

Water Treatment and Distribution services

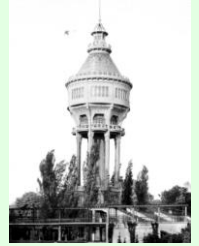
PPI in Hungary

Warsaw, Poland

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Introduction



Responsibility for water supply and sanitation provision : *municipalities*

Regulation:

- **National water strategies and rules**
- **Water Supply and Sanitation (WSS), policy of EU**
- **Local policies**, may contain special approaches and solutions concerning details on the practices (tradition, diversity and quality of available water sources, natural, environmental and financial conditions).

Introduction

Water sources

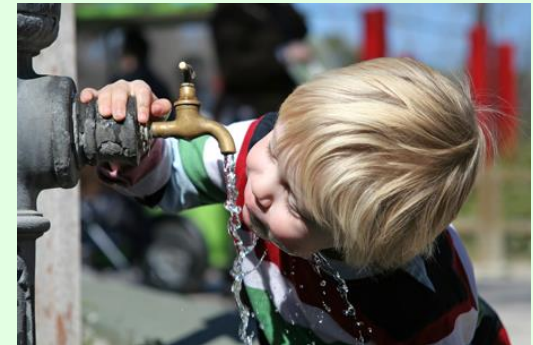


Hungary is rich in

- **freshwater;**
- **groundwater;**
- **thermal water sources.**

The main freshwater sources are:

- **Lake Balaton;**
- **river Danube** (417 km in Hungary);
- **river Tisza** (597 km in Hungary);
- **their watershed area;**
- **further freshwater sources.**

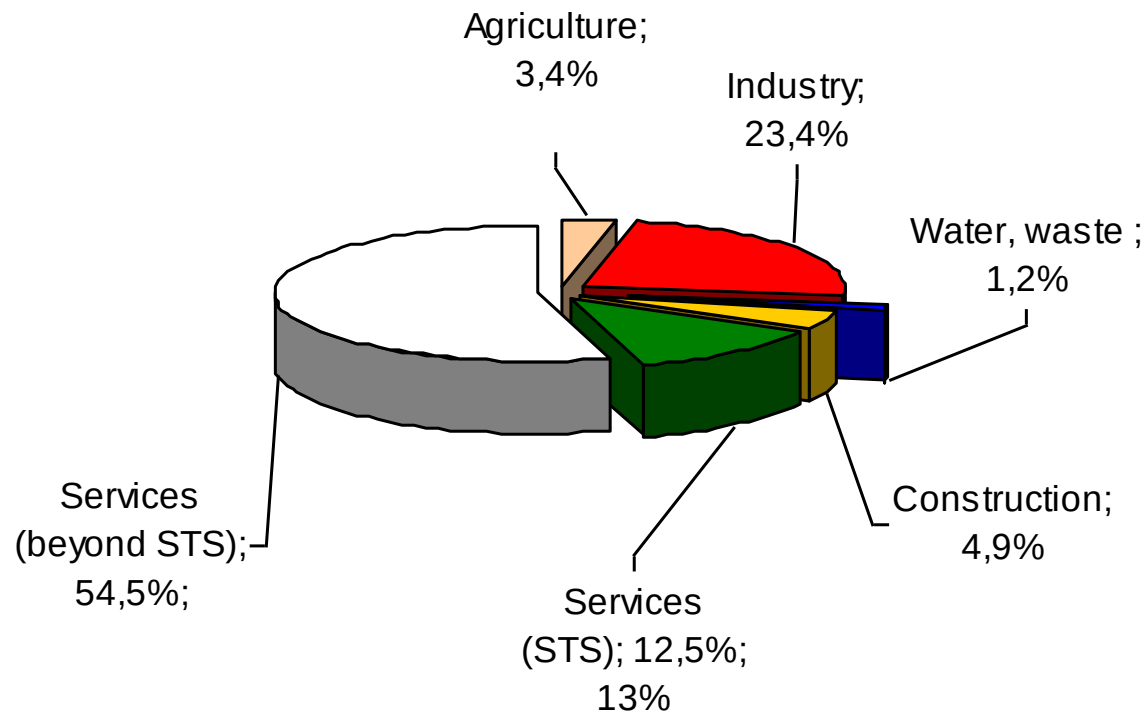


DEFINITION OF THE SERVICE

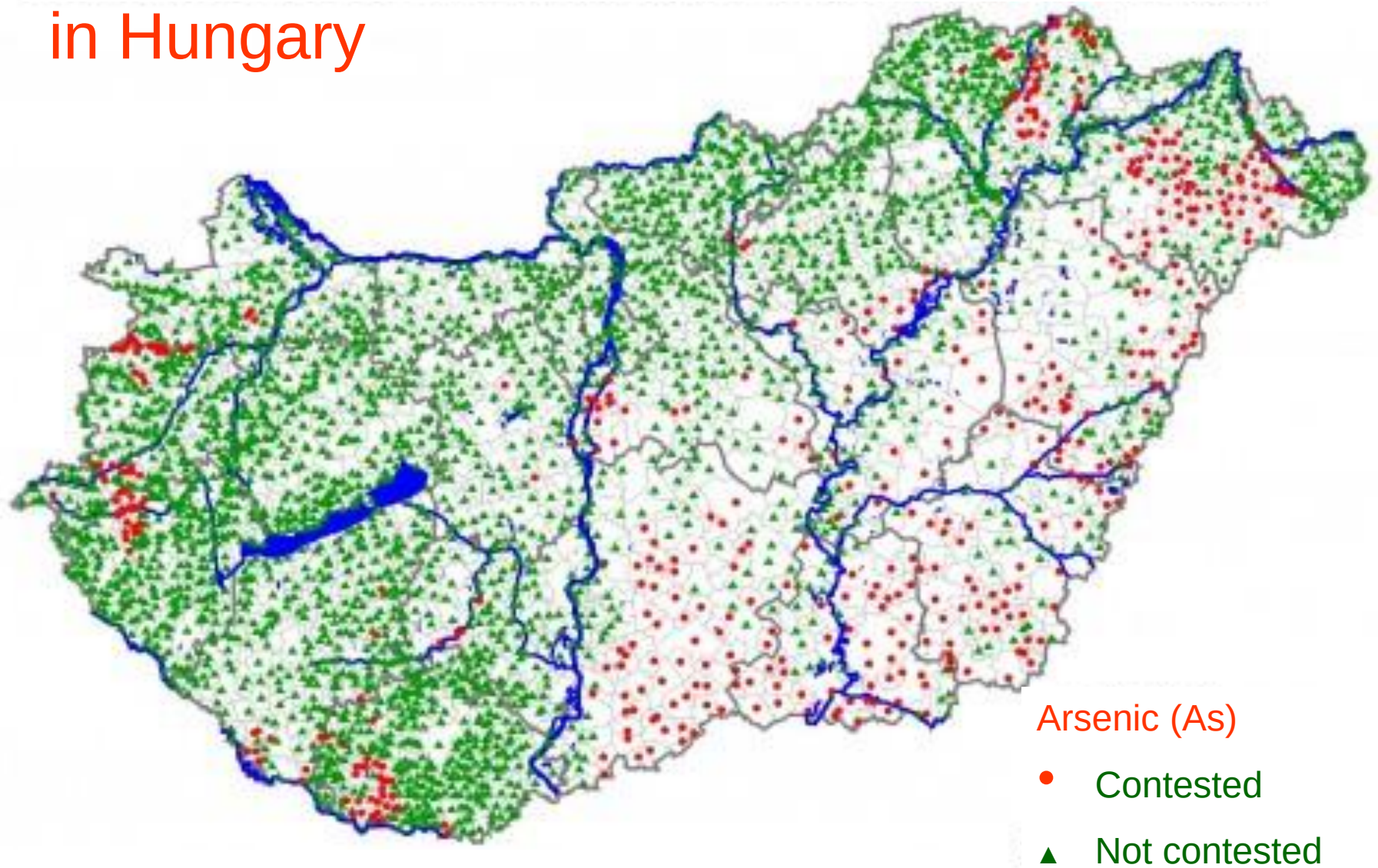
Size of the industry



GDP in Hungary, 2009

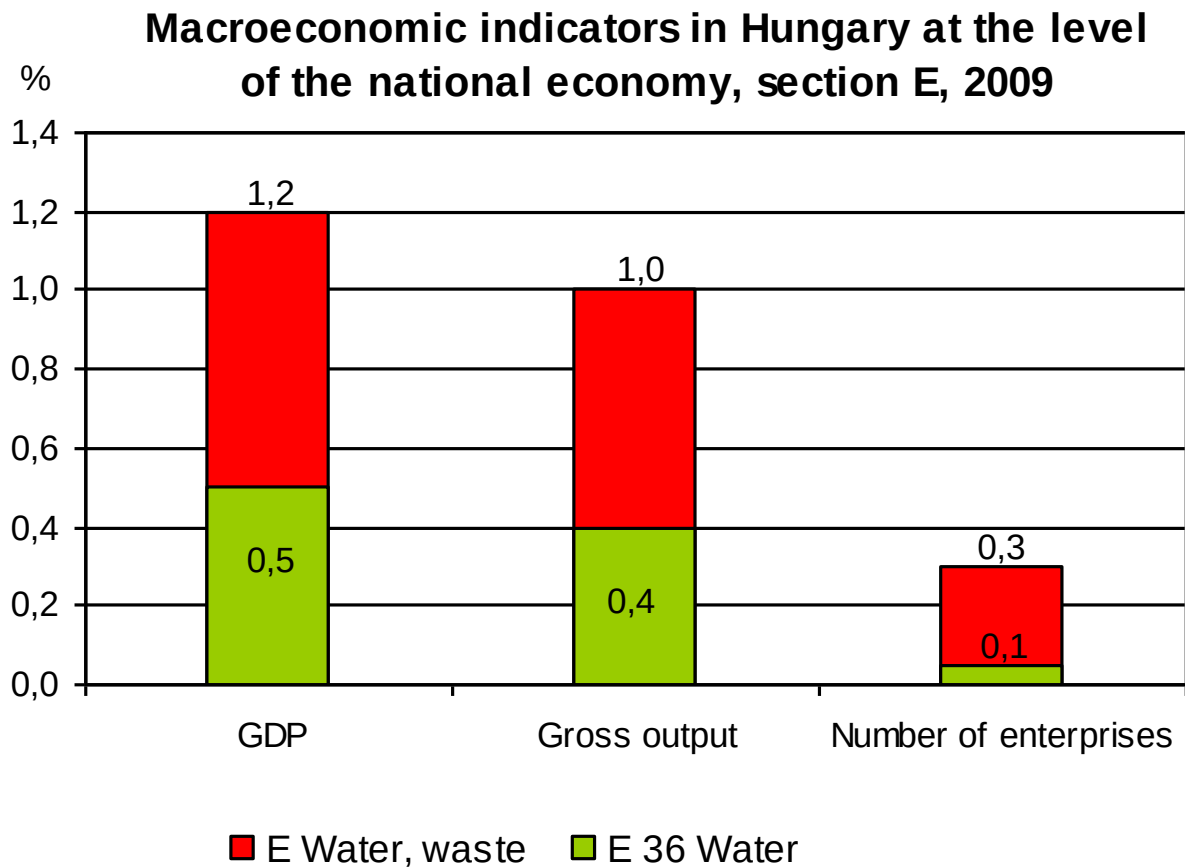


Arsenic (As) content of drinking water in Hungary



DEFINITION OF THE SERVICE

Macroeconomic indicators



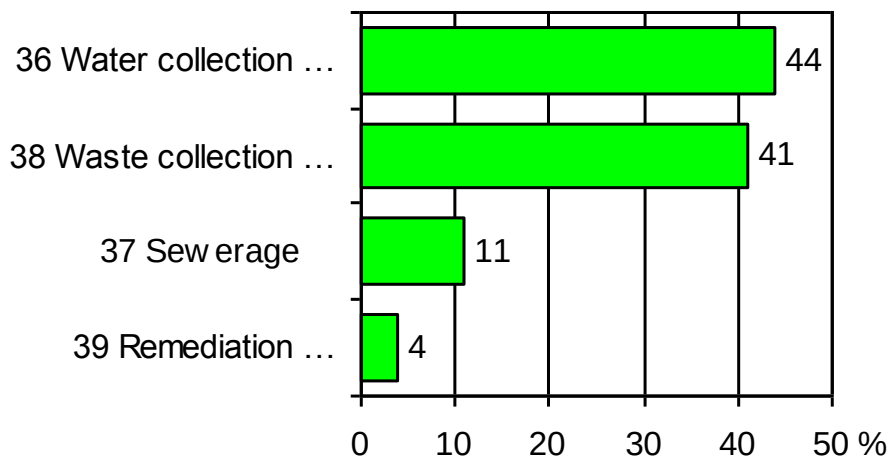
DEFINITION OF THE SERVICE

Macroeconomic indicators



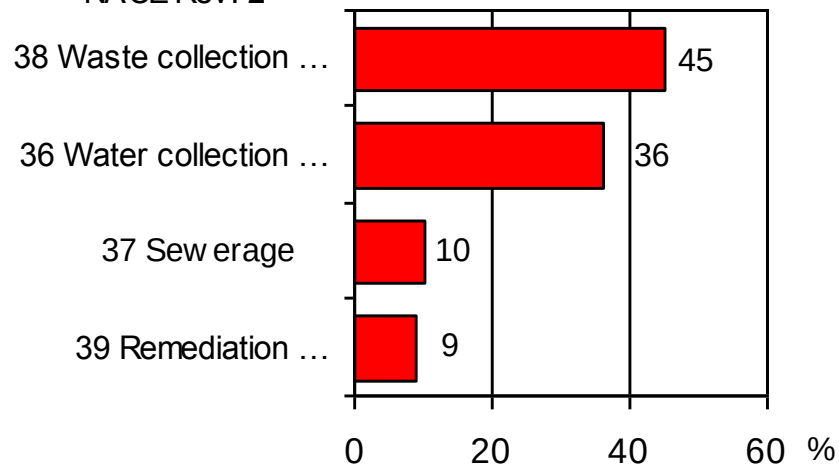
GDP in Hungary, section E, 2009

NACE Rev. 2



Net Turnover in Hungary, section E, 2009

NACE Rev. 2



Market conditions

Market structure in Hungary

Different type of ownership

- **Municipalities;**
- **Community (state) owned waterworks;**
- **Regional operators;**
- **Private water companies, mainly multinational (French, German and Austrian) companies.**

Market conditions (2)

Partial privatization of public services
combined with long term management rights
given to private companies

Effect of privatization

*The most important **question:***

*Relationship between company ownership
and water prices*

*Do privatised companies set higher prices
than the community-owned waterworks?*

Market conditions (3)

- **Water prices are subsidised in Hungary**
- **Household water prices are lower than industrial prices**
- **Water tariffs hardly cover the operation costs.**
- **Central subsidies help to keep prices below a threshold**
- **Outsourced activities are typical, generally provided under a fixed term contract by suppliers (providing a degree of power by increasing switching costs).**

Market conditions (4)

WSS services are provided

- often by the same company;
- there are a number of waterworks dealing only with water;
- there are a few dealing only with wastewater.

For example:

- Budapest Water Works provides water supply;
- Budapest Sewage Works is responsible for the wastewater management.

Market conditions (5)



Source of the data:

- **The annual structural survey**
(Enterprises classified in division E 36)
- **The annual survey for statistics on industrial production** (enterprises classified to industry (sections B,C,D), as well as non-industrial enterprises)



Annual structural indicators by size class

Enterprises classified in division E 36

(2009. year)

Size class	Number of employees		Turnover		Value-added at factor cost	
	capita	%	(Million HUF)	%	(Million HUF)	%
Total Size class	19.863	100,0	216.124	100	105.822	100
1-9 employees	422	2,1	6.598	3,1	1.611	1,5
10 to 19 employees	386	1,9	3.985	1,8	1.625	1,5
20 to 49 employees	1.142	5,7	12.316	5,7	4.170	3,9
50 to 249 employees	5.058	25,5	44.706	20,7	19.782	18,7
250 and more employees	12.855	64,7	148.520	68,7	78.634	74,3

The annual production of industrial products and services



The frame of observation is all enterprises classified to industry (sections B,C,D), as well as non-industrial enterprises

Period of time: 2010. year

	Accounts			
Published data of annual industry statistics	Number of production enterprises	Number of production enterprises	Total sales value	Total sales value
	pieces	%	Million HUF	%
36== Water collection, treatment and supply	187	100,0	123.632.903	100,00
360010 00 0 702 - Natural water (1000 m3)	164	87,7	118.352.136	95,7
360011 00 0 702 - - Drinking water (1000 m3)	150	80,2	114.994.199	93,0
360012 00 0 702 - - Non-drinking water (1000 m3)	33	17,6	3.357.937	2,7
360020 00 0 706 - Treatment and distribution services of water through mains (1000 HUF)	35	18,7	4.319.131	3,5
360030 00 0 706 - Trade services of water through mains (1000 HUF)	7	3,7	961.636	0,8

CLASSIFICATION

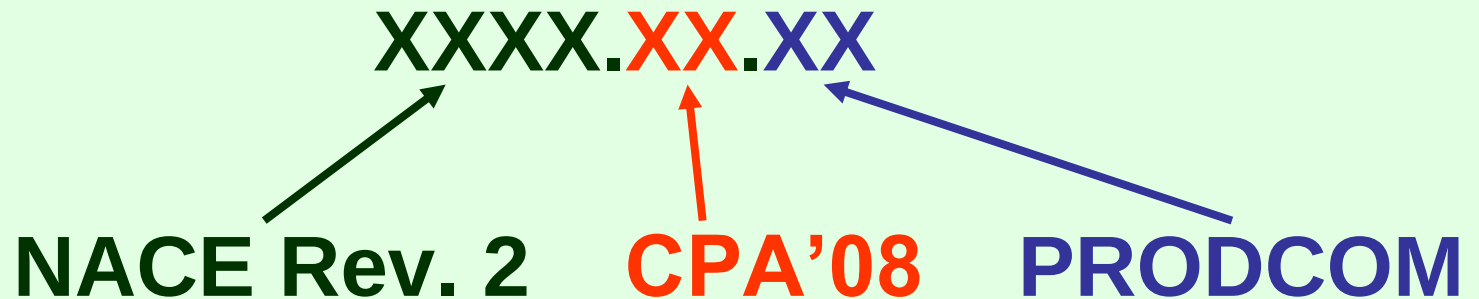


In Hungary **the harmonized national versions** of the following economic classification systems are applied:

- **NACE Rev 2 / TEÁOR'08** (the statistical **classification of economic activities** in the European Communities / in Hungary).
- **CPA'08 / TESZOR'08** (the European/ Hungarian **classification of products by activity**).
- **PRODCOM / ITO** is the **classification of goods used for statistics on industrial production** in the EU / in Hungary).

EVALUATION OF STANDARD

PRODCOM / (ITO in Hungarian) code:



For activities classified to the section 36:

Code of the service: (3600.XX. 00)

PRICING UNIT OF MEASURE

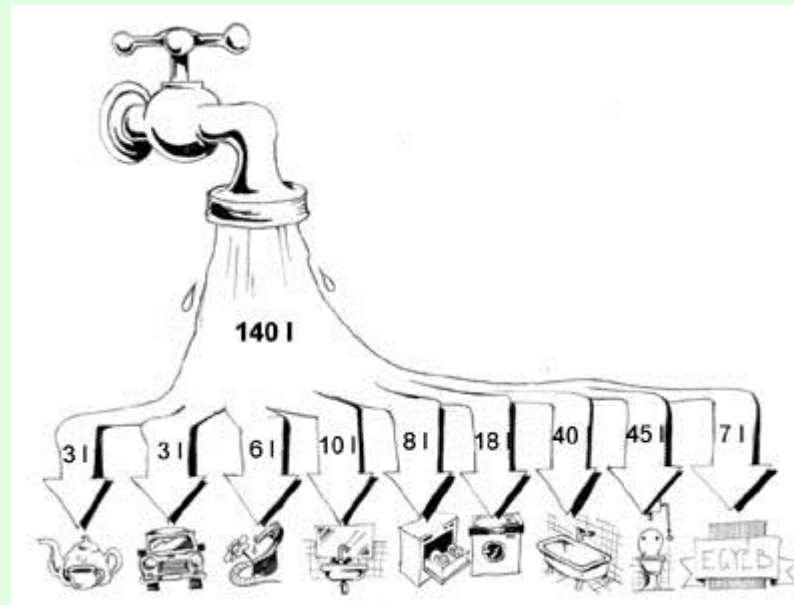
Classification Name of the service	Code CPA/group	Unit of measure
Household charges	3600.11/1901	m ³
Institutional charges	3600.11/1902	m ³
Affiliate fee	3600.11/1903	1000 m ³
Basic fee (water meter)	3600.11/1904	HUF/piece/month
Industrial	3600.12/1905	1000 m ³

PRICING METHODS



The main used pricing methods

- Using prices of repeated services
- Component pricing



Prices

The main price determining factors:

- Type of supplier / consumer;
- Amount of the water consumed;
- Region.

Price = *Basic fee* (depending on the type of the water meter)

+

price for the water (depending on the amount consumed)

+

sewerage charges

Weighting structure

Weights 2 years prior to the actual year are used

For aggregation of PPIs (previous month = 100)	Source of weights
Indices of CPA 4 digit	PRODCOM 6 digit
Indices of higher level	SBS data

The other type of indices are chain linked.

Long time series are chain linked with annually updated weights.

Index calculation

Price relatives
of representative items



Indices of commodity groups
(CPA / PRODCOM 6. digit)
(unweighted mean of price relatives)



Indices of the CPA 4 digit level
(weighted mean of commodity groups, **Laspeyres**)



Indices of higher level
(weighted mean of CPA 4 digit indices, **Laspeyres**)

Consumer Price index (CPI)

The Harmonized Index of Consumer Prices (HICP)

Category „Water supply (04.4.1)”

Includes

- water supply and associated expenditure

Excludes

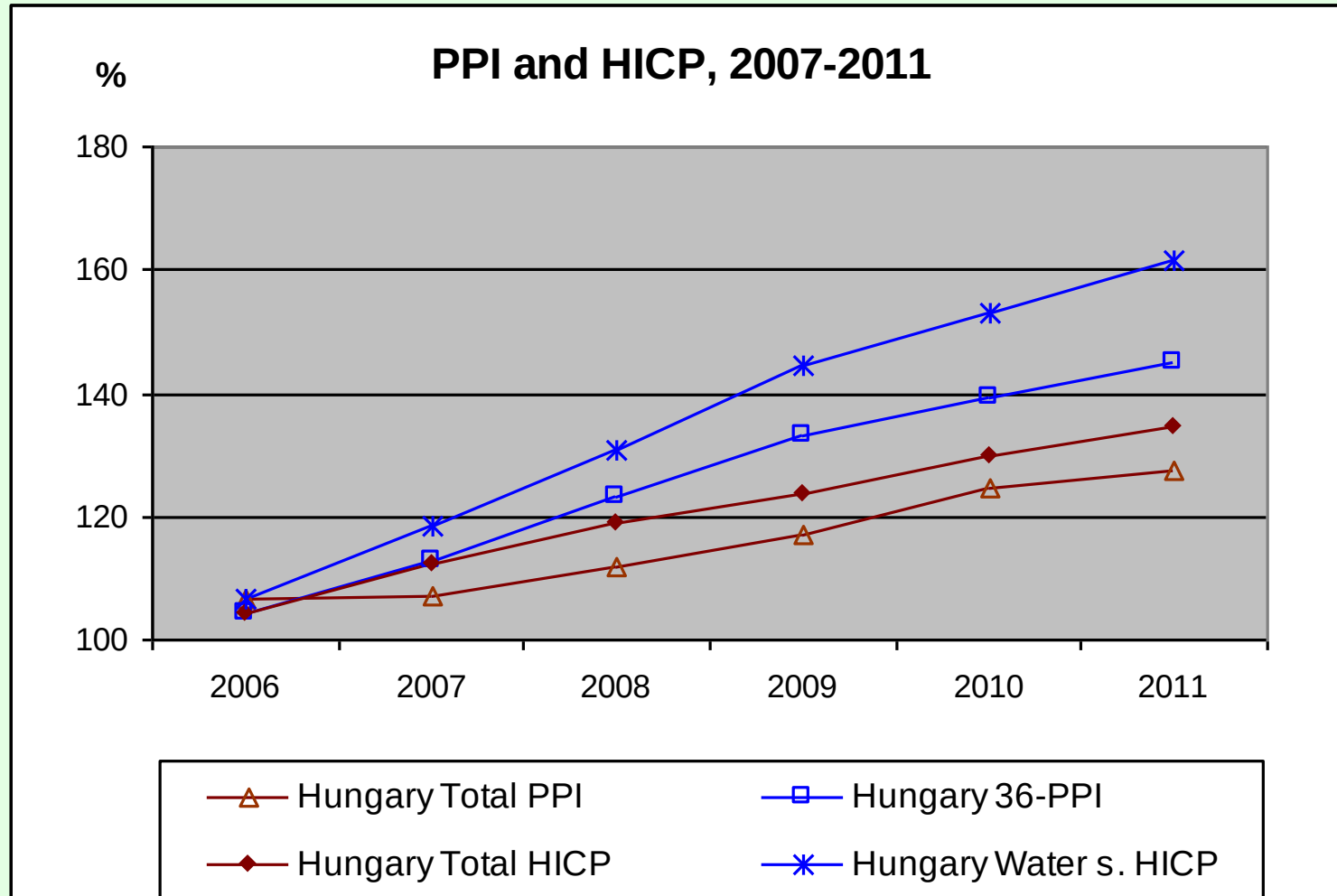
- drinking water sold in bottles or containers and hot water

This category is a **subcategory** of the Housing, Water, Electricity, Gas, and Other Fuels and

Of Water Supply and Miscellaneous Services Relating to the Dwelling categories.

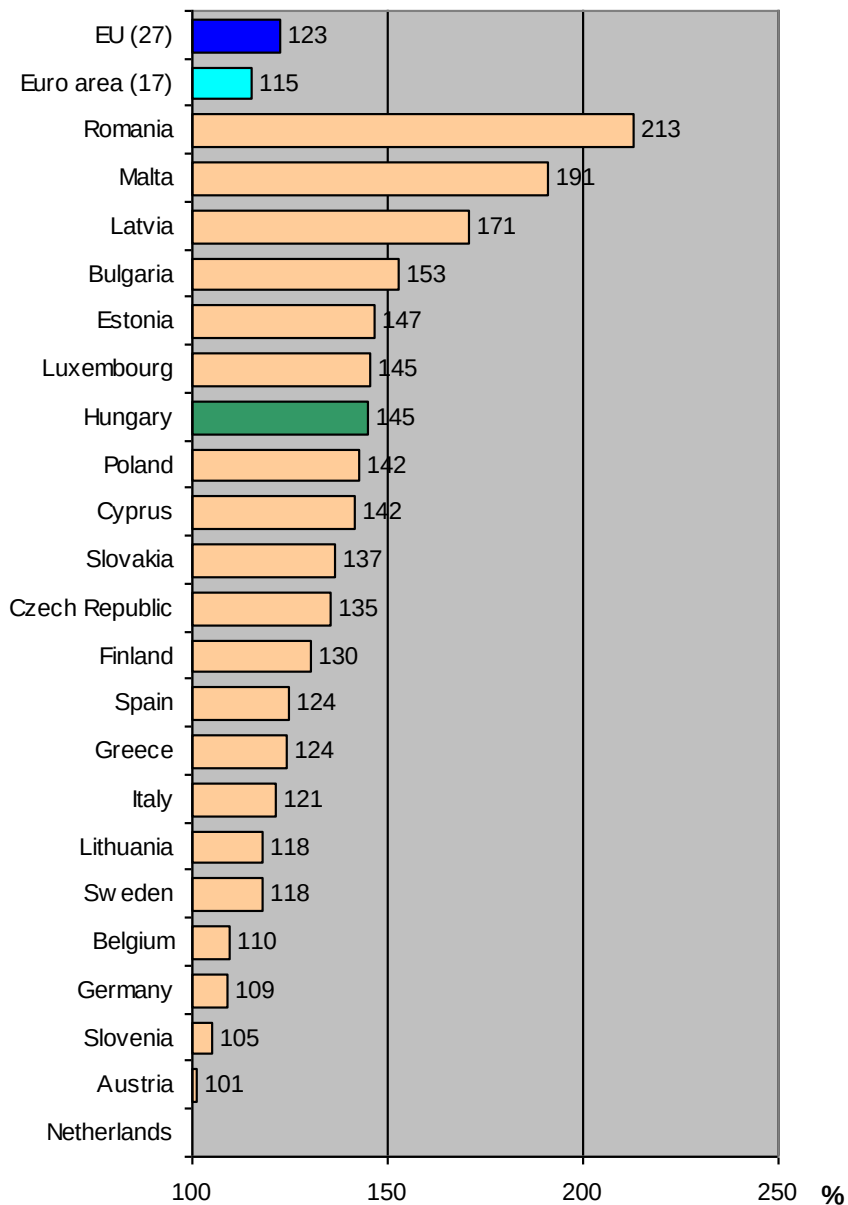
RESULTS

(2005 = 100)



OUTLOOK in the EU

PPI, Water collection, treatment and supply, 2011



2005 = 100



QUALITY ADJUSTMENT



The main used methods are:

- overlapping method;
- imputation of averages of similar categories or higher level aggregates;
- comparable adjustment;



COMPARABILITY



Inconsistency regarding

- **Classification** of services related to the section 36 (Industry vs. Service sector ?)
- **Coverage** of the total industrial macroeconomic indicators (labour, output, indices)

PPIs In Hungary

for some combination of groups of branches are available:

- Industry excluding division 36 (B+C+D)
- Industry including division 36 (B+C+D+E36)
- Industry including section E (B+C+D+E)

COMPARABILITY of the PPIs



PPI's

- are harmonized with the European short term regulation (STS)

Source of data:

- monthly statistical survey
- enterprises classified in the industry

SUMMARY



To produce **comparable macro-economic indicators** regarding WSS services at the word level is needed

- **Consistency** of main classification systems (Industry vs. Service sector ?);
- **Consistency** concerning coverage of the statistical indicators (total industrial output; total PPI);
- **Validation process** to ensure completeness of quantity and value data;
- **Cooperation** between all players: data suppliers, statisticians at national as well as at international level;
- Handle the **effect of globalization**.

***Thank you
for attention!***



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