Factors, which affect the volume of the retail trade

- Real domestic consumption
- Consumption of foreigners in Hungary
- Retail trade
- Inflation
- Real income

Source: GKI
Inflation

• CPI (blue) with no trend
• Declining from 10% per year to 0%
• CPI growth rate was 93%
• Core inflation 80%
• Modification factors (utility prices for households, fuels)
• „real inflation” around 2-3%
The changes in the CPI in Hungary, 2000-2014 (%)

Source: CSO, GKI
Real income

- 2002 major wage increase
- 13th month’s pension
- 600 thousand people and 2,8 million pensioners
- 2011 – new flat tax system and family allowance regulations
- 230 thousand public workers
- 5% of the whole employment
Real wages and real income per capita, 2000-2014 (previous year = 100)

Source: CSO
Real domestic consumption

- In 2002 50% wage increase
- 2009 financial crisis
- 2011 – weakening HUF compared to CHF and EUR
- Employee’s tax deduction ceased
- One-time minimal wage increase (20%)
- Utility prices lowered by 20%
- Household’s debt for real estate in foreign currencies
Real consumption, 2000-2015 (last year’s same month = 100)

Source: CSO
Consumption of the foreigners

- Decrease until 2012
- 16% of the whole consumption
- Cannot be modeled
The elements of the retail trade of the foreigners consumption

Source: CSO, GKI
Retail Trade

- Decrease until 2009
- From 2012 a growing tendency
- Three elements:
  - Online cash-registers
  - Fuel consumption
  - Real income
Source: CSO
The model I.

- Household’s survey data
- Consumer Sentiment Index
- Expectations concerning the future economic situation
- Data shifted with 4 months
- Weighted with the household’s whole income
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*Pearson Correlation

**Correlation is significant at the 0.01 level (2-tailed)

Source: GKI

N = Number of the months observed

- ES4 = economic situation shifted with 4 months
- ESIPC4 = economic situation weighted with income per capita shifted with 4 months
- ESH4 = economic situation weighted with the household’ whole income, shifted with 4 months
- RTWF = retail trade without fuels
- RT = retail trade
The model II.

- $R^2 = 0.576$
- 16% unexplained consumption of the foreigners
- Errors
- Whitening effect
- Black economy
Retail trade without fuels

• $R^2 = 0.63$
• Stronger explanatory power
• Regression model
• With the same weighting
„The improved model”

- Regression model
- Income added as an other independent variable
- $R^2$ grew to 0.667
- The only variable (on income) available monthly is the salaries
- Example: pension and unemployment benefits are not included
Source: CSO, GKI
Thank you for your attention!