

INFORUM Modeling in National Accounting Systems with Chain-Weighted Indexes

**A few remarks on the
European Situation**

Overview

1. Introduction

- Legal situation

- Background

- Principles of constant price calculations

2. Implications for INFORUM modelling

- Creating a new data basis

- Consistency with official growth rates

- Linkage

3. Concluding remarks

European legislation

COUNCIL REGULATION (EC) No 2223/96 of 25 June 1996 on the European system of national and regional accounts in the Community (ESA 95)

COMMISSION DECISION of 30 November 1998 clarifying Annex A to Council Regulation (EC) No 2223/96 on the European system of national and regional accounts in the Community as concerns the principles for measuring prices and volumes

COMMISSION DECISION of 17 December 2002 further clarifying Annex A to Council Regulation (EC) No 2223/96 as concerns the principles for measuring prices and volumes in national accounts

European legislation

REGULATION (EC) No 1267/2003 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 June 2003 amending Council Regulation (EC) No 2223/96 with respect to the time limit for transmission of the main aggregates of national accounts, to the derogations concerning the transmission of the main aggregates of national accounts and to the transmission of employment data in hours worked

European legislation – background

In the European Union (EU) the compilation of statistical data is to a high degree standardized and regulated.

National accounts results are directly used for many administrative purposes. Examples are:

- o GDP figures as basis for the budget of the Commission
- o GDP figures basis for the financial contributions of Member States to the EU budget
- o GRP results as basis for the definition of criteria for regional policies
- o Many NA results serve as criteria for the pact for Stability and Growth

European legislation – background

In all the cases national accounts results calculated in current prices are used.

Consequently the emphasis on harmonization was laid on GDP and its components in current prices. The situation changed when an exemption from the rules of the excessive deficit procedure was granted in the case of an economic recession.

Economic recession was defined by a reduction in **GDP in real terms**.

The need arose to harmonize the calculations of national accounts (and GDP in particular) in constant prices.

European legislation - background

COMMISSION DECISION of 30 November 1998

The Commission must use national accounts aggregates in real terms for Community policy purposes and, in particular, **for the supervision of the Stability and Growth pact.**

In order to assess the seriousness of the economic recession the Member States must generally take as a reference any annual reduction of real GDP of at least 0,75 %; whereas exceeding the reference value following a serious economic recession is exceptional only **if GDP in real terms** records an annual reduction of at least 2%;

European legislation - background

COMMISSION DECISION of 17 December 2002

It is necessary to improve the comparability between the Member States in the data for **changes in real Gross Domestic Product (GDP)**, both with a view to the application of Article 2 of the Council Regulation (EC) No 1467/97 of 7 July 1997 on speeding up and clarifying the implementation of the excessive deficit procedure (3) and the Resolution of the European Council on the Stability and Growth Pact of 16 June 1997

European legislation - principles

COMMISSION DECISION of 30 November 1998

Principle 1

In the measurement of prices and volumes a detailed level of aggregation of products shall be used.

This level of aggregation, which is referred to as the elementary level of aggregation, shall be at least as detailed as the P60-level of ESA 95, for output as well as all categories of (intermediate and final) use.

European legislation- principles

COMMISSION DECISION of 30 November 1998

Principle 2:

Volume measures available at the elementary level of aggregation shall be aggregated using the Laspeyres formula to obtain the volume measures of all national accounts aggregates.

Price measures available at the elementary level of aggregation shall be aggregated using the Paasche formula to obtain the price measures of all national accounts aggregates.

European legislation - principles

COMMISSION DECISION of 30 November 1998

Principle 3:

Volume measures derived at the elementary level of aggregation shall be aggregated using weights derived from the previous year.

If a Member State has a transitional period regarding principle 3, then it shall change the base year every five years as from 1995 during the transitional period.

European legislation

REGULATION (EC) No 1267/2003 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 June 2003 amending Council Regulation (EC) No 2223/96 with respect to the time limit for transmission of the main aggregates of national accounts, to the derogations concerning the transmission of the main aggregates of national accounts and to the transmission of employment data in hours worked

Almost all granted derogations end in 2005

European standard situation

Time series of national accounts at current prices
Absolute numbers

Time series of national accounts at constant prices
Volume indices (chained Laspyres) only

Make and use tables at constant prices of the
previous year $t + 36$

European standard situation

REGULATION (EC) No 1267/2003 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 16 June 2003

amending Council Regulation (EC) No 2223/96 with respect to the time limit for transmission of the main aggregates of national accounts, to the derogations concerning the transmission of the main aggregates of national accounts and to the transmission of employment data in hours worked

Amendments to the table 'Overview of the tables' of Annex B — Transmission Programme of National Accounts Data — of Regulation (EC) No 2223/96, (ESA 95)

TRANSMISSION PROGRAMME OF NATIONAL ACCOUNTS DATA

Overview of the tables

First transmission	Delay t + month (days where specified)	Transmission for years	Subject of the tables	Table No
2002	70 days	1995-2001	Main aggregates, annual	1
2002	70 days	1995-2001	Main aggregates, quarterly	1
1999	8	1995-1998	Main aggregates general government	2
2001	3	1997-2000	Main aggregates general government	2'
2000	9	1995-1999	Tables by industry	3
2000	9	1995-1999	Exports and imports by EU/third countries	4
2000	9	1995-1999	Household final consumption expenditure by purpose	5
2000	9	1995-1999	Financial accounts by sector (transactions)	6

European standard situation

Expenditure of the gross domestic product

P.3	5. Total final consumption expenditure		X	X
P.3	6. (a) Household final consumption expenditure (domestic concept)		X	X
P.3	6. (b) Household final consumption expenditure (national concept)		X	X
P.3	7. Final consumption expenditure of NPISHs		X	X
P.3	8. Government final consumption expenditure		X	X
P.31	(a) Individual consumption expenditure		X	X
P.32	(b) Collective consumption expenditure		X	X
P.4	9. Actual final consumption of households		X	X
P.41	(a) Actual individual consumption		X	X
P.5	10. Gross capital formation		X	X
P.51	(a) Gross fixed capital formation	Pi 6	X	X
P.52	(b) Changes in inventories		X	X
P.53	(c) Acquisitions less disposals of valuables		X	X
P.6	11. Exports of goods (fob) and services		X	X
P.7	12. Imports of goods (fob) and services		X	X

Implications for INFORUM modeling

For modelling purposes we need to have a data set with adding up properties. The totals have to be the sum of the parts.

In the new European situation this property is not given for alle years except t-1. There are two alternatives:

- To convince the Statistical Agency (NSI) to produce two parallel sets of national accounts, a “chaining version” and a second set using a fixed base year as in previous times.
- To produce a set of “own” national accounts time series at constant prices, using the base year of our last reliable input-output table as the base year of our own calculations.

Implications for INFORUM modeling

Creating an own data set for the past

General principle: Bottom up

Scenario 1

Updating the „old statistical world“ of constant price data on the basis of a fixed base year with the help of chained Laspeyres volume indices .

Scenario 1 only provides an interim solution for a limited number of periods.

Implications for INFORUM modeling

Creating an own data set for the past

General principle: Bottom up

Scenario 2

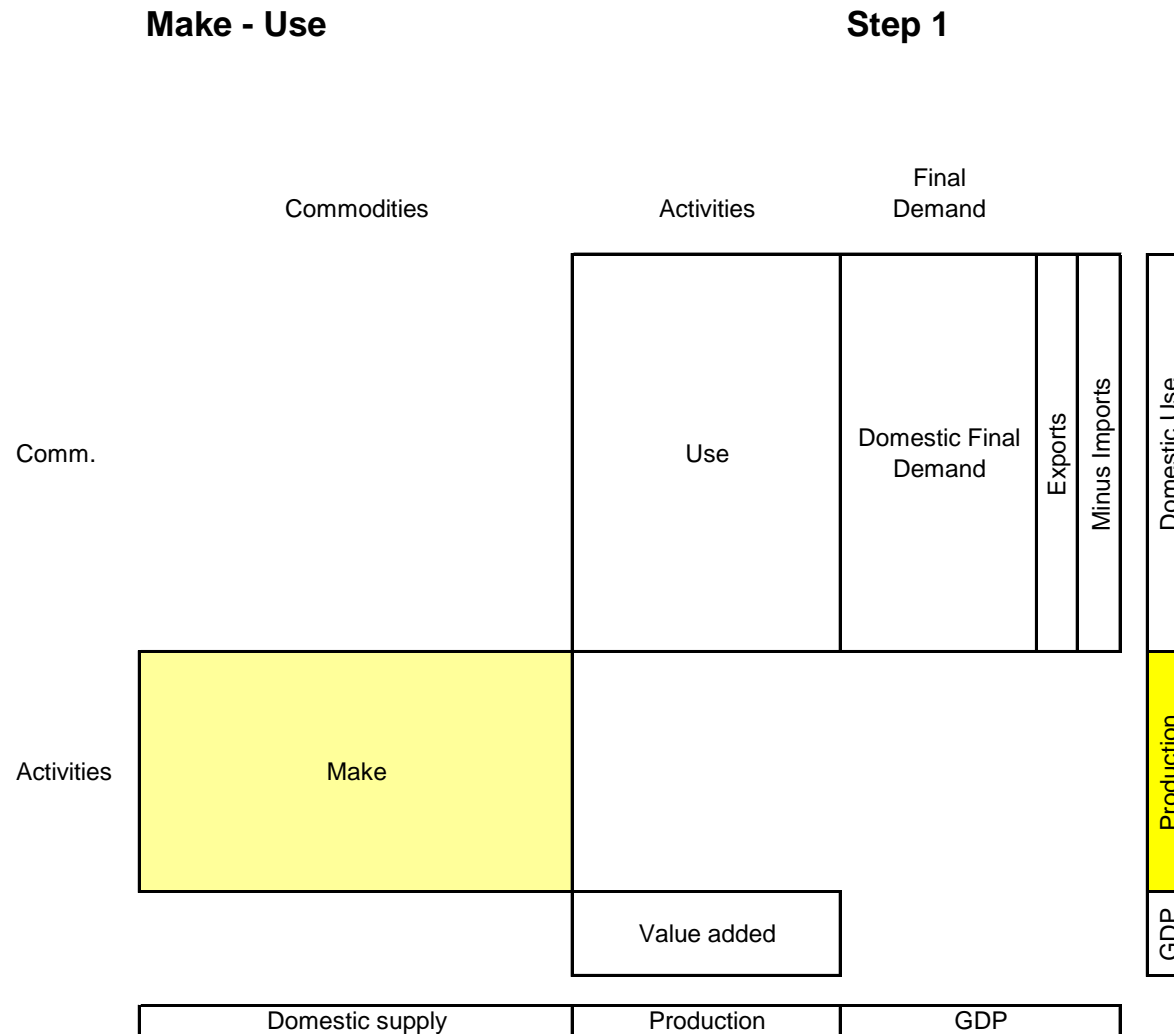
Linking elements of the base year table (or national accounts results of this year) with Laspeyres volume indices

Problem areas:

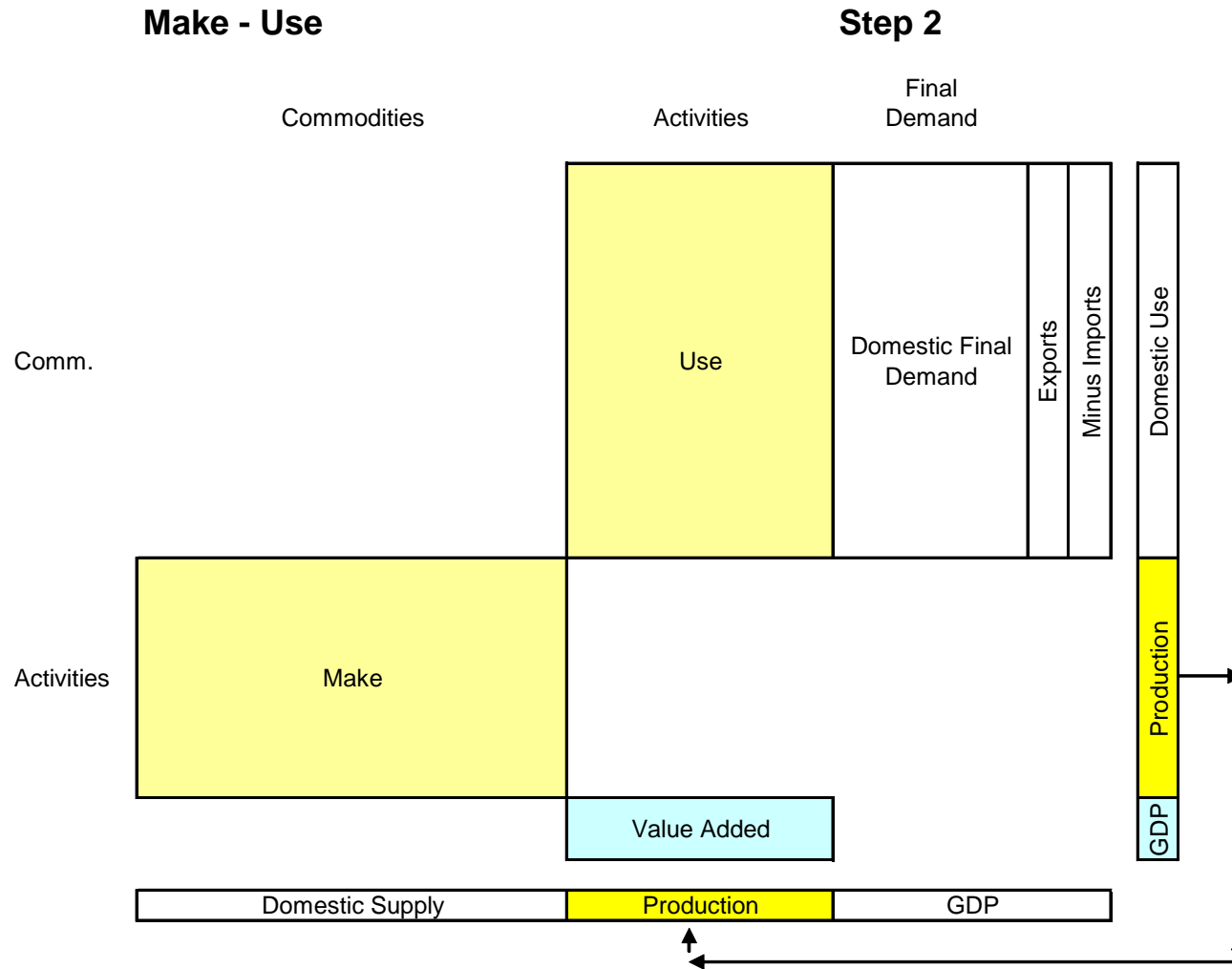
Incomplete information as long as no time series based on a fully integrated set of national accounts are available

Of special relevance: output on commodity level versus output on industry level

Implications for INFORUM modeling



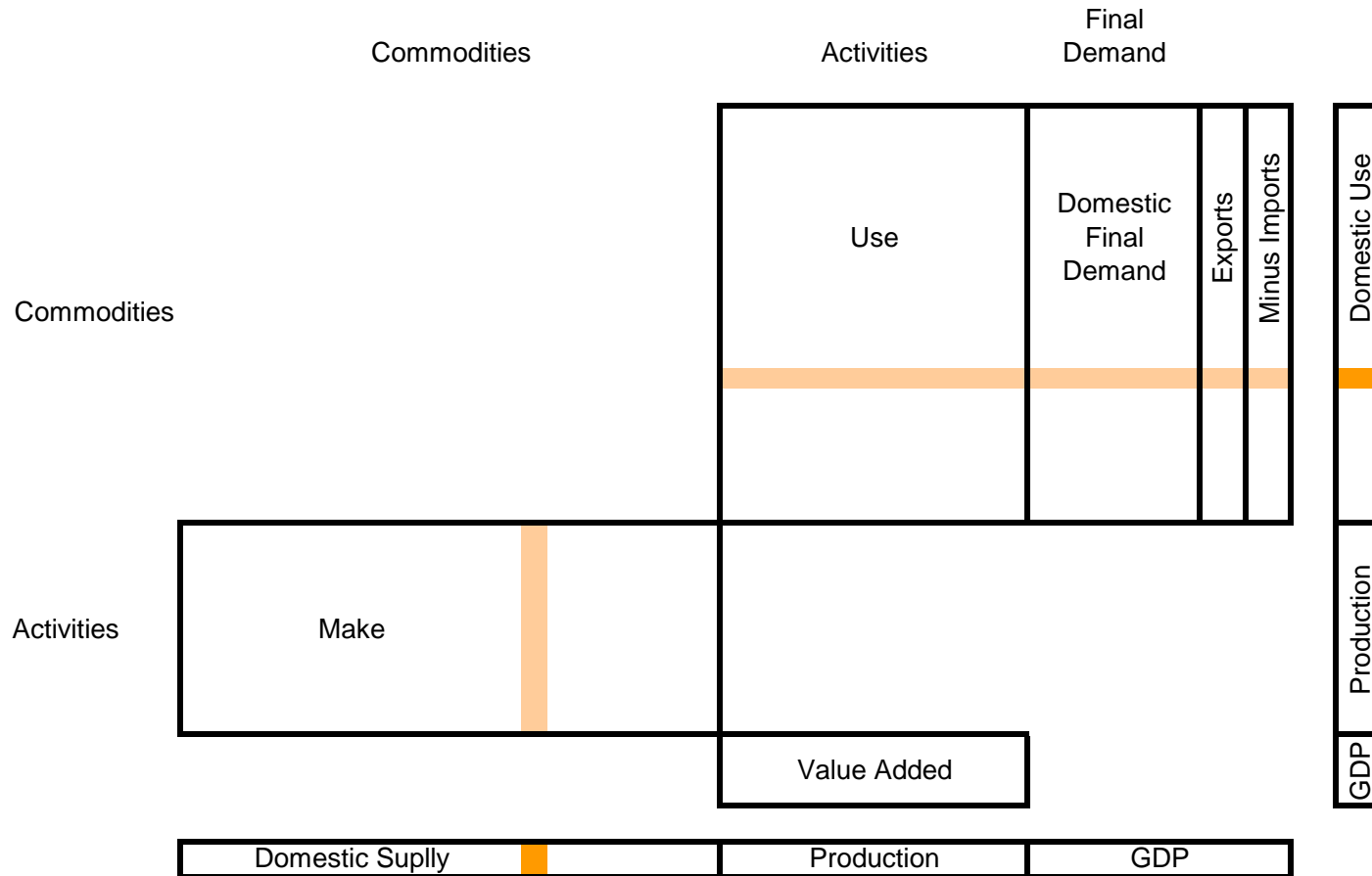
Implications for INFORUM modeling



Implications for INFORUM modeling

Make - Use

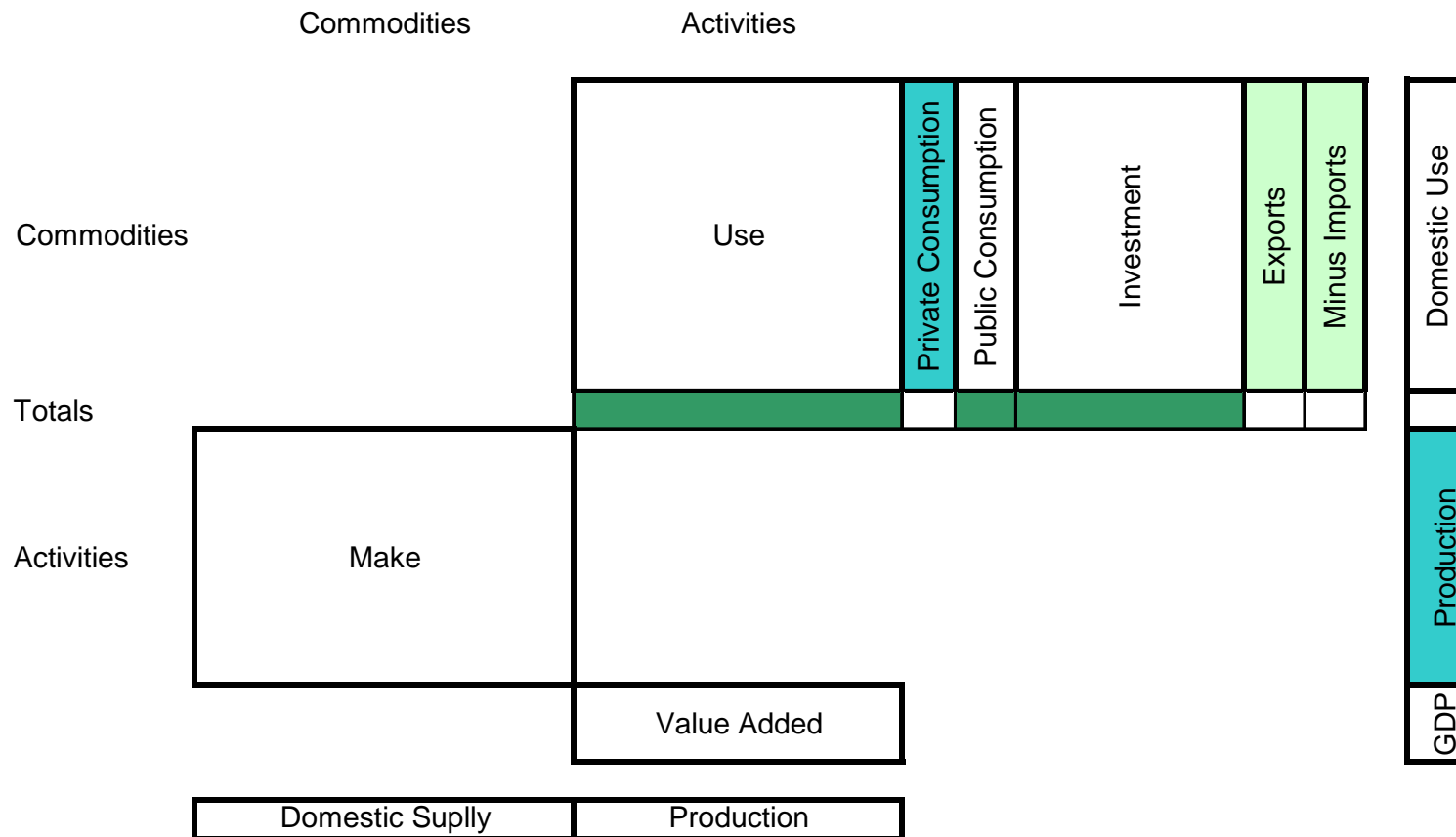
Commodity accounts



Implications for INFORUM modeling

Make - Use

A typical "European" data situation for constant price calculations



Implications for INFORUM modeling

Creating an own data set for the past

Scenario 2

Additional problem areas:

Chosing an appropriate level of disaggregation

- o Working at the most detailed level at which data is provided by the Statistical Agency or
- o Working on the IO level (P60/A60)?

The role of „consistency ex post“

Final demand categories adding up to real GDP

Imposing additional conditions?

Implications for INFORUM modeling

Two other general issues to be discussed:

Consistency with official growth rates

The question whether we really have to match official GDP figures, is a rather **political one** and might be of importance for the acceptance of our results by the public.

Linkage

Do we need a standard procedure even if the data situation and the willingness of the NSI to cooperate might differ, even in Europe?

Concluding remarks

Creating an own data set is always but an „emergency solution“.

No use can be made of a lot of information available in the Statistical Agency.

The level of disaggregation is necessarily lower than in the case of an estimate made by the Statistical Agency.

There will be as many „solutions“ as research institutes create their own data set. One of the results might be a considerable confusion in the scientific discussion because the results are not based on the same data set.

Concluding remark

A quotation from the SNA 1993:

“Disaggregated constant price data should be compiled and published **in addition** to the chain indices for the main aggregates.

The need to publish two sets of data that may appear to conflict with each other should be readily appreciated by analysts engaged in macroeconomic modelling and forecasting" (SNA 1993, 16.75).

Thank you for your patience