Jean Monnet Chair

Small Area Methods for Monitoring of Poverty and Living conditions in EU (SAMPL-EU)

II.1. Income, Consumption and Poverty in the European Statistical System

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Outline

1. Some points from previous lectures
2. From GDP to Well-Being and Poverty
3. National Accounts
4. Basic Equations and Identities
5. Aggregates of interest
6. Sub-System of NA: Labour Account
7. Household Sector and Consumption
8. Regional Accounts

Some points from previous lectures -1-

- ✓ **Design of policy intervention**: we are interested in the field of poverty and living conditions

- ✓ Implementation of a pertinent **Statistical Information System** and set of Indicators

  Indispensable for taking rational decisions, under the general and specific **context**

- ✓ Main analyses: for **Interpretation** and **Comparisons**

- ✓ Characteristics of data: in general term we speck of **Quality of data**:

  Confidence in the quality of the information is indispensable in order to use it without suspect

Some points from previous lectures -2-

✓ **statistical outputs have to meet certain quality standards**

relevance, accuracy, timeliness, accessibility , clarity (or interpretability), coherence and comparability

- For this reasons the international organization (UN and EUROSTAT) state that it is important that the statistical outputs meet certain **quality standards** and actually **they try to guarantee it**

- **Needs and Methods of producing data**

at **macro-level**

at **micro-level**

- **Comparisons** → Never plain: need for standardization

From GDP to Well-Being and Poverty -1-

- The **effects** of the policy intervention impact at **micro level**
- But the **evaluation** of the effect are measured both considering units satisfaction and at **macro level** (global economy)
- Need to have a **coherent system of statistical information** for the evaluation, to describe the economy and to compare different situations among countries (in Europe) and within countries (NA)

❑ **Well being and poverty**

✓ Well-being is a state that **involve all the aspects** of a person and marks his the quality of life

Emotional, mental, physical, social, and spiritual

✓ **Concept in evolution** during the time

The possibility to satisfy some fundamental needs and some wishes one time difficult to reach, conducts to the **born of other needs** and wishes

From GDP to Well-Being and Poverty -2-

- **Well-being and poverty**

✓ **Economic well-being** concept linked to **Income resources, at Macro** level (territorial areas, groups of population, etc.)

✓ **Economic well-being** concept linked to **Income resources, at Micro** level (households or families and individuals)

✓ **Non-material well-being** concept linked to other aspects of the life (as living conditions); alternative measures

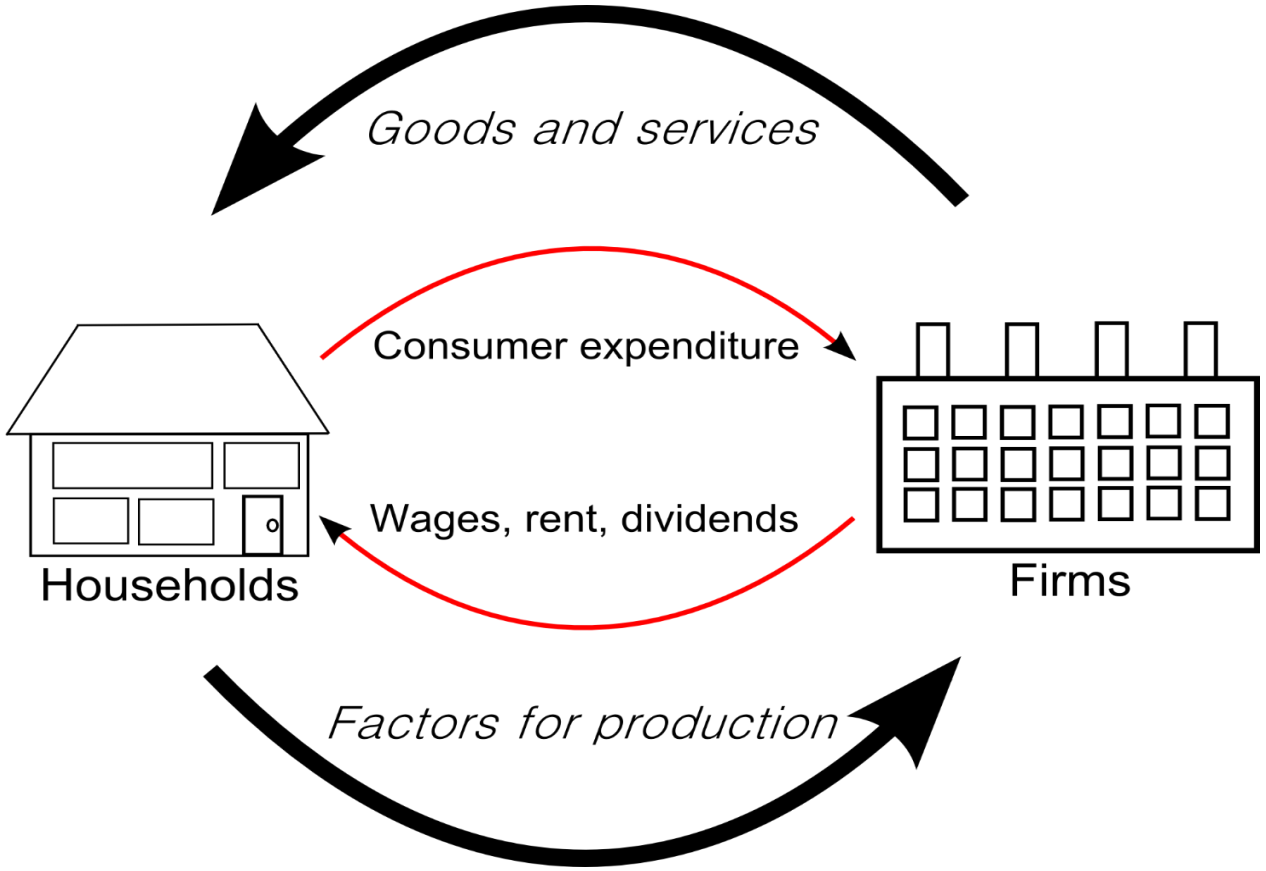
Needs to refers to **Income production** and particularly, **in this course**, to

Income distribution

in **National Accounts**

3. National Accounts: The circular flow of Income -1-

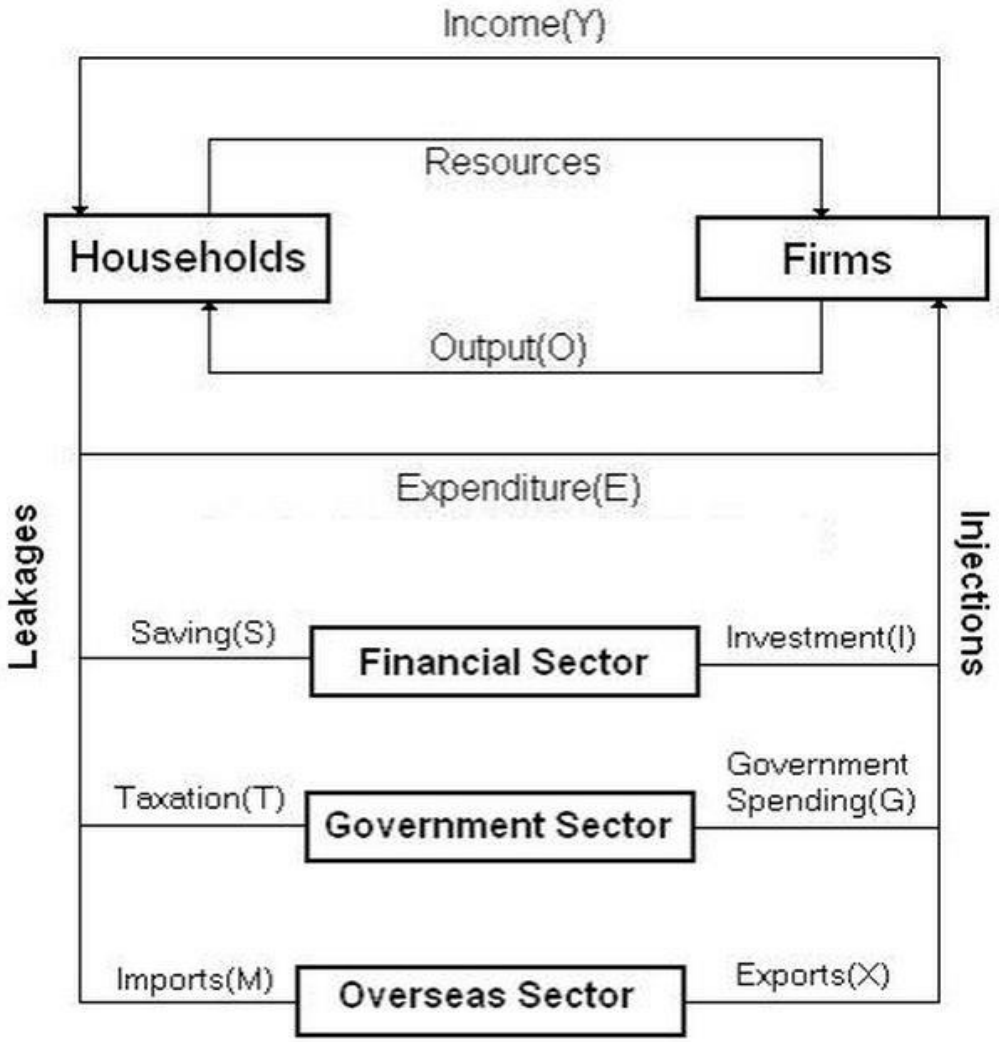
The circular flow of income or circular flow is a model of the economy in which the major exchanges are represented as flow of money, goods and services, etc. between economic agents



3. National Accounts: The circular flow of Income -2-

- The flows of money and goods exchanges is a **closed circuit** and correspond in value, but run in opposite direction
- Only two **agents (or sectors)** are considered in this simple circular flow of Income
- The circular flow analysis is the **basis of National Accounts** and hence of **macroeconomics**
- In the next slide a more complex **five sector model** is presented

EXAMPLE OF A FIVE SECTOR MODEL



N.B the symbols represent the corresponding sectors or flows

The system of National Accounts-1-

➢ **Definition of National Accounts**

A comprehensive and systematic, quantitative description of economic phenomena in a country, related to a certain period of time, to give an overall picture of its economy

➢ **Why National Accounts?**

▪ **Relevance for:**

- **Monitoring the performance** of an economy with a consistent set of indicators
- Basis for **Economic theory** and Model building
- Basis for **coherent policy formulation** (and evaluation) and for **monitoring** and **forecasting the effects** of socio-economic policies
- Gives a possibility of **comparisons between years and countries** (for international comparisons)

The system of National Accounts -2-

- **Objective**

Give a complete overview of the **various economic processes** within an economic territory

- Production, **consumption***, capital formation
- **Income distribution and redistribution***
- Flow of funds (financial processes)
- Accumulation of wealth
- Relations between sectors and with the rest of the world

*of interest for this course

- **The core of the system of National Accounts**

- National Accounts is a **closed system with identities** (definitional equation)
- Checking data with the help of identities (e.g. the budget identity and transaction identity)
- **Uniform concepts, definitions and accounting rules** (SNA 2008 and ESA 2010)

The system of National Accounts: Basic Identities -1-

- **Two basic kinds of information in the system:**

• **Stocks**: holdings of assets and liabilities at a point of time --> recorded in balance sheets

• **Flows**: reflect creation, transformation, exchange, transfer or extinction of economic value --> recorded in all other accounts of the system --> **two kinds of economic flows**:

– transactions

– other changes in assets

The system of National Accounts: Basic Identities -2-

- **Basic Identities (equations)**

• The basic idea: **supply and demand are equal** GDP + M = C + G + I + X <=> GDP = C + G + I + (X - M)

• Also: output + import = IC + C + G + I + X

• Production = Income = Expenditure

• **Definitional equations**:

• transaction identity (for transactions between units): total uses = total resources

• budget identity (for sectors and units): total uses = total resources

Where:

GDP = Gross Domestic product

M = Imports

C = Consumption of Household

G = Government Expenditure

I = Investments

X = Exports

5. Aggregates of interest: Production Aggregates -1-

In the following slides only the aggregates and sectors of interest for the JMC are presented

Definition of Production

• "An activity carried out under the control and responsibility of an institutional unit that uses inputs of labour, capital and goods and services to produce outputs of goods and services. Production does not cover purely natural processes without any human involvement or direction,…" (ESA95)

• Same definition in ESA 2010

Value added (gross)

= difference between output and intermediate consumption
= income generated with production
= compensation of employees
» wages and salaries
» social contributions

+ operating surplus and mixed income
+ consumption of fixed capital

5. Aggregates of interest: Production Aggregates -2-

GROSS DOMESTIC PRODUCT (GDP)

Three methods for estimation:

A. **Production method** -> based on value added by industry

$$Y = P - IC$$

B. **Expenditure method** -> based on expenses

consumption
capital formation
exports - imports

$$Y = C + I + E - M$$

C. **Income method** -> based on information on income by sector

5. Aggregates of interest: Income aggregates

Gross National Income (GNI)

= gross domestic product + primary income received from the rest of the world - primary income paid to the rest of the world

- **Primary income (Distribution and redistribution of Income)**

  - wages and salaries, social contributions (these together equal compensation of employees)
  - interest, dividends
  - taxes on production and imports
  - subsidies

- **Income of the population**

5. Aggregates of interest: Final Expenditure

Final Expenditure

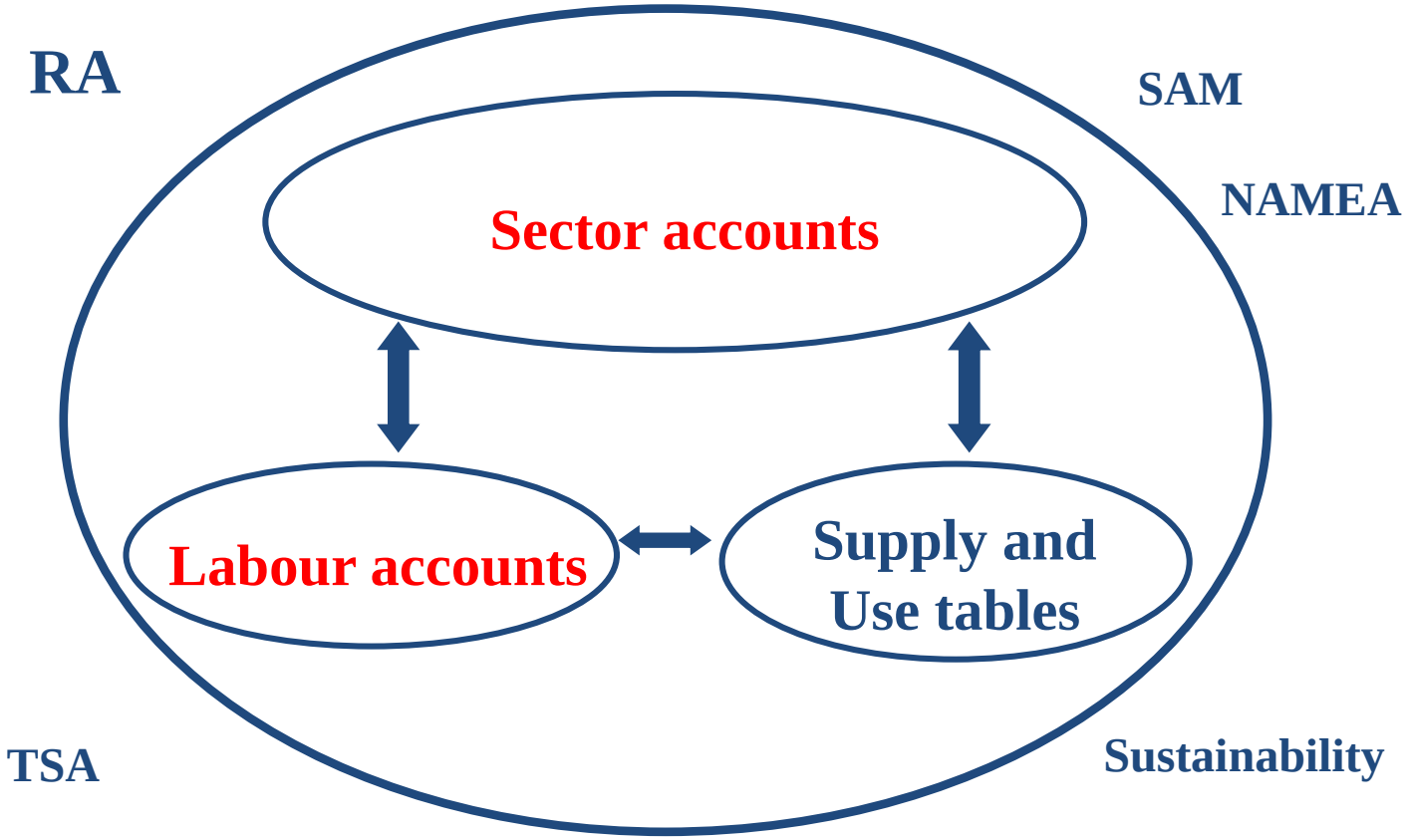
Exports and imports (foreign trade)
Consumption of households
Consumption of government and NPISH
Gross capital formation (Investments)

Final expenditure: Consumption (C + G)

Final consumption expenditure
Actual final consumption:
• In the economy as total: final consumption expenditure = actual final consumption
• Actual individual consumption is used for international comparisons

6. The enlarged system of N A: main sub-system

The system of National Accounts has been enlarged to show other flows and included other sectors: for this course the Labour accounts are of interest because are related to the distribution of wages, etc.



6. Main subsystems of N A: The Labour Accounts

Labour accounts (important for the evaluation of income distribution and poverty)

- Integrated dataset on **labour** and **wages**
- Consistency with corresponding data in sector accounts and supply and use tables

Examples: data on population and labour force, employment (hours worked, number of jobs, number of employees/self employed), compensation of employees

➡ **Also the Social Account Matrix (SMA) is very important for the analysis of the income distribution, but it is too complex to be presented in this course**

Labour Account -1-

Content

1. **Concepts**
   - International guidelines
   - Employment
   - **Compensation of employees (and mixed income)**

2. **Labour Accounts Frameworks**
   - Data confrontation
   - Labour market dynamics
   - **Price and volume measurement**

3. **Key data sources**
   - **Labour force survey**
   - Employees' registers

Labour Account -2-

International Guidelines

SNA 2008

- Chapter 7 – **Distribution of income**
  compensation of employees, mixed income
- Chapter 19 – Population and labour inputs
  labour force, labour inputs, productivity, data sources

ESA 2010

- Chapter 4 – **Distributive transactions**
  compensation of employees
- Chapter 11 – Population and labour accounts *(un)employment, jobs, non-observed economy, labour input, labour input at constant prices, productivity*

Labour Account -3-

Employment measures: Total hours worked

Includes:

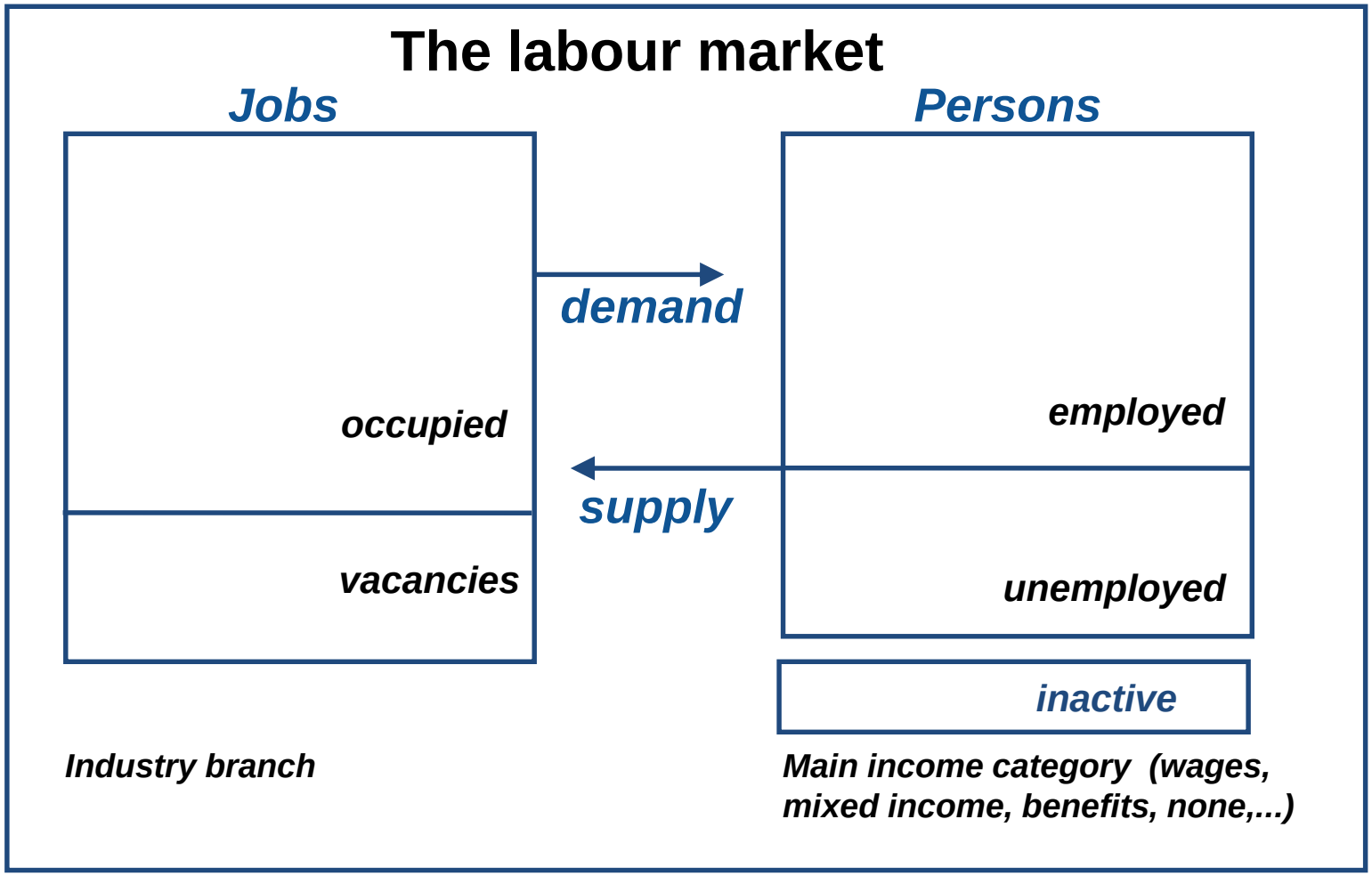
- Work of employees and self-employed;
- Contractual hours and (un)paid overtime;
- Work time spent on training;
- Coffee/tea breaks.

But excludes:

- Hours paid for but not worked such as holidays and sick leave;
- Meal breaks;
- Time spent on commuting;
- Education other than training.

Labour Account -4- Flows of demand and supply

Categories of Jobs and Persons in the labour market



7. Main Sectors in NA: Household Sector and Consumption in NA

The most important NA Sector for this course is the Household Sector

Classification of institutional sectors

- S11 Non-financial corporations
- S12 Financial corporations
- S13 General government
- S14 **Households**
- S15 Non-profit institutions serving households
- S2 Rest of the world

Household Sector -1-

Content

1. Definition of households
2. Principal roles of households
3. Institutional units
4. Institutional sector
5. Households sector
6. Households sub sectors

1. Definition of households

Small groups of persons

- who share the **same living accomodation**
- who **pool income and wealth**
- who **consume certain types of goods and services collectively**, mainly housing and food

Household Sector -2-

2. **Principal roles of households**

- Consumers (final consumption)
- Employees (supply of labour)
- Producers (production of market goods and services, unincorporated producers/ enterprices)

3. **Households are institutional units**

Institutional units are economic entities that are capable of:

- owing goods and services
- incurring liabilities
- engaging in economic activities and transactions with other units in their own right

Household Sector -3-

4. Institutional sector

Resident institutional units grouped together into mutually exclusive sectors according to their economic behaviour

The households sector consists of all **resident** households

5. Households sector includes:

- Households whose principal function is **consumption**
- Household producers for exclusively **own final use**
- Sole proprietorships and partnerships without legal status that are **market producers** (other than quasi-corporations)
- Persons living permanently in institutions (**institutional households**)

Household Sector -4-

6. **The households sector is subdivided in:**

- Employers and own-account workers
- Employees
- Recipients of property incomes
- Recipients of pensions
- Recipients of other transfer incomes

Criterion of inclusion in the different aggregates: the largest income category of the household as a whole

Household Sector -5- Data Sources

Data Sources

Direct sources

- Household surveys (for current accounts)
- Central Banks (for financial accounts)
- Fiscal data (for own account workers)

Indirect sources

- Social economic reports
  - Fiscal data
  - Business registers / production statistics
  - Social security funds
  - Institutional investment schemes
  - In general: data of other sectors

Household Sector – Consumption -1-

Consumption of households: definition

- Goods and services
- Consumption of own production
- Barter
- Second hand purchases

Tourism: domestic versus national concept

Consumption of households: sources of data

- **Retailtrade survey (RTS)**
- **Household budget survey (HBS)**

Household Sector – Consumption -2-

➢ Methods of computation

❖ **It is impossible to compute the value of NA Aggregate using only one source of data**

- **Reconciliation of RTS and HBS**
  - make population and valuation consistent
  - turnovers from RTS
  - market shares from HBS (specification by type of outlet)

- **Paid for by households directly of indirectly**
  - examples: housing, financial and medical services

- **Many consumption items based on mixture of sources**
  - examples: utilities, energy, transport, cultural & social services

8. Regional Accounts

- **We are interested in designing and implementing poverty policies at regional level.**
- **In this case as general framework it is possible to use the Regional Accounts that are derived by the National Accounts**

Background: Why Do Regional Accounts Exist?

- Data on national accounts is not enough
- An input for decision-making
- Regional policy and development
- Analysis, monitoring and forecasting
- Research

Basic Concepts

- **Regional accounts are a regional specification of the corresponding accounts of the national economy**
- Same basic concepts than in National Accounts
- **Regional Accounts make regional economic structures, disparities and development visible**

Example of Sequence of accounts on the distribution of income

II.1.1 Generation of income account (for all sectors excluding ROW)

U		R	
Compensation of employees	238,8	Net domestic product (market prices)	395,8
Taxes on production and imports	58,9		
Less: subsidies	-8,2		
B2n = Operating surplus or mixed income	106,3		
	395,8		395,8

Sequence of accounts

U	II.1.2 Primary distribution of income (for all sectors excluding ROW)		R	
Property income		222,9	Operating surplus or mixed income	106,3
			Compensation of employees	238,6
			Taxes on production and imports	56,4
			Less: subsidies	-6,9
B5n = Net national income		400,3	Property income	228,8
		623,2		623,2

Sequence of accounts

U	II.2 Secondary distribution of income (for all sectors excluding ROW)		R
		Net national income	400,3
Current taxes on income, wealth	52,3		
		Current taxes on income, wealth	53,2
Social contributions	115,0		
Social benefits	81,4	Social contributions	115,4
Other current tranfers	122,2	Social benefits	79,9
B6n = Net disposable income	393,7	Other current tranfers	115,8
	764,6		764,6

Sequence of accounts

U	II.4 Use of income account (households, government and NPISH)		R	
Final consumption expenditure		343,2	Net disposable income	393,7
Adjustment for change in net equity of households on pension funds		19,4	Adjustment for change in net equity of households on pension funds	19,7
B8n = Net saving		50,8		
		413,4		413,4

References

- **Most of the slides here presented are taken by the documentation used in the European Statistical Training Programmes hold during the last four years**

- **Main references**

- Measuring the Economy: A Primer on GDP and the National Income and Product Accounts, (http:/bea.gov/NATIONAL/PDF/NIPA_PRIMER.PDF), by Bureau od Economic Analysis (BEA), US

- Richard Stone: “Definition and measurement of the National Income and related tools”, 1947

- United Nations, System of National Accounts: SNA 1953, 1968, 1993 and now 2008

- Eurostat, European System of Accounts: ESA 1970, 1979, 1995 and now 2010

(look only to the chapters and paragraphs regarding the topics presented in the slides)