

# Market services – volume growth compilation

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# Introduction

- Traditionally, most international harmonisation work of national accounts has focussed on current price estimates
- For most users and compilers of national accounts, the volume growth of GDP is the most important figure
- In Europe, the importance of harmonising also national account's price and volume data was focussed when the European council in July 1997 agreed on the “**Stability and Growth Pact**”
  - Followed by a research programme and the “**Handbook in prices and volume measures in the national accounts**” (2001)

# Statistics Norway and price indices....

- Statistics Norway initiated a project in 2003
  - The aim was to upgrade the price indices in general
  - However, the program covered mainly the development of new producer price indices for market services,
  - and in addition to improve price indices of certain types of capital goods
- The division of national accounts gave priorities for certain market services (especially lack of proper price indices for business services)
- The initiative has gradually given results
  - even though progress has been slow and expensive and more time consuming than initially thought
  - It turned out to be both data demanding and methodologically challenging to compile the new SPPIs

## Why are volume figures for services important.....

- Volume growth rates important
- Often asked for
  - Changes in productivity
  - Comparisons of national accounts data with physical measures such as emissions to air or number of employees
- In Norway, in lack of proper prices, input-prices were used
  - Underestimate the real growth, as quality growth of the output is not taken into account
  - Underestimate productivity

## .... and why are they so difficult to do?

- Hard to define the quantity units of services that would allow observations of a related price
- An observed price change may reflect changes both in characteristics of the service and pure price changes
  - The price index should reflect pure price changes only (Eurostat 2001, ch. 2.4)
- Challenging to measure the quality improvement of services (volume component) which is necessary for adjusting the price index
- Hedonic price indices were tested for several services
  - Results seemed to be of poor quality – and heavy response burden

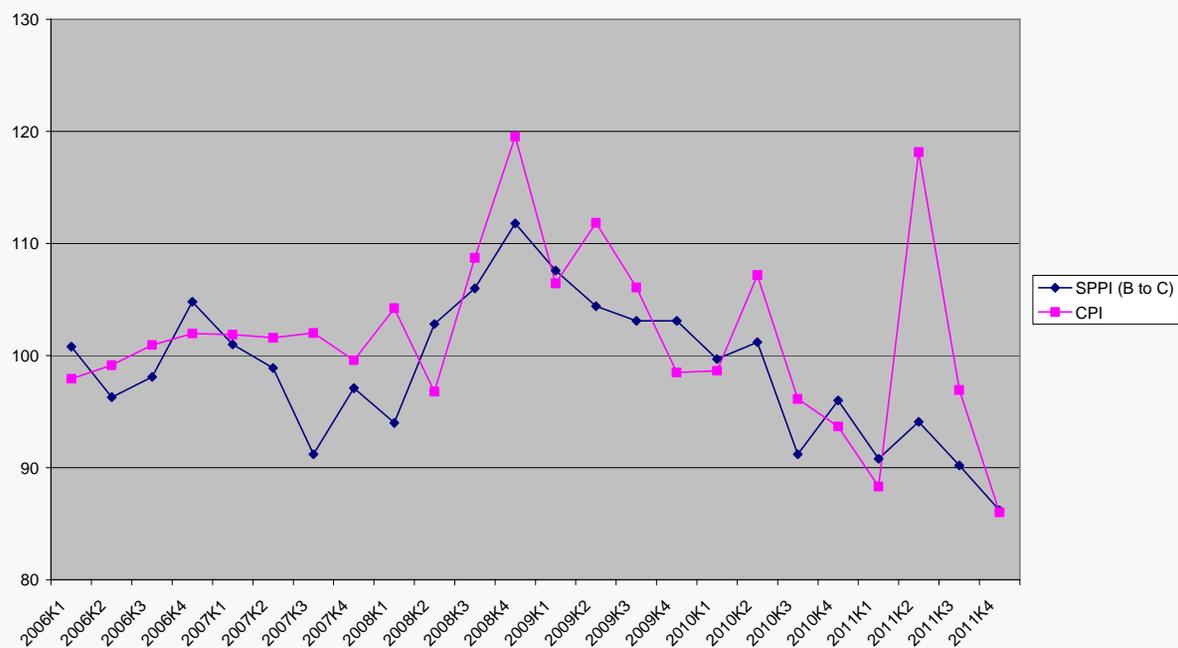
## The method of hourly charge-out rates

- When the traditional PPI way of compiling price indices failed, what then?
- The strategy chosen was to establish producer price indices based on **charge-out rates of hours worked** (eg. services from architects)
  - This is combined with rather detailed product specification,
  - and there may be a further stratification by type of staff (qualifications)
- Doubt has been raised as to how well price indices can represent quality and productivity growth

## Coordination of SPPI and CPI

- The Norwegian national accounts use the consumer price index (CPI) to deflate household consumption
- Some SPPI distinguish between services sold to establishments (business to business - b to b),
- and services sold to households as consumers (business to consumers - b to c)
- What if both a CPI and a SPPI (b to c) for a specific service
  - Can be a possible conflict between the two indices (even though the CPI is a purchaser price and SPPI is a basic price).
  - In Norway, inconsistencies showed up in some areas (eg. air transport services),
  - and cooperation and coordination between the price index compilers was necessary

## Price indices for household consumption of passenger services by air. 2008-2011. CPI and SPPI (business to consumers). 2006=100



## Deflation methods in Norway

- Deflation is from the supply side, and each product is deflated with appropriate price indices within the supply and use framework
- Each of the products has the following price indices:
  - Domestic production (basic price)
  - Imports (CIF value)
  - Exports (FOB value)
- Generally, for each product, total domestic use at constant prices is calculated at basic value
  - as total domestic supply plus imports minus exports
  - Constant price values for the various domestic uses are calculated by distributing total domestic use at constant prices proportionally with the domestic uses at current prices
  - However, if a specific price index (CPI) is available for **household consumption**, the other domestic uses are corrected (if possible only changes in stocks and statistical discrepancies), ensuring that supply and use of each product at constant prices will balance

## Limitations and challenges

- We have inadequate information on supply and use of specific service products
  - What services are produced and
  - Who are the users
- Regarding services, it is also a challenge to estimate **exports and imports** by type of service at current values,
  - and so far price observations are missing in most cases
  - Thus, for most services exports (and imports) are deflated using the relevant price index for domestic uses

## Concluding remarks and **questions**

- The development of new producer price indices for services in Norway has been positive
  - To a large extent enabled us to switch the deflation of services from using input price indices to using producer price indices
  - But still there are challenges to be faced both
    - ◆ with regard to the quality of the service price indices and
    - ◆ with regard to service prices of exports and imports
- **What is the situation in your country?**
  - **Do you have proper service price indices?**
  - **How are the challenges of compiling the SPPIs solved?**
  - **What about using charge-out rates of hours worked?**
  - **Regarding services, how do you compile export and import prices?**
  - **Have you faced inconsistencies between SPPI (b to c) and CPI?**