



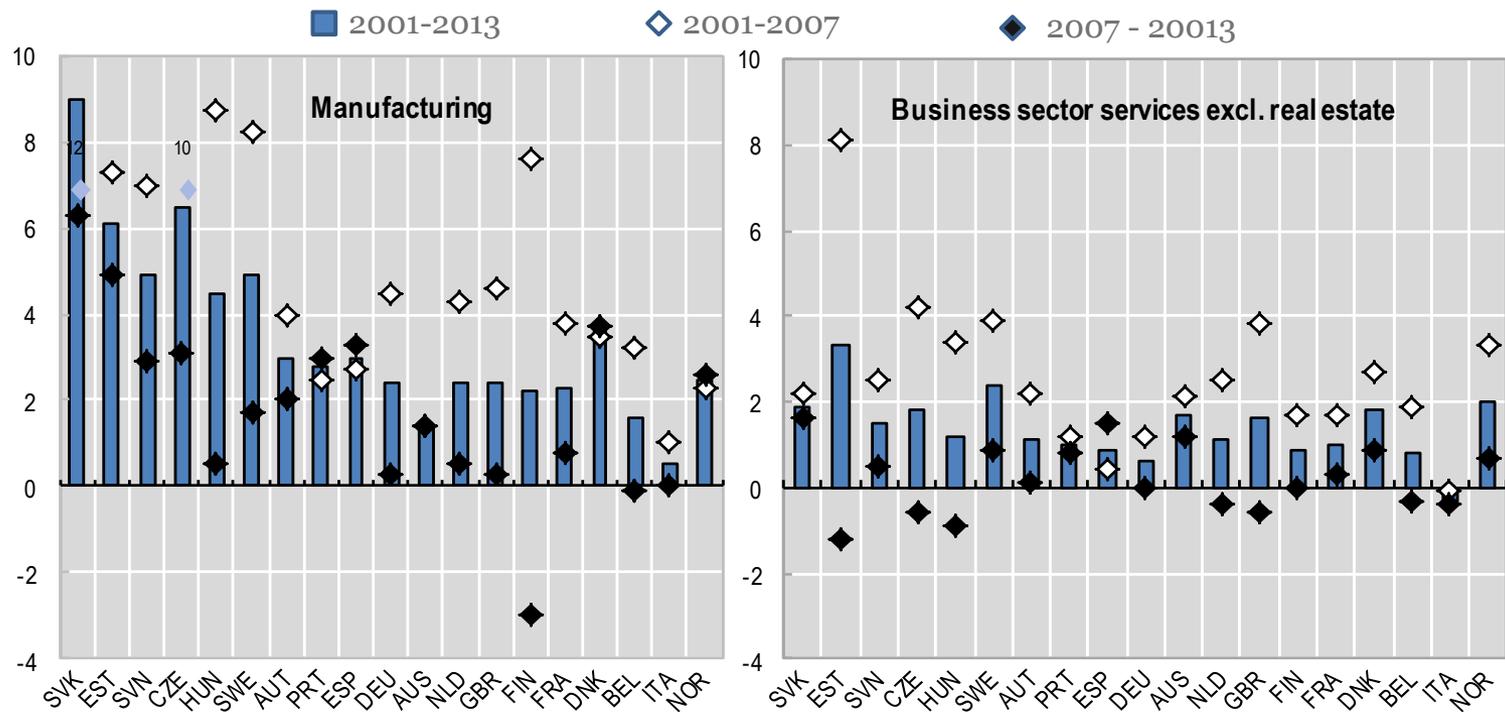
OECD Project on measuring producer price indices and productivity growth in services

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Measuring producer price indices in services I – why do we care?

Average annual growth in value added per hour worked, in %



Source: 2014 OECD Productivity Database, September 2014



Measuring producer price indices in services II – what are the issues?

- **Tracking price changes**
 - Variety of pricing methods used ...
 - ... hampers the reliability and comparability of the index.
- **Identifying quality changes**
- **Treatment of bundled services**
- **Decomposition by type of end-users**
 - Business prices may display different trends to those of consumers;
 - Availability of reliable weight data (such as turnover).



Potential role of price measurement for measured productivity growth

- Effect on volume series of value added ...
- ... by using different potential deflators ...
 - SPPI
 - CPI
 - Wage rate index per employed person or per hour worked.
- ... for telecommunication services and legal accounting services for France and the U.S.



Overview of main results

Average annual growth rates in gross value added per person employed using different deflators of value added, in %

Service activity	Deflator	Base	Wage rates - employment	CPI - All items	CPI - related service	SPPI	
	Period						
France	Telecommunication services	2000-2010*	6.37	0.55	2.71	6.32	
		2005-2010*	4.73	-2.01	0.22	4.92	8.60
	Legal and accounting services	2000-2010*	-0.24		1.17	1.02	
		2005-2010*	-1.18	-3.26	-0.88	-1.58	-2.70
United States	Broadcasting & telecommunication	2000-2011*	6.82	2.28	1.88	7.41	6.00
		2005-2011*	5.64	0.40	0.85	5.67	3.12
	Legal services	2000-2011*	-1.60	-0.28	0.53	-1.65	-2.68
		2005-2011*	-3.00	-1.13	-0.36	-1.88	-4.12

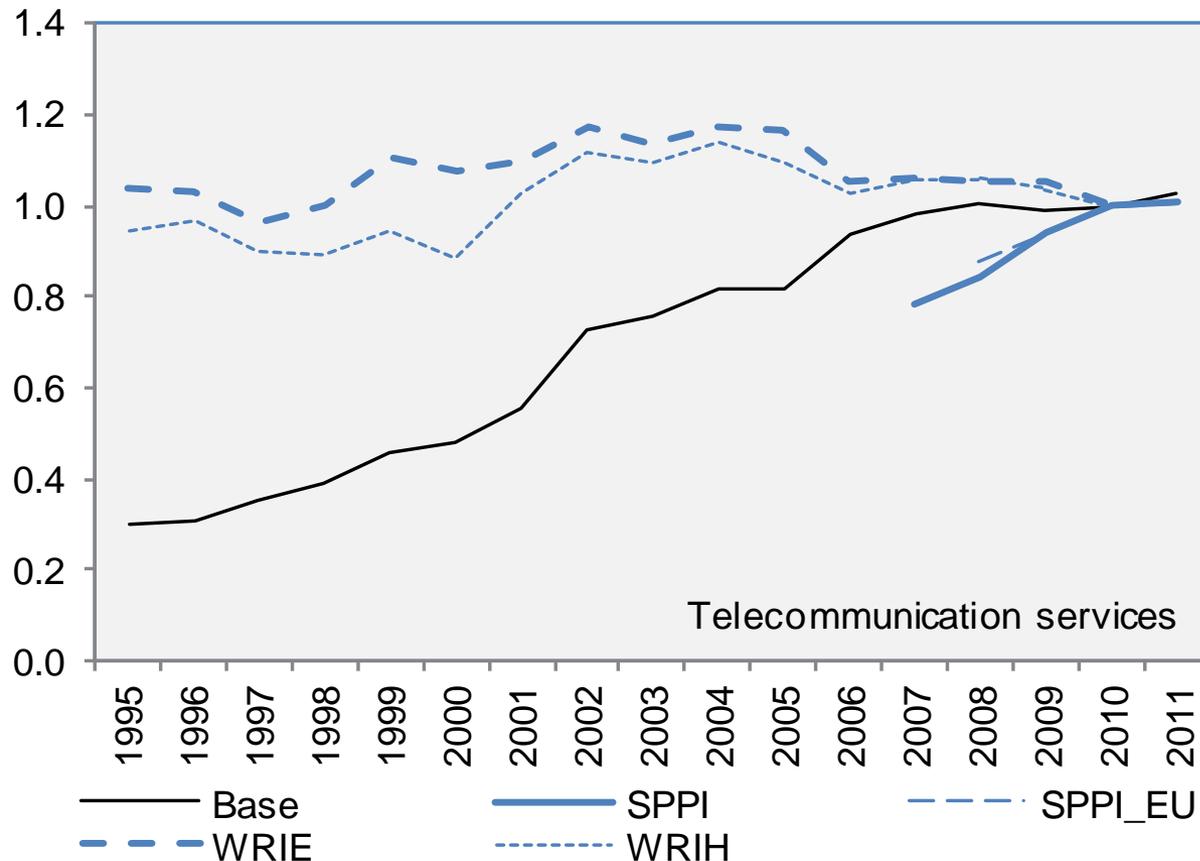
Note: All results based on double deflation. *: closest period available; “Base”: value added deflator as given in National Accounts.

Source: OECD STAN database, INSEE, Bureau of Labour Statistics.



If output-based SPPI can be computed a proxy may lead to significant bias

Volume series of Value added (VA), France, Index, 2010=1

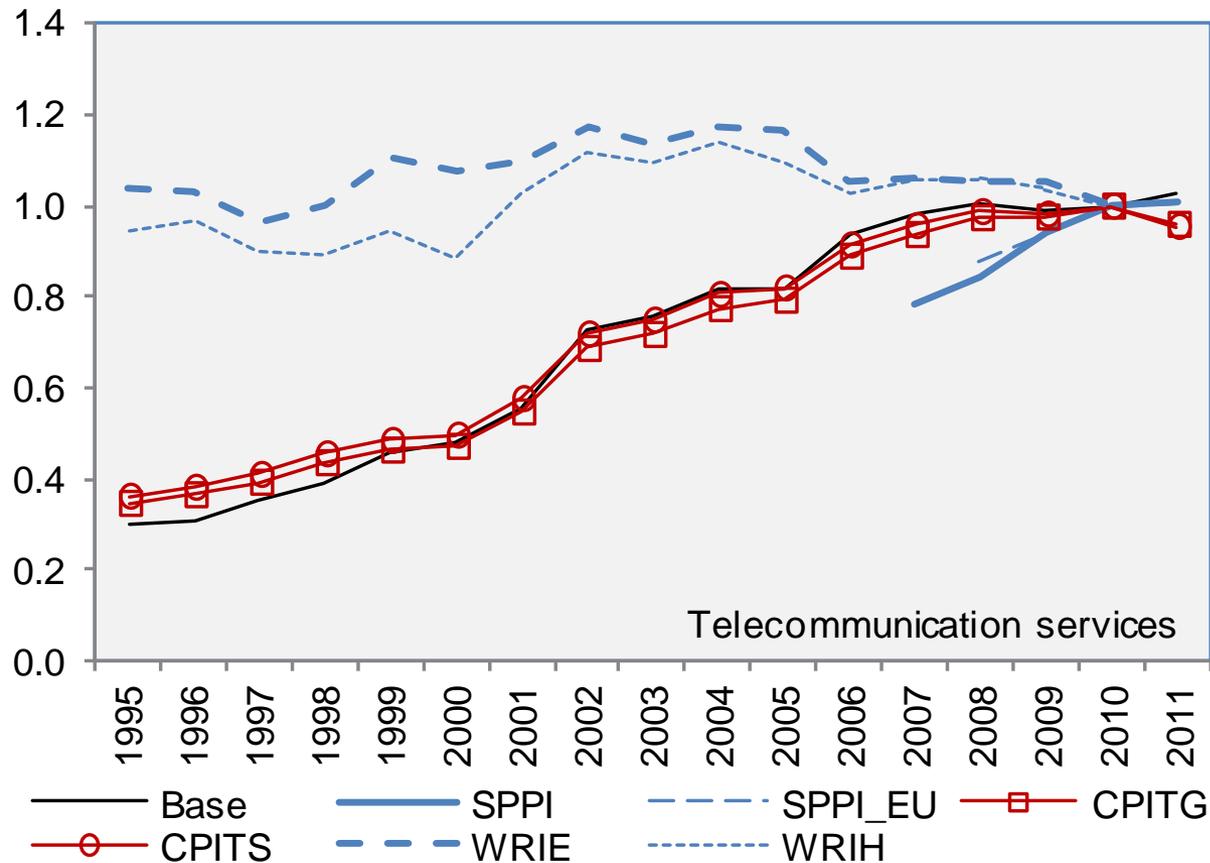


Note: Base: VA deflator as in NA; SPPI: SPPI, national/Eurostat series; WRIE/WRIH: index of wage rates per employed person/ per hour worked.



The bias is smaller in the case of CPIs for closely related services

Volume series of Value added (VA), France, Index, 2010=1

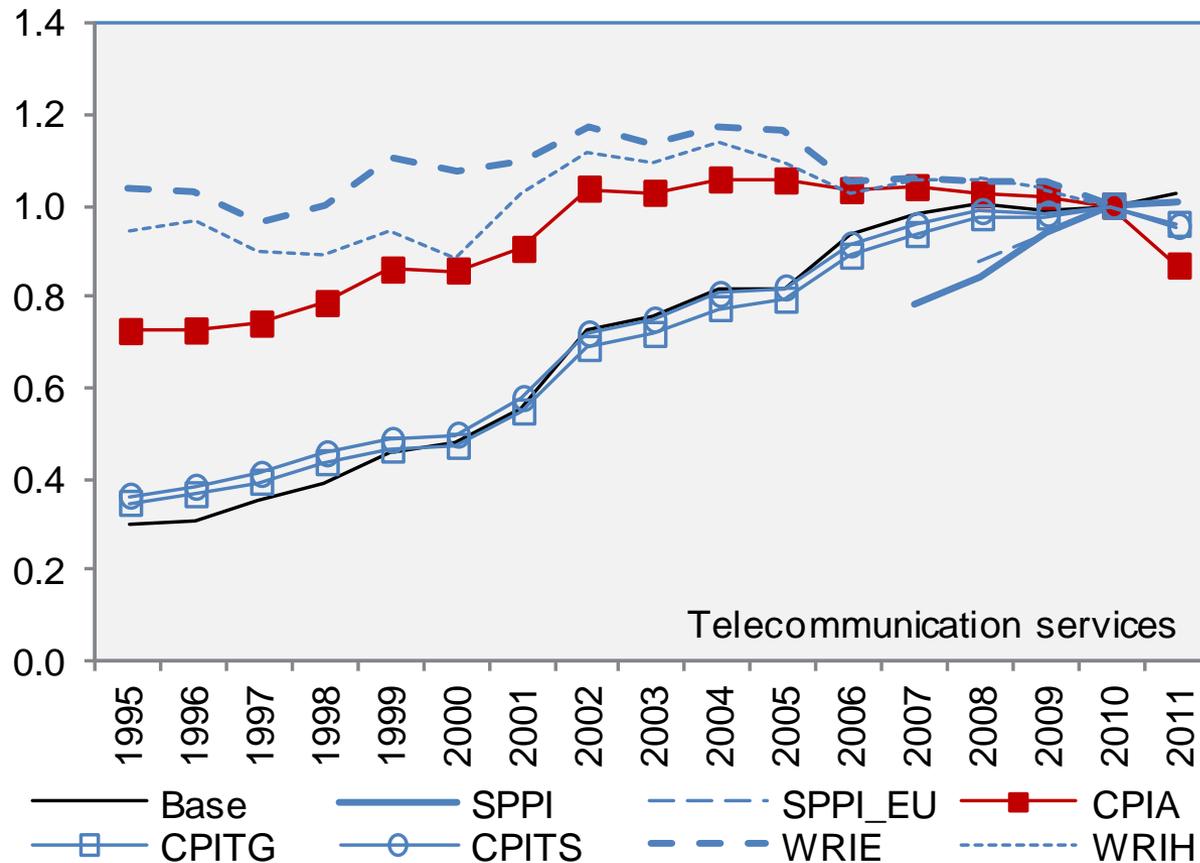


Note: previous slide plus new: CPITG: CPI telecommunication goods, CPITS: CPI, telecommunication services.



..., but the composition of the product basket of the CPI is key.

Volume series of Value added (VA), France, Index, 2010=1

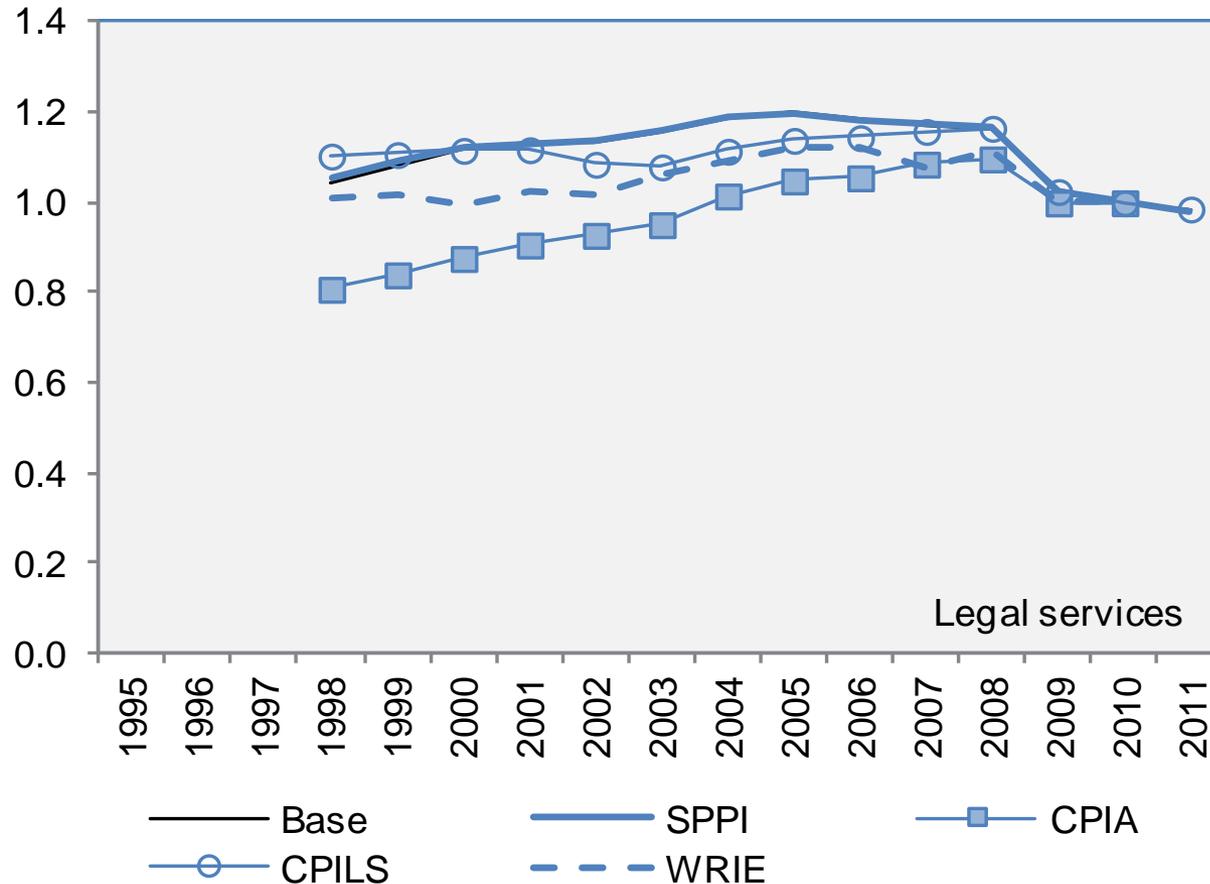


Note: previous slides plus new: CPIA: CPI all items.



The biases appear much smaller in the case of legal services

Volume series of Value added (VA), United States, Index, 2010=1



Note: Base: VA as in NA; SPPI: SPPI, national series; CPIA: CPI all items, CPILS: legal services; WRIE: index of wage rates per employed persons.



SPPIs and productivity - Lessons learnt 1

- **Bias depends on:**
 - Economic environment,
 - Service characteristics,
 - The way prices are set by service providers (pricing mechanisms).
- **A possible ranking of pricing methods**
 - First-best: output-based SPPIs,
 - Second-best: CPIs for closely related services,
 - Third-best: input/time-based index.



SPPIs and productivity - Lessons learnt 2

- **Improve service price index measurement**
 - Developing price of final service output, see *“Methodological guide for developing producer price indices for services” (OECD/Eurostat, forthcoming)*
 - Closer link between CPI and SPPI compilation
 - Closer link between price index measurement and other variables (e.g. value added, output, etc)



THANK YOU VERY
MUCH FOR YOUR
ATTENTION

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