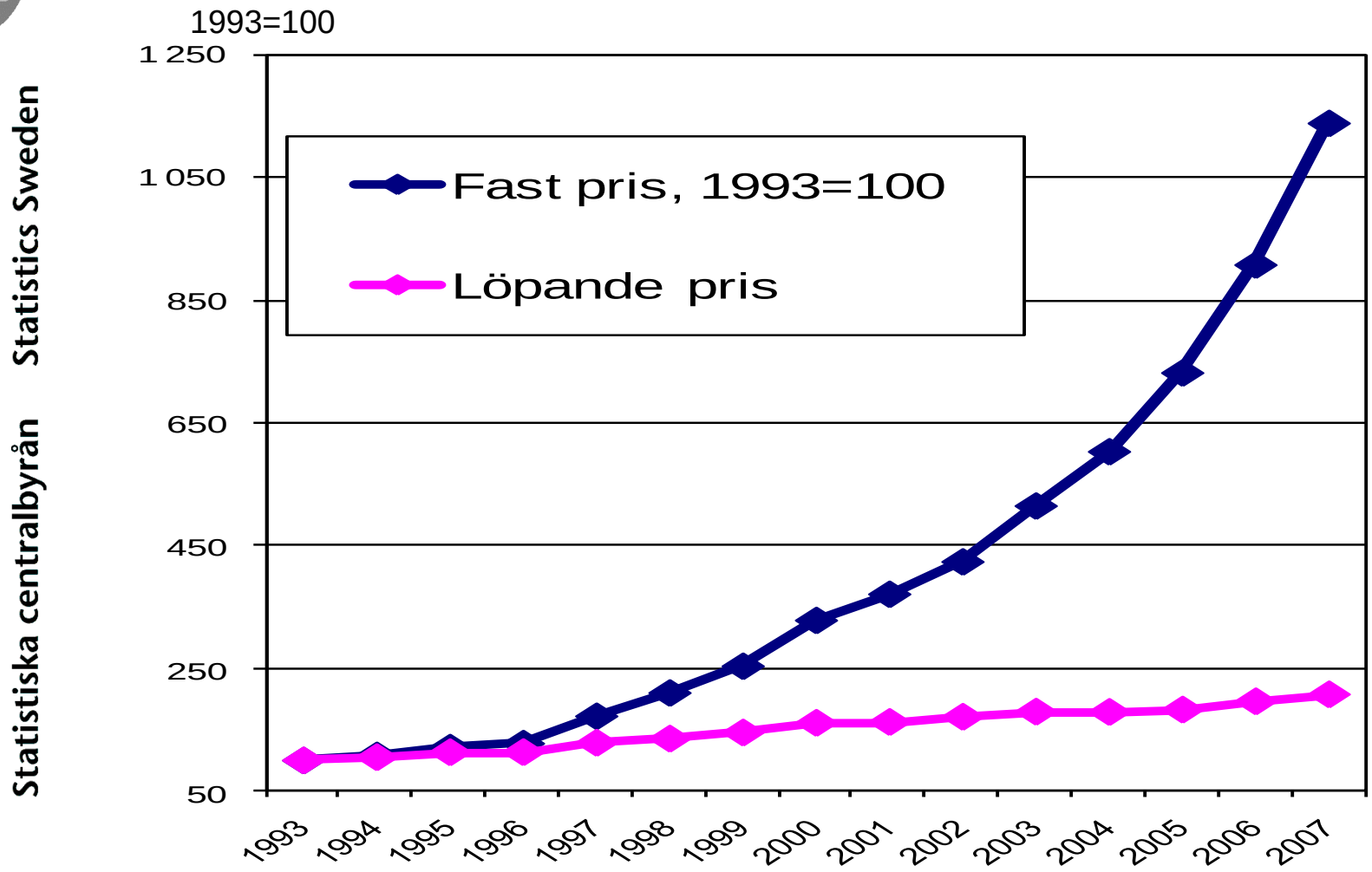


Household exp of Audiovisual, photografical and information equipment



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Compare growth rates

- Current prices – no good
- Constant prises – within the same country
- Per head indicators – not the whole story
- Exchange rate adjustment – not sufficient

Some differences

- Statistical methods, price indicies
- Quality of populations, business registers
- Various administrative data
- Organisational differences
- Different currencies
- Exchange rates

More difficulties

- How to measure output of services?
- By help of wage index if no other alternative
- Requires break-down in groups of employees
- By hourly earnings
- But for non-market production ???

Output indicators

- Use the relation V = p *q
- Find a measure of q
- Requires very detailed information (genuine product)
- Requires both quantity and quality information on changes

Previous method

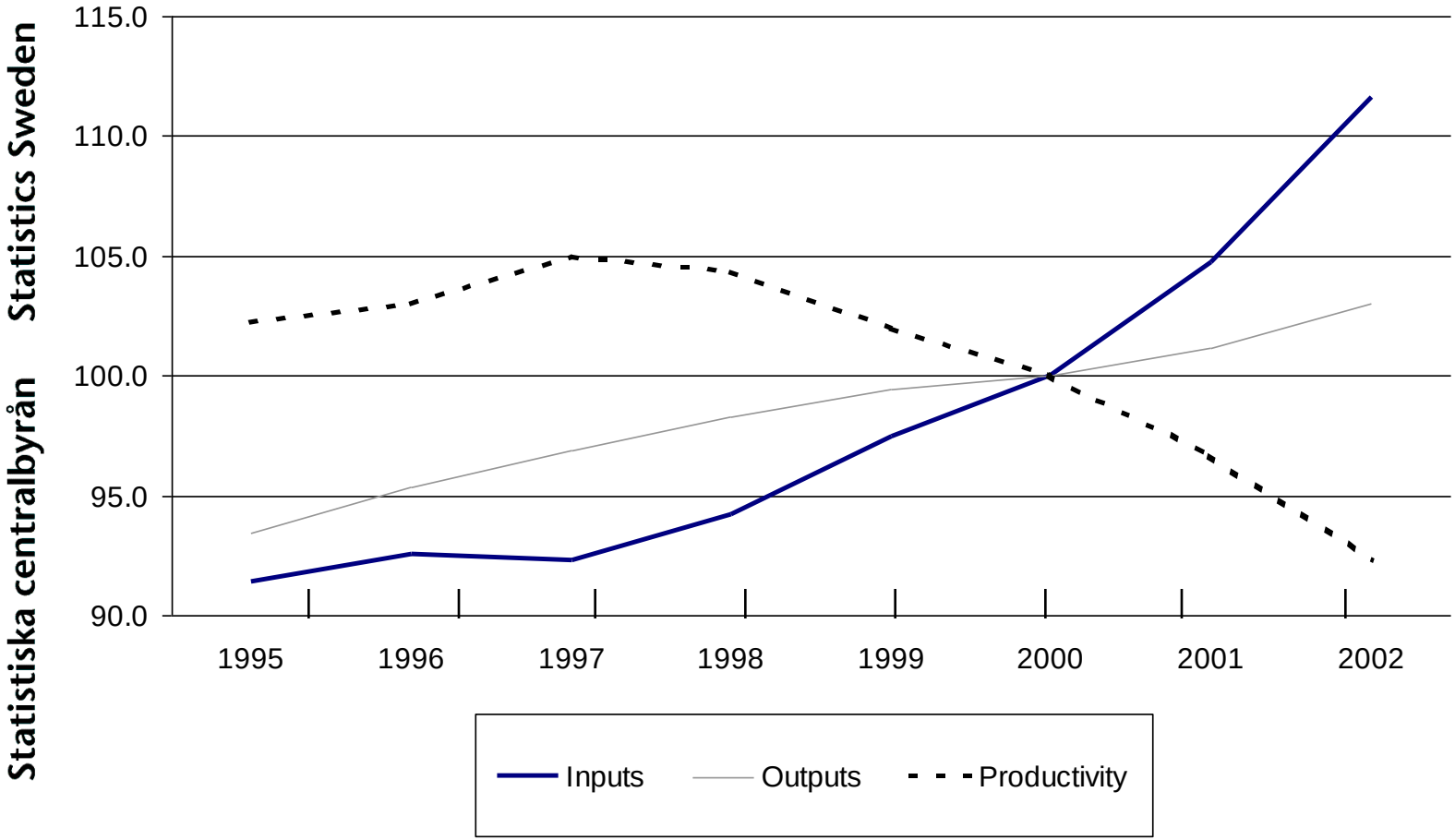
- Use of input variables, i.e. hours worked for constant price compilations
- No quality adjustment or ad hoc adjustment
- As output was estimated by help of input factors there was no chance to measure productivity changes
- This was not what politicians wanted to show

New method

- UK was in the front line
- Started to compile quantity indicators within health services and education
- They did not have very much access to much details
- Only three indicators of health in the beginning: doctor´s visits, drugs and number of operations
- The results was a disaster

Government productivity

estimates implied by UK National Accounts (2000=100)



Atkinson report, etc.

- UK research project
- A special working group established
- Much more detailed information had to be used
- OECD has published a new handbook
- Still no agreement on quality adjustments, seems too difficult

Output measures now used

- Individual non-market production
- Healthcare - DRG
- Education – no of pupils + grades
- Child and elderly care – no of persons
- Social insurance systems
- Cultural services – no of visits
- All indicators weighted together

Criteria for using output indicators

- Cover all services produced
- Weighted by the costs of each type of output in the base year
- Defined as detailed as possible
- Quality adjusted

Education, compulsary school

- Teaching, ordinary
- Teaching, mothertongue and Swedish as a secondary language
- School meals
- School transports, etc
- Student's care
- Pre-school class (6-year olds)

Quality adjustments

- No. of pupils leaving without final certificate
- Merit value for the 16 best subjects in the final certificate
- No. of pupils leaving with marks in Swedish, English and mathematics (qualified for further studies)

Results old vs new method

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Sweden, Change in volume, percent							
	2002	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
New method							
GFCE	2,1	0,9	-0,3	0,2	1,7	0,7	1,3
Central gov	2,2	2,0	-0,9	-2,6	1,3	-0,5	-0,6
Municipalities	1,3	1,5	0,6	0,4	1,8	0,8	1,9
County Councils	3,6	-1,3	-1,5	2,7	2,0	1,6	2,2
Old method							
GFCE	2,0	0,8	0,2	0,1	2,8	1,6	0,8
Central gov	2,3	1,8	-1,2	-2,8	1,6	-0,2	-0,6
Municipalities	1,5	0,1	1,0	0,7	3,3	2,2	1,0
County Councils	2,9	0,9	0,4	2,3	3,2	2,5	2,0
Difference							
GFCE	0,1	0,2	-0,6	0,0	-1,1	-1,0	0,5
Central gov	0,0	0,1	0,3	0,2	-0,3	-0,3	-0,1
Municipalities	-0,2	1,4	-0,4	-0,3	-1,5	-1,3	0,9
County Councils	0,7	-2,2	-1,9	0,5	-1,2	-0,9	0,3

Household saving rates

- Gross
- Net
- Difference consumption of fixed capital
- Treatment of pensions
- Pay-as-you-go or entitlements
- Saving behaviour - public policy

GDP not a welfare indicator

- GDP is only a measure of economic activity
- No aspects of freedom of speech, democracy, unemployment, distribution of incomes, environmental considerations, health indicators, living conditions, working environment, possibilities of education, etc.

HFCE vs actual individual consumption in different countries

- Organisational differences
- Government final consumtion expenditures can be divided into individual and collective
- Individual are health care, education, child and elderly care and cultural activities

HFCE vs actual individual consumption in different countries

	Final consumption expenditure	GFCE	Collective consumption expenditure of Gen Govt	Individual consumption expenditure of Gen Govt	HFCE	Household actual final consumption
	(1+4)	1=(2+3)	2	3	4	5=(3+4)
Danmark	75,6	25,9	7,7	18,1	49,7	67,8
Tyskland	74,7	18,7	7,7	11,0	56,0	67,0
Grekland	85,3	16,4	10,6	5,7	68,9	74,6
Spanien	78,7	18,0	7,5	10,2	60,7	70,9
Frankrike	81,8	23,7	8,2	15,5	58,1	73,6
Irland	61,9	15,8	7,9	7,9	46,1	54,0
Italien	80,0	20,3	..	..	59,7	59,7
Luxembu	57,5	17,0	6,7	10,3	40,5	50,8
Nederländ	73,4	24,1	10,6	13,5	49,3	62,8
Österrike	72,4	18,1	7,0	11,1	54,3	65,4
Portugal	89,3	21,1	..	..	68,2	68,2
Finland	72,8	22,1	7,6	14,5	50,7	65,2
Sverige	75.2	27.1	7.7	19.4	48.1	67.5
Storbritan	89,5	21,9	8,3	13,6	67,6	81,2
USA	86,5	15,9	..	..	70,6	70,6
Japan	72,7	18,0	..	..	54,7	54,7
Island	87,6	24,4	10,2	14,2	63,2	77,4
Norge	73,2	20,4	6,3	13,8	52,8	66,6
Schweiz	71,0	11,4	..	..	59,6	59,6

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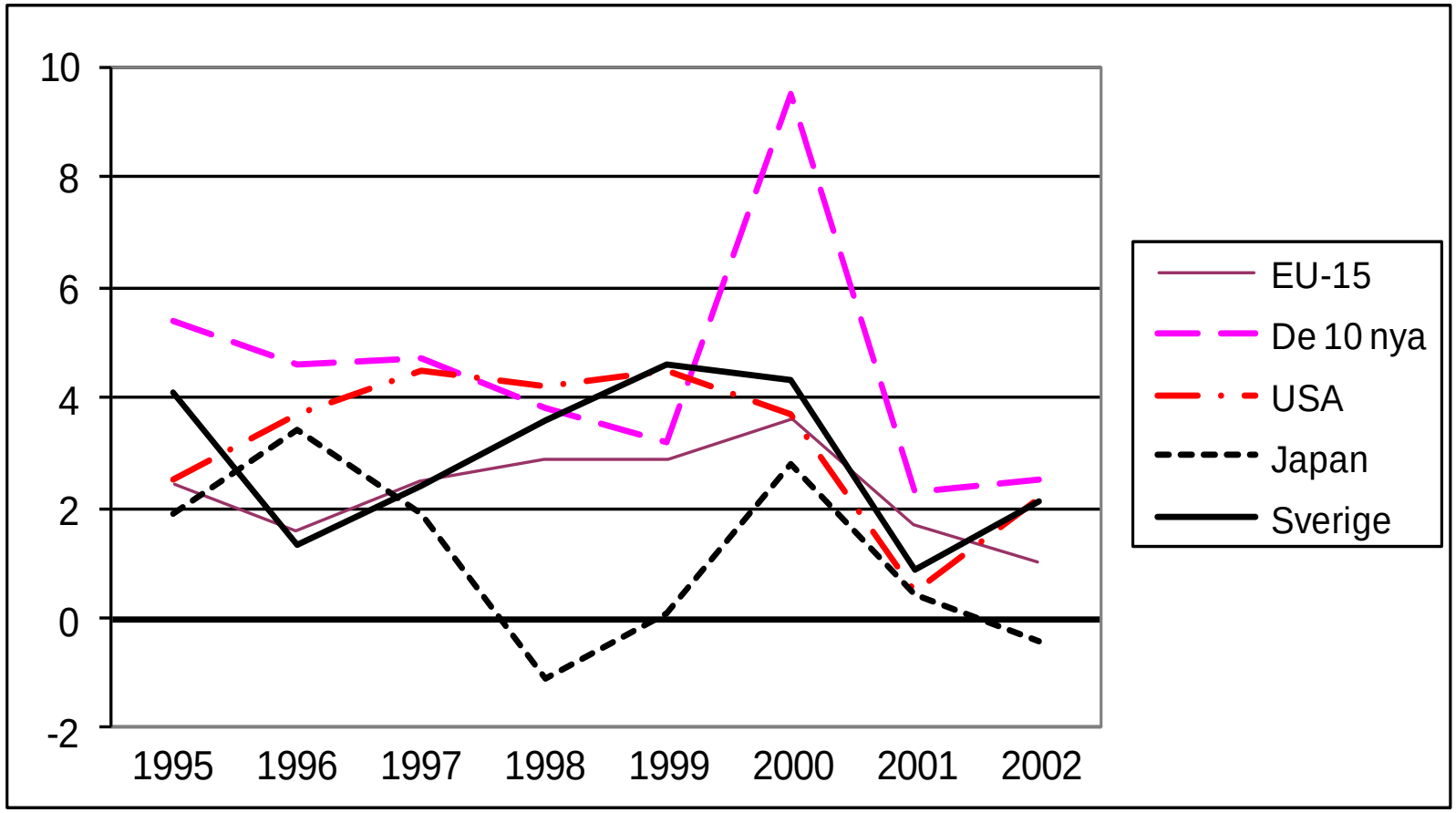
International comparison

- Percentage change constant prices



Spacial volume/price breakdown

- Purchasing Power Parities – PPP
- A volume/price break-down at a certain point in time (not between different time periods)
- Calculate a price ratio for identical products
- One country is used as a reference = 100
- Constant PPP: GDP in constant prices (ref year) divided by PPP for a fixed year

PPPs

- the procedure is
- to specify a precise set of goods and services whose
- prices have to be collected
- to calculate the ensuing price ratios or relatives
- and then to average the price ratios to arrive at an overall index.

PPPs

- compare the price of a "standard" good that is in fact identical across countries. Every year *The Economist* magazine publishes a light-hearted version of PPP: its "Hamburger Index" that compares the price of a McDonald's hamburger around the world. More sophisticated versions of PPP look at a large number of goods and services. One of the key problems is that people in different countries consume very different sets of goods and services, making it difficult to compare the purchasing power between countries.

PPPs

- Three country groups in EU: northern, middle and southern
- Representative products by country, 2000
- Represent consumption patters
- Represent country averages
- Weighted by GDP expenditure
- Cover HFCE, GFCE, GFCF