Price & volume measures:
3.4 – Rebasing & linking

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Objectives

After this session, participants will know about:

- Continuous rebasing
- Rebasing to a fixed year
    - Choosing a base year
    - Rescaling basic level series
    - Linking aggregate series
- Introducing revisions

Continuous rebasing

- The principle reason is for rebasing is to take account of changes in relative prices.
- Many larger economies effectively rebase every year. They use the prices of the previous year to make constant price (KP) estimates for the most recently completed year.
- This assumes their previous year estimates are high quality, "final" estimates of GDP at current prices.
- The linked series of KP estimates only add up in the "reference" year R and in the year R+1

Rebasing to a specific year

- More commonly, countries rebase on to a specific recent year,
  - often associated with a major exercise to re-establish the current price (CP) level of GDP in that year.
- Recommended if the estimates are an extrapolation of a previous "benchmark" level, more than 5 years earlier. Extrapolations can go off track.
- This happened in Ghana, Nigeria, …
- Also an opportunity to introduce improvements…

Choosing a base year

- Best when high quality data are available
- But relative prices can make a difference
- In one country, the year chosen had
  - a household budget survey
  - a census of establishments and
  - a business inquiry
- but also relatively low agricultural prices: combined with relatively low growth, this increase GDP growth by 1per cent per year

Basic level series

- In most cases, a KP series of estimates at basic level for an industry or product are formed by extrapolating the base-year value using a (single) quantity indicator.
- Rebasing involves re-scaling the old KP series so that it is equal to the new CP value in the new base year.
- The rescaling factor is $p_{i,b}*q_{i,b}/p_{i,0}*q_{i,b}$ or $p_{i,b}/p_{i,0}$
  - This is simply the old (implied) deflator in new base year b
- Equivalently, if a CP series is deflated by a series of price relatives, the latter can be rescaled to be 100 in the new base year.
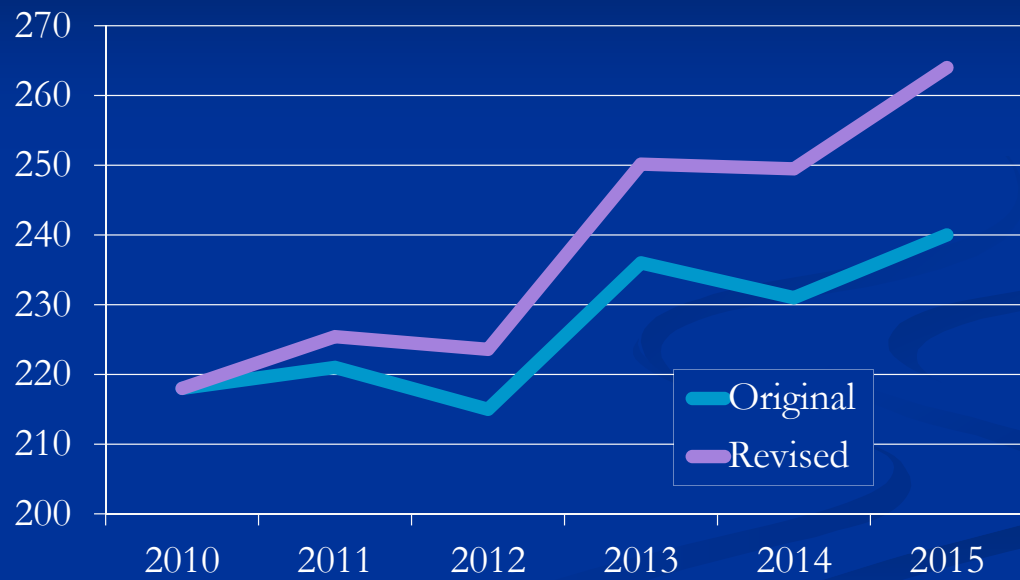
Linking rebased aggregates

- Adding up the rescaled basic level KP estimates gives new KP aggregates at the prices of the new base year.
- It is usual however to preserve the growth rates of the aggregates for periods covering previous base years.
- This is achieved by rescaling the former aggregate series before a given "link year".
- The scaling factor is the ratio of the new KP figure in the link year to the old KP figure in the link year

Introducing revisions

- Rebasing and linking procedures are quite easy
- But complications arise from revisions to the CP estimates in the new base year, as a result of
  - "benchmarking" and/or
  - adopting a new classification (such as ISIC Rev.4)
- Unless backward revisions are made at current prices, the new CP series will be discontinuous

Original and revised series

Discussion