IRPET **Regional Institute for Economic Planning of Tuscany**

The EU Fiscal Compact for Italy.

A preliminary analysis using DANTE.

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УВОЖУ К ОТВЕРЖЕННЫМ СЕЛЕНьЯМ,
Я УВОЖУ СКВОЗь ВЕКОВЕЧНЫЙ СТОН,
Я УВОЖУ К ПОГИБШИМ ПОКОЛЕНьЯМ.

PART I
DANTE, something about my personal toy

DANTE is a multisectoral model

- **37 industries**
- **54 products**
- **Supply and Use Tables (industry-by-industry; industry tech)**
- **I developed also an aggregate version**

DANTE is an econometric model

aggregate version: 74 behavior eq. (demand block; prices block; supply block; income/tax block)

134 identities

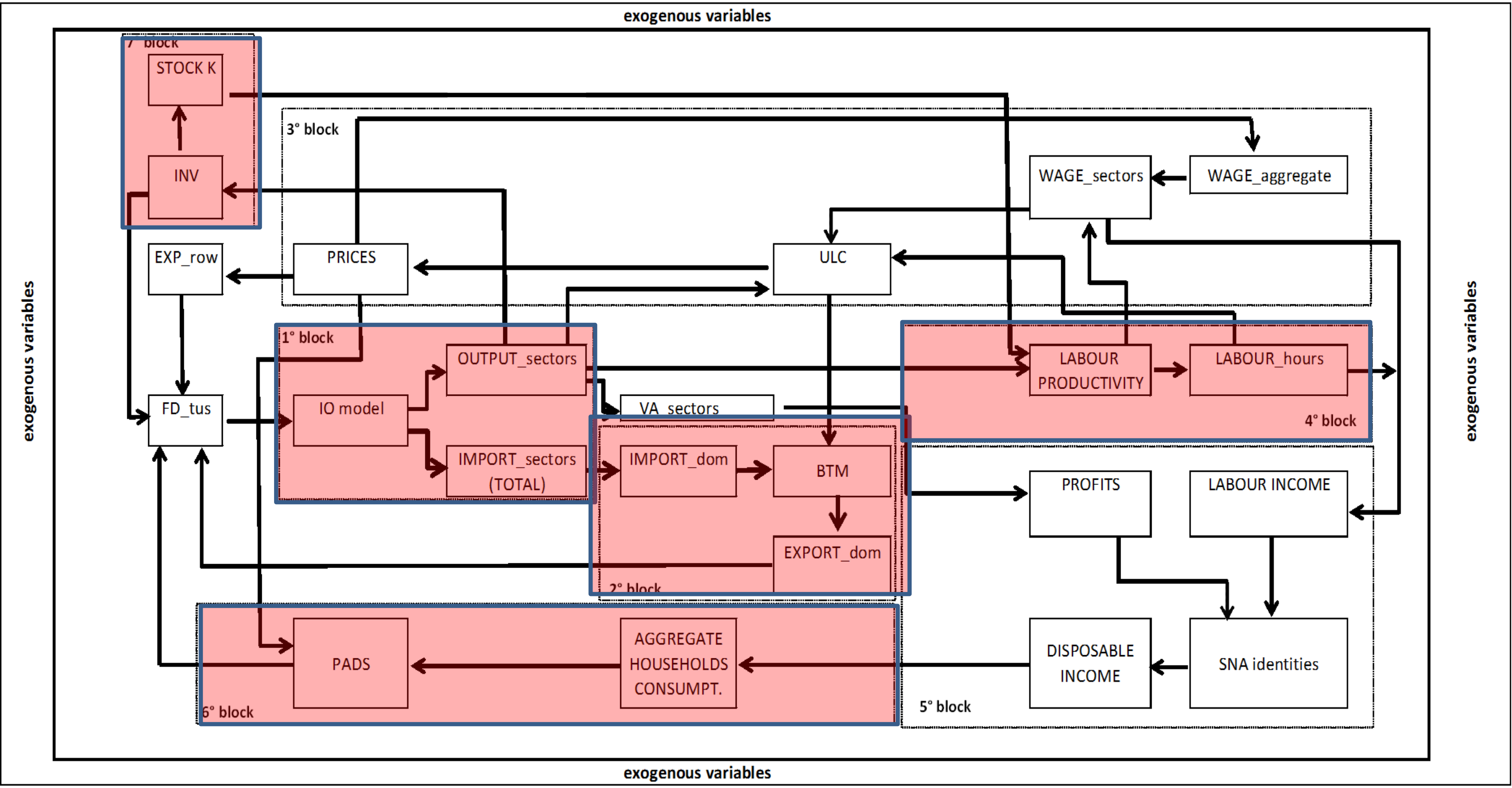
disaggregate version: sectoral reg (investment ; household consumption ; productivity)

aggregate reg (Total Consump.)

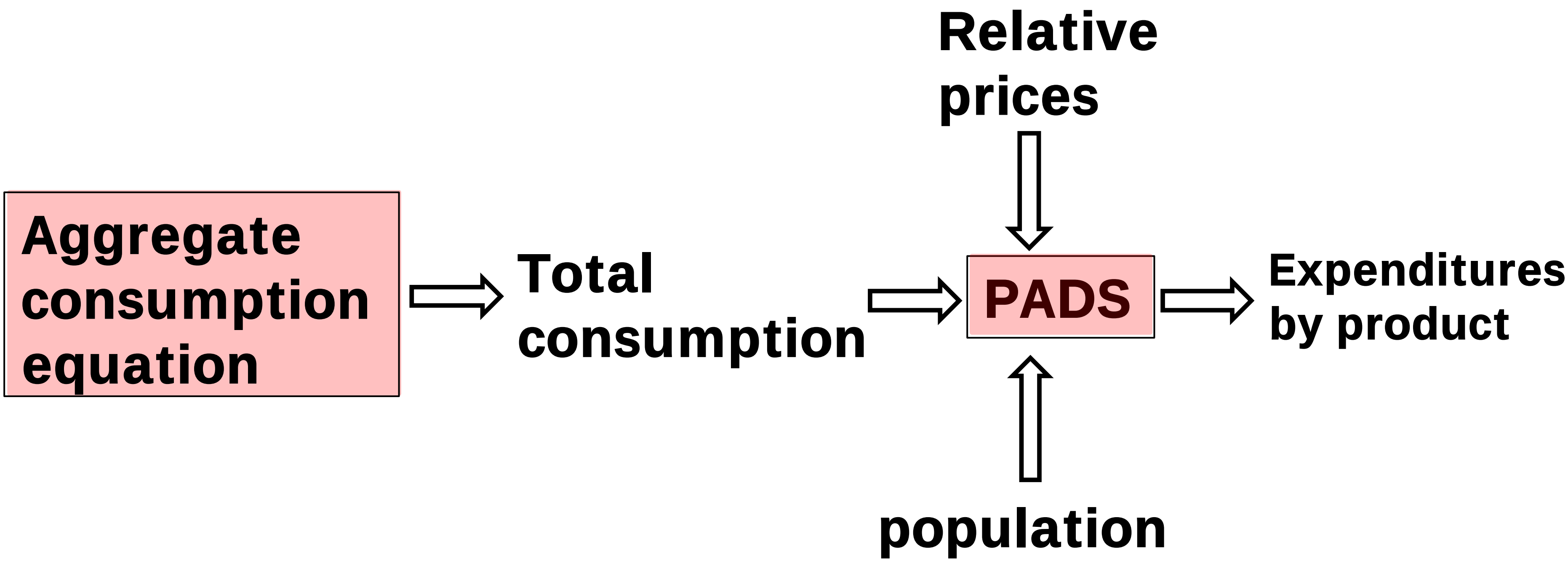
General informations

DANTE is a multiregional model

- **20 italian regions collapsed in 3 regions**
- **54 bilateral trade matrices (by products)→37 (by sector)**
- **regional gravity model**



Households Consumption Block

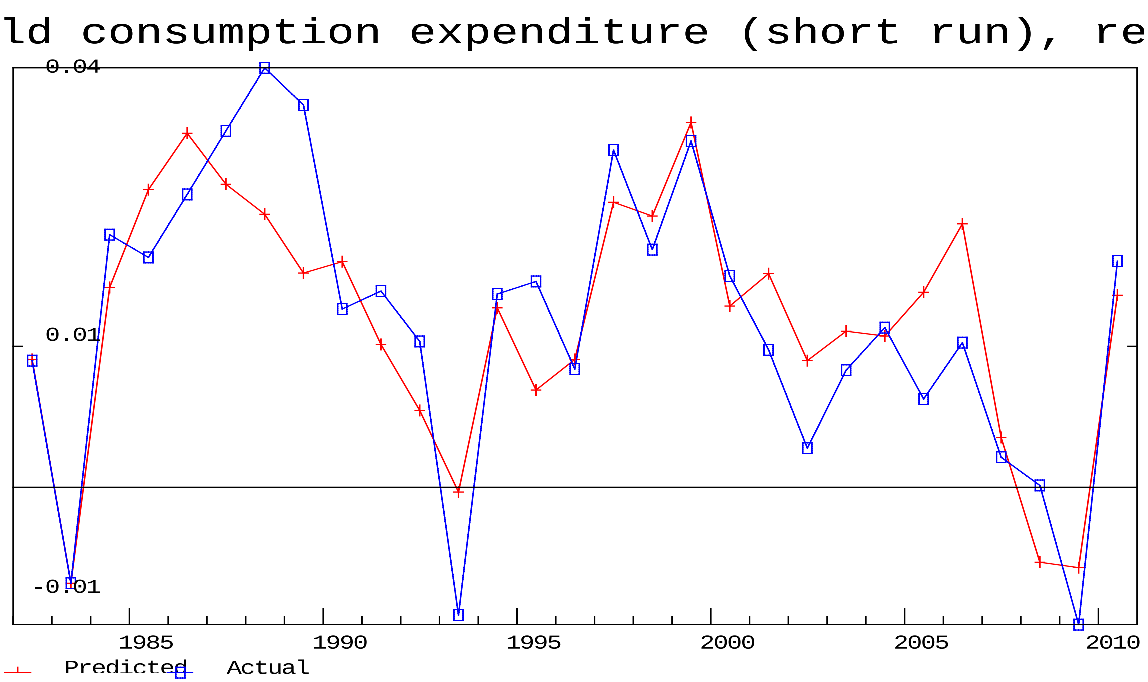


Aggregate equation

LCH - Modigliani

SEE = 0.01 RSQ = 0.7261 RHO = 0.16 Obser = 29 from 1982.000
SEE+1 = 0.01 RBSQ = 0.6513 DW = 1.67 DoFree = 22 to 2010.000
MAPE = 171.41

Variable name	Reg-Coef	Mexval	Elas	NorRes	Mean	Beta	t-value	F-Stat
0 d_RCER_TUS	- - - - - - - - - - - - - - - - - -			0.02 - - - - - - - - - - -				
1 intercept	0.01751	87.8	1.02	3.65	1.00		7.457	
2 d_YDR_TUS	0.25515	10.7	0.10	3.35	0.01	0.268	2.226	9.72
3 ecm	-0.23769	24.9	0.04	2.98	-0.00	-0.431	-3.507	10.33



Sectoral equations

PADS - Almon

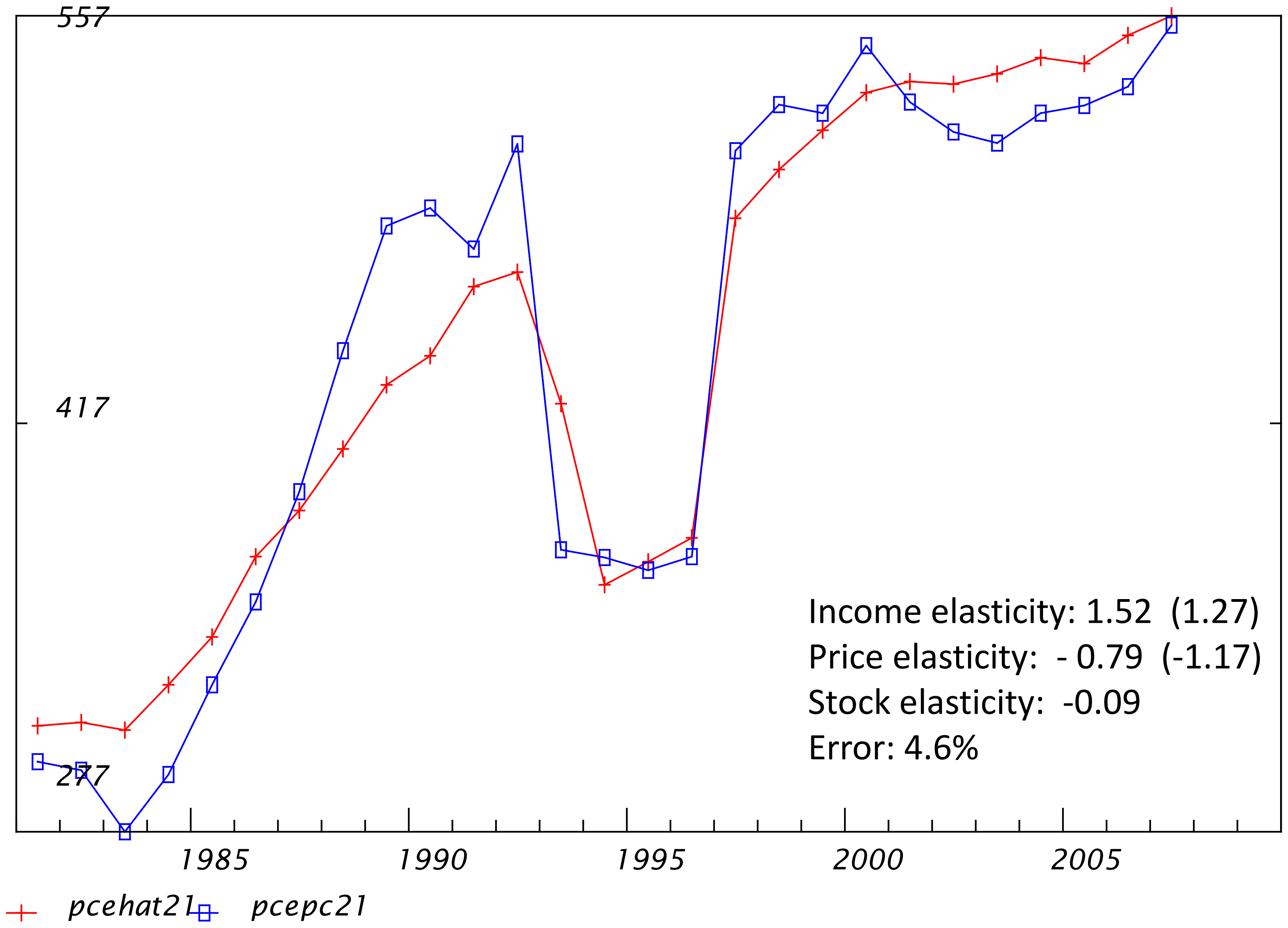
Some features:

1) I introduced dummy var. to control for specific events (sales incentive 97-98);

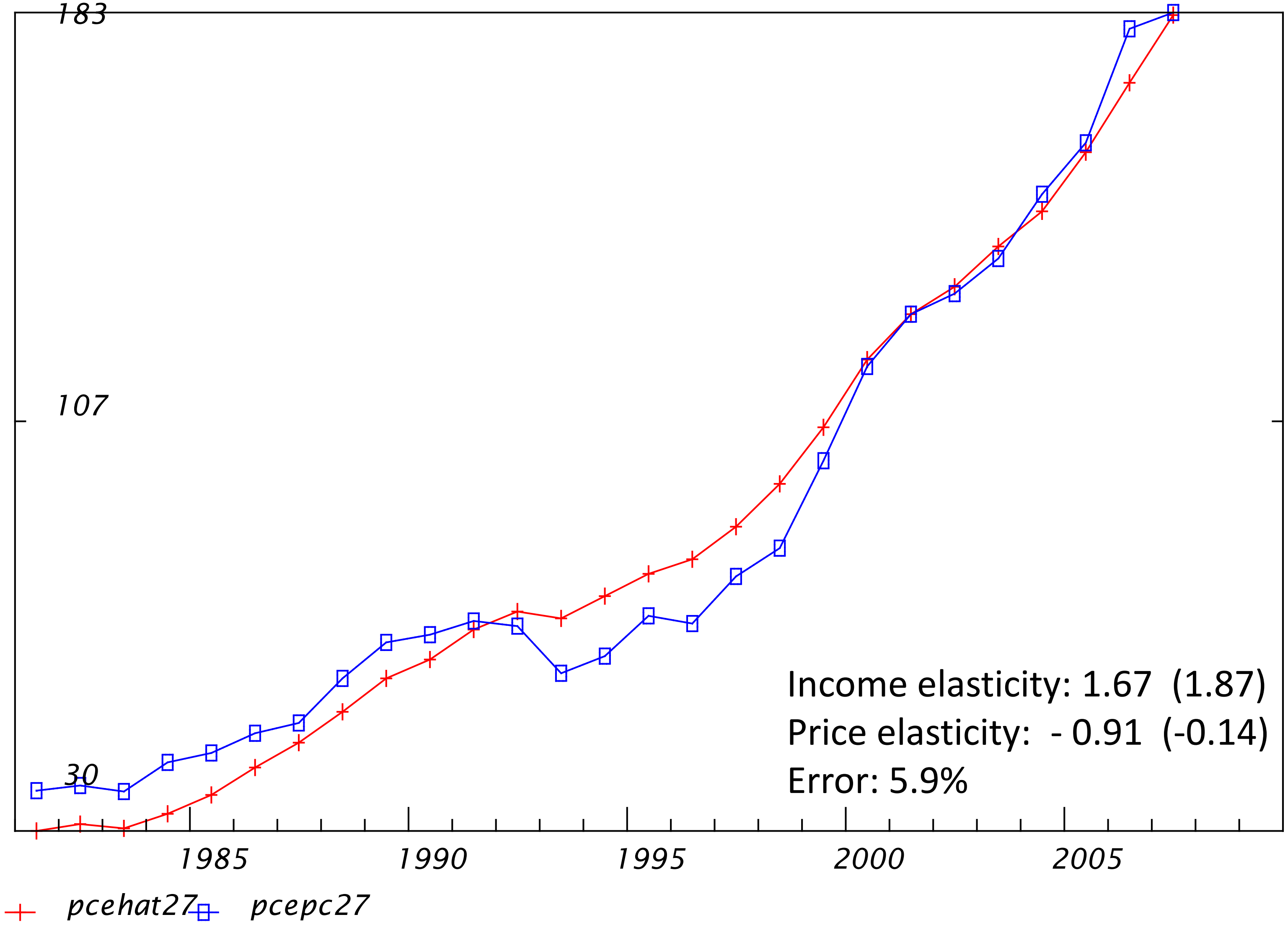
2) For some durables I used the laggeg value of the stock;

3) For some other durables I used the real interest rate:

Vehicles

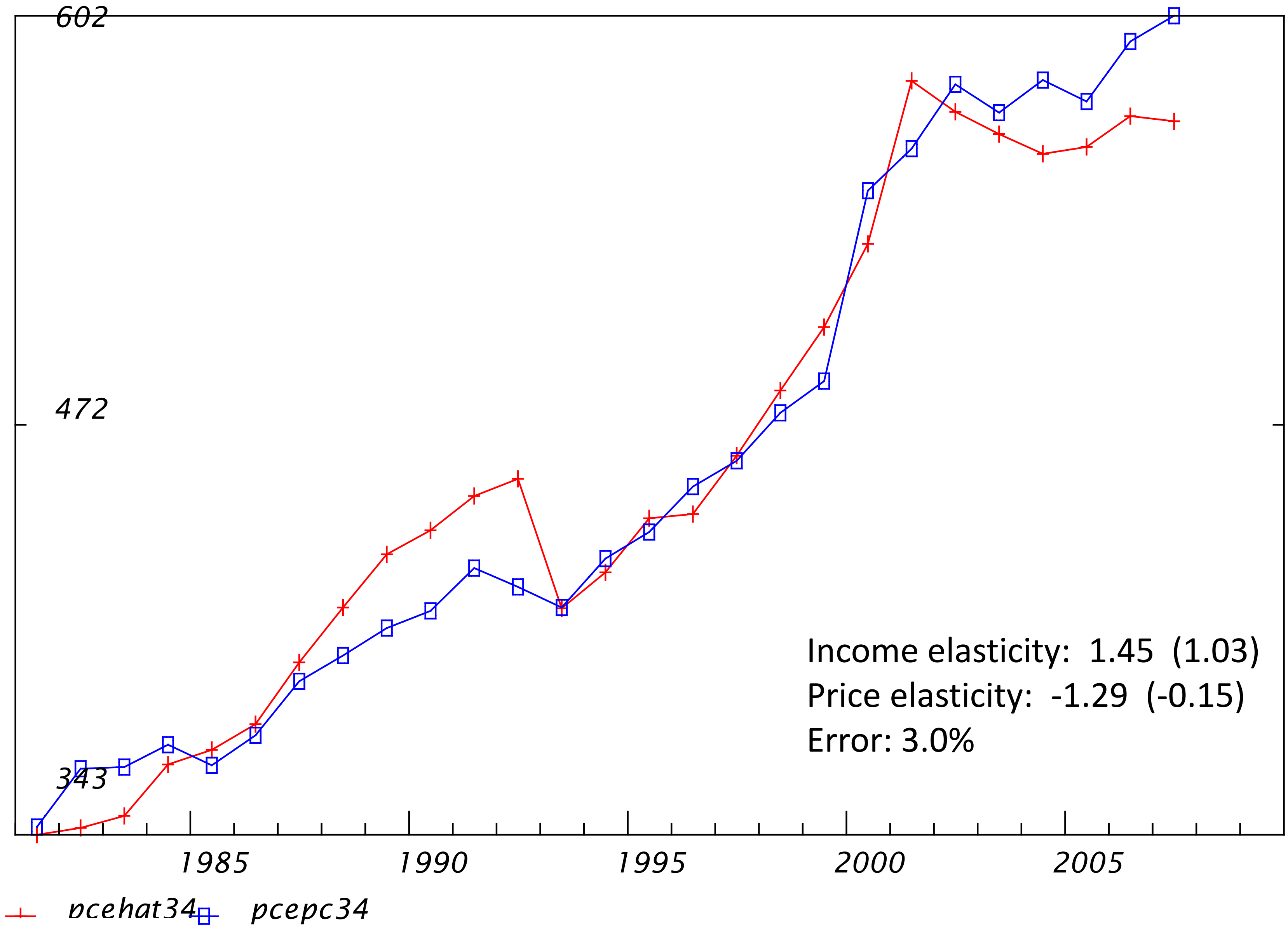

557
417
277
1985
1990
1995
2000
2005
pcehat21
pcepc21
Income elasticity: 1.52 (1.27)
Price elasticity: - 0.79 (-1.17)
Stock elasticity: -0.09
Error: 4.6%

TV, Radio and personal computer



Income elasticity: 1.67 (1.87)
Price elasticity: - 0.91 (-0.14)
Error: 5.9%

Bar and Restaurants



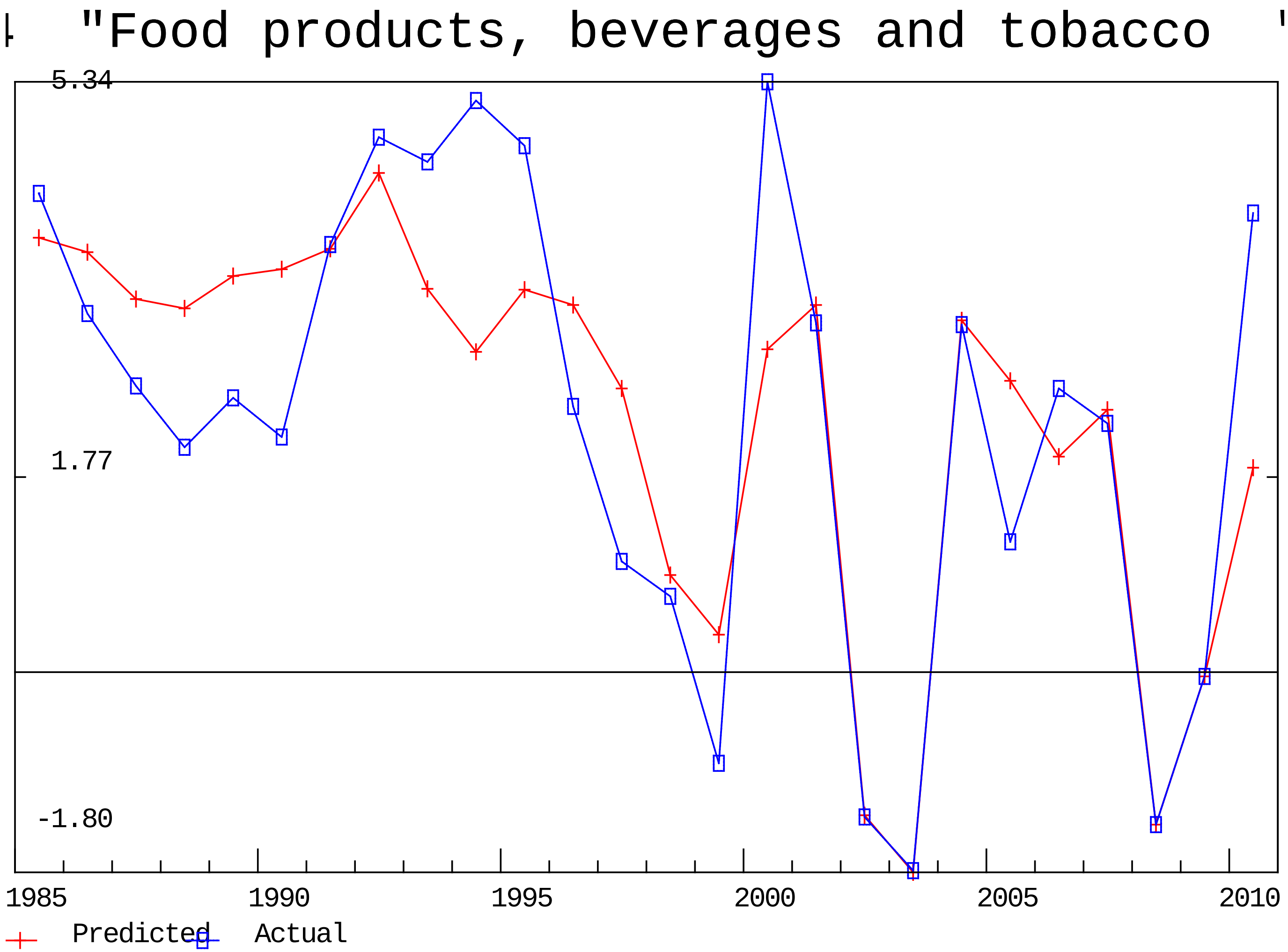
Aggregate equation **Sectoral equations**

↓ ↓

Kaldor-Verdoorn Approach

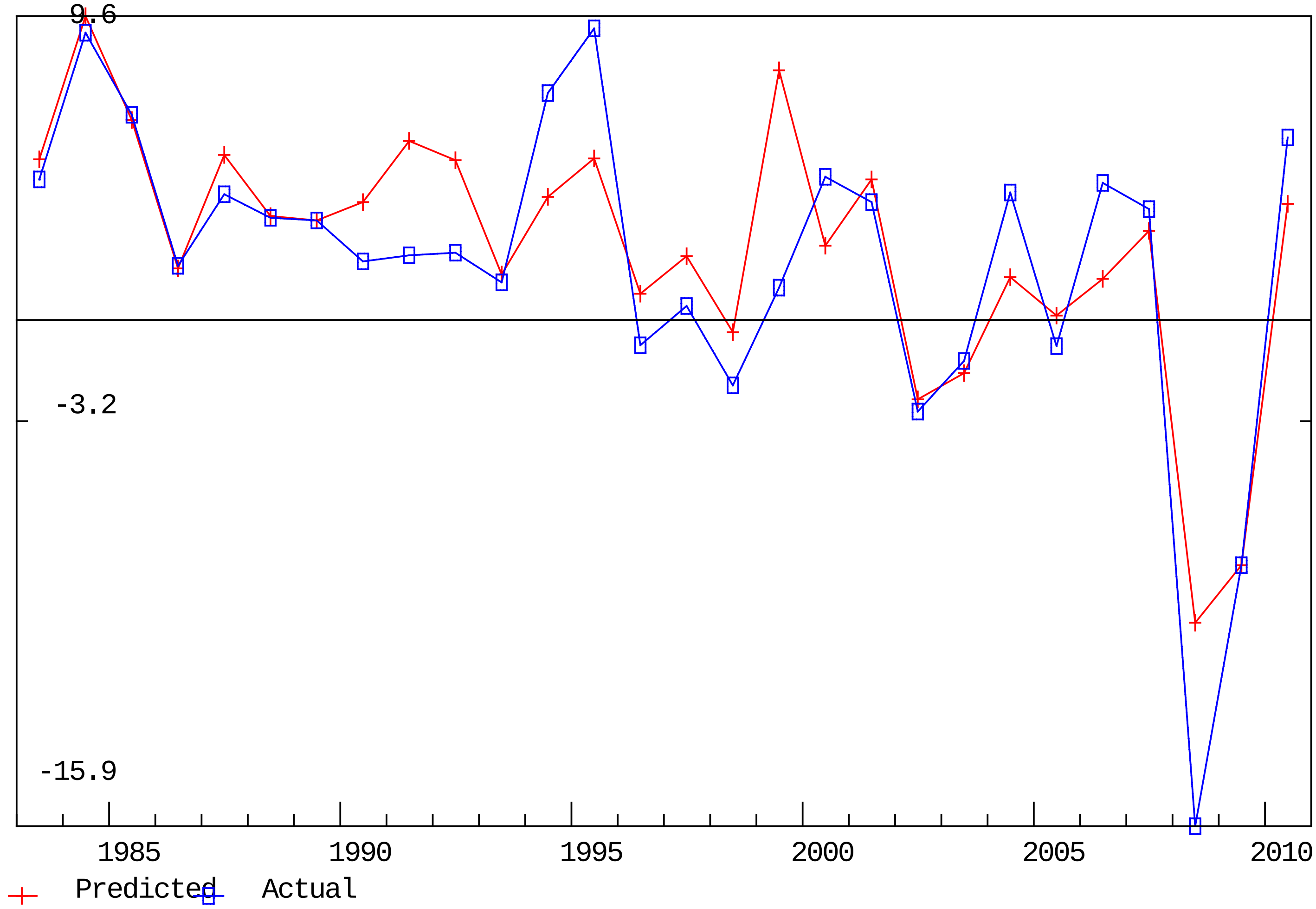
$$\dot{\Delta} yl = f\left(\dot{\Delta}\frac{k}{l}, \dot{\Delta} Q\right)$$

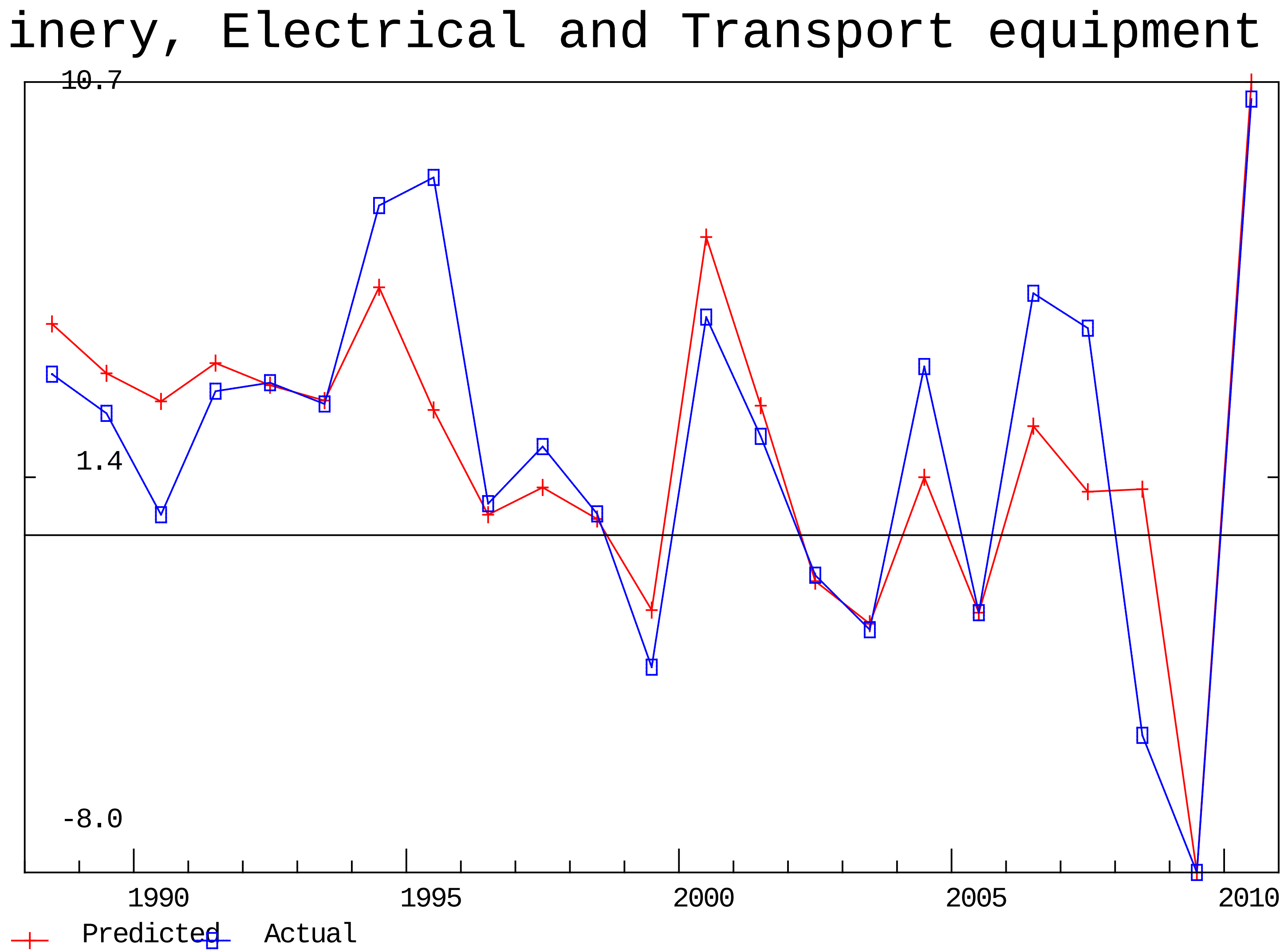
Labour Productivity Block



Labour Productivity Block

"Basic metals and fabricated metal product




inery, Electrical and Transport equipment
10.7
1.4
-8.0
1990
1995
2000
2005
2010
Predicted
Actual

PART II
Let’s play …

Some informations about the Fiscal Stability Treaty/1

One currency … many different tax policies, many different public expenditures decisions … the coordination is a problem

1997(1993): Stability and Growth Pact (Maastricht):
Public Deficit/GDP < 3% (otherwise sanctions)
Public Debt/GDP < 60% (otherwise … no playstation for 1 week)

1997 – 2012 many different release of this Treaty

2012: In January, The European Council approved the Fiscal Stability Treaty (except UK and Ceck Republic) in order to obtain a better fiscal coordination.

Up to now: 21 National Parliament ratified the new Treaty

Some informations about the Fiscal Stability Treaty/2

The new Treaty (entered in force on 1° Jan 2013) is a stricter version of the previous one (SGP).

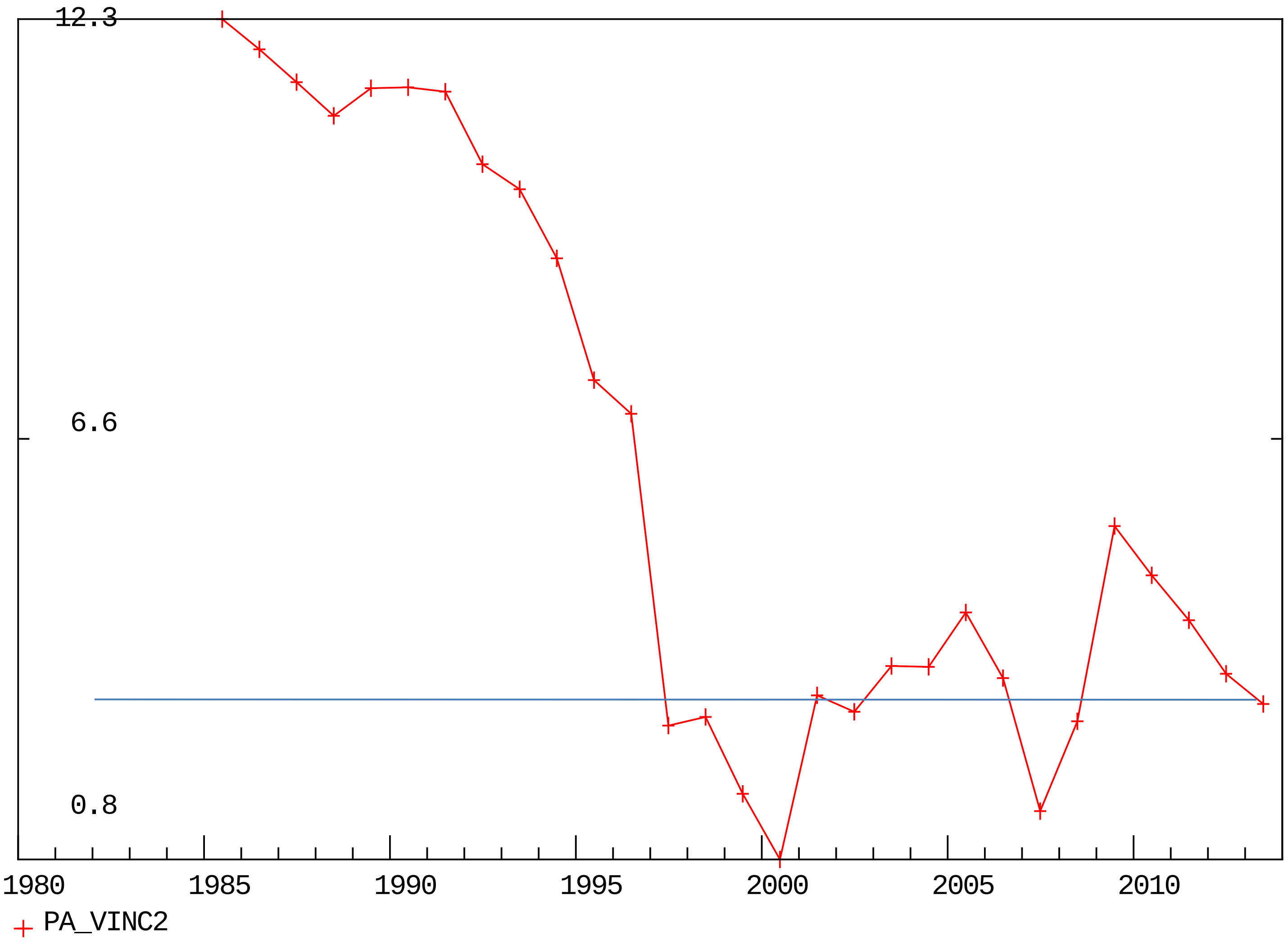
It contains 3 titles regarding rules for the European Union organization and coordination. The Title n.III is called "Fiscal Compact"

Balanced budget rule: General government budgets shall be "balanced" or in surplus

Debt brake rule: Member States whose government debt-to-GDP ratio exceeds the 60% reference level, shall reduce it.

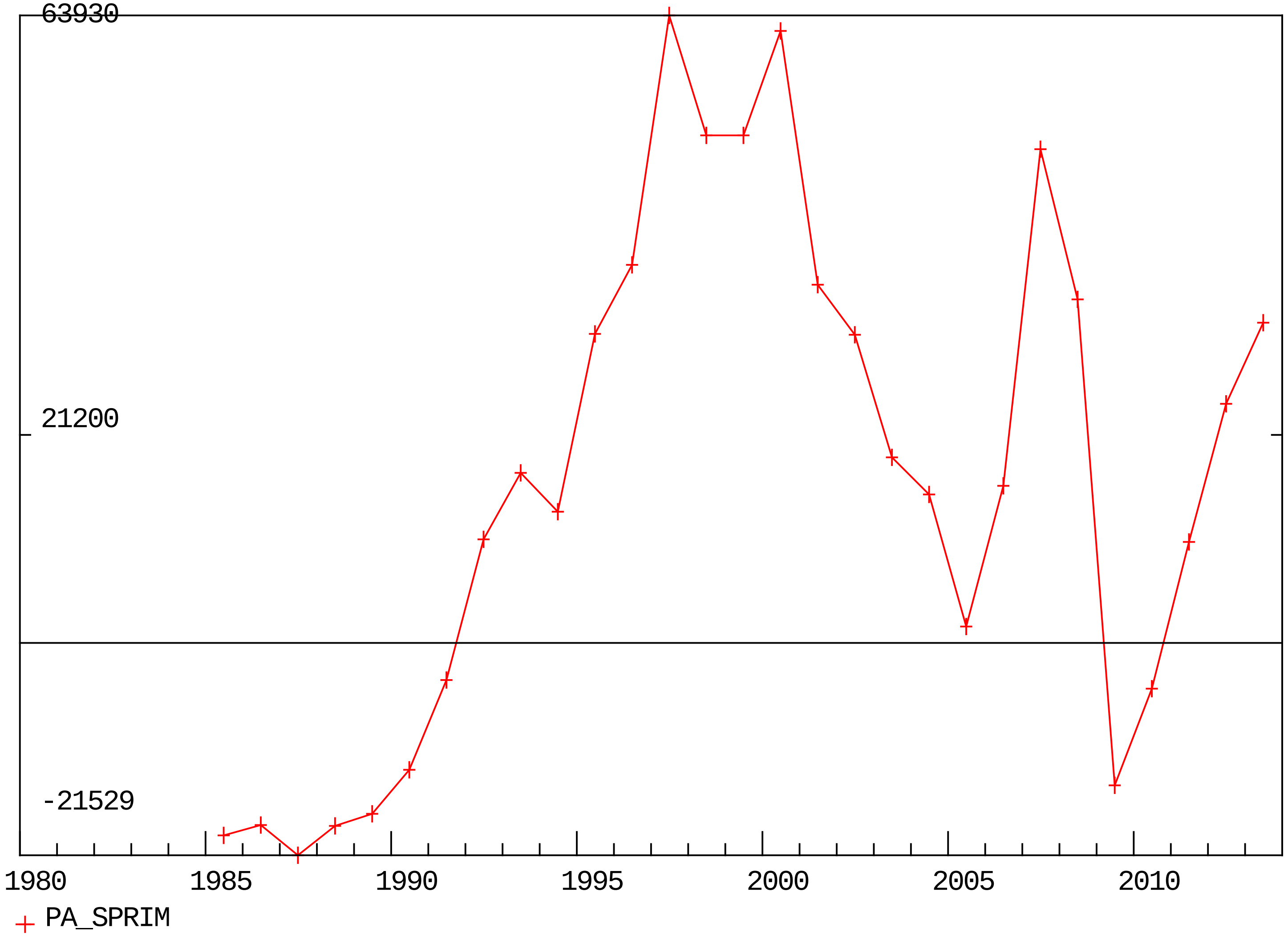
Starting when? … the year after the abrogation of EDP (for all the countries with an ongoing EDP) … for Italy should be 2014

Public Deficit/GDP

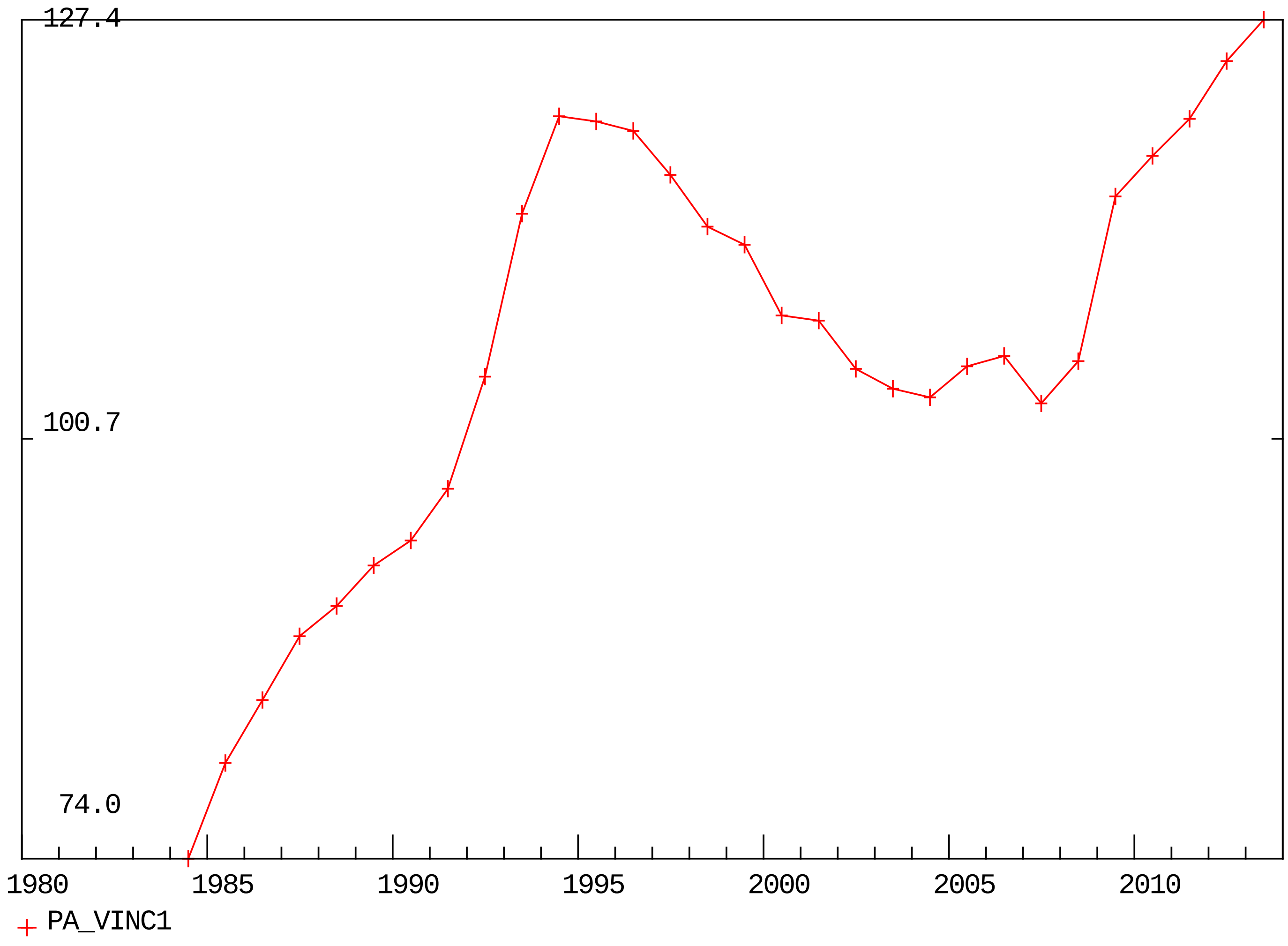


Primary surplus

(millions of euro)

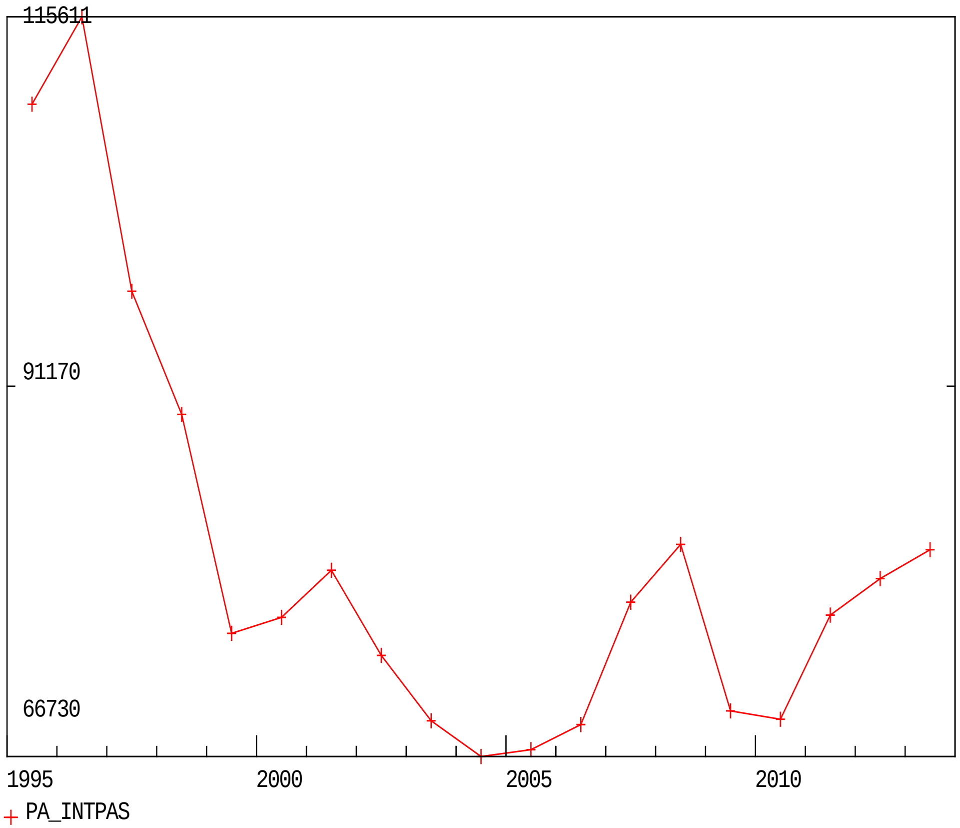


Public Debt/GDP

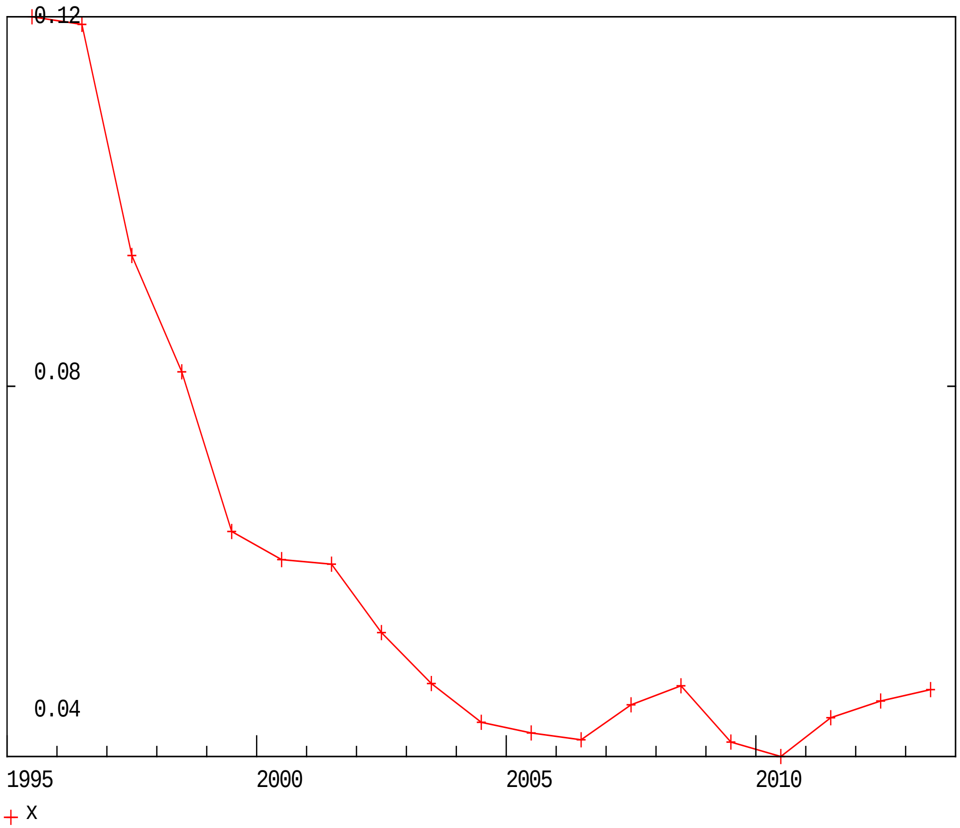


Interests paid by Public Administration

Level (million of euro)



% of GDP (0.1=10%)

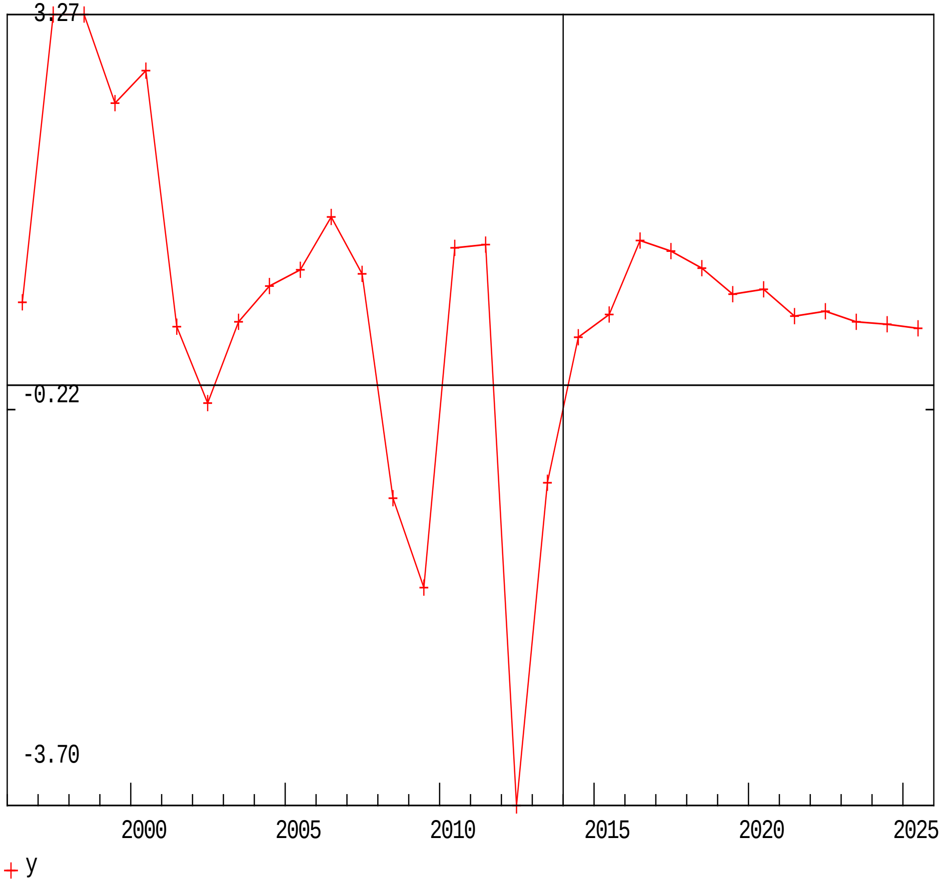


Main exogenous variables

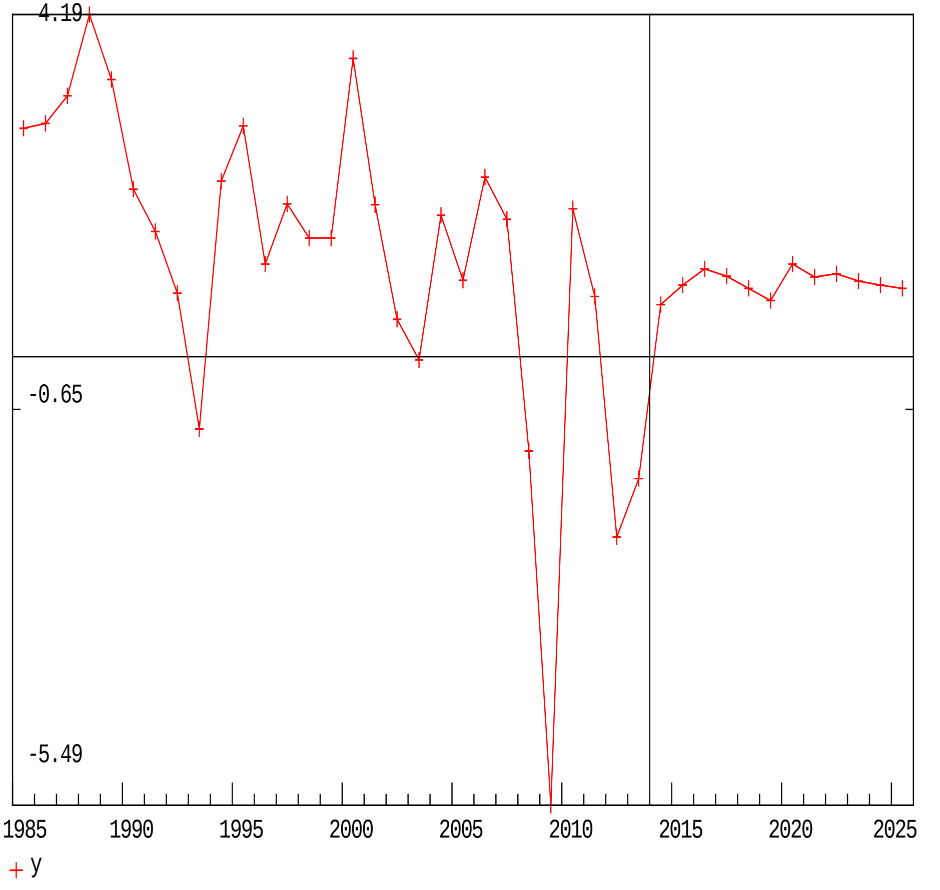
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
euro-US dollar	1.31	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
GCE (nominal)		-1.5%	0.0%	1.0%	1.0%	1.0%	1.0%	1.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Trade_RoW		4.0%	6.0%	8.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Trade_UEM		-0.1%	2.5%	3.5%	3.7%	4.3%	4.7%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
IPUB		-5.0%	1.0%	0.0%	1.0%	1.0%	1.0%	3.0%	3.0%	3.0%	5.0%	5.0%	5.0%	5.0%
Import price		1.5%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Wage in Pub.Adm.		-0.2%	0.0%	0.5%	0.5%	0.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%

Main endogenous results

Households consumption
Annual % change (real terms)

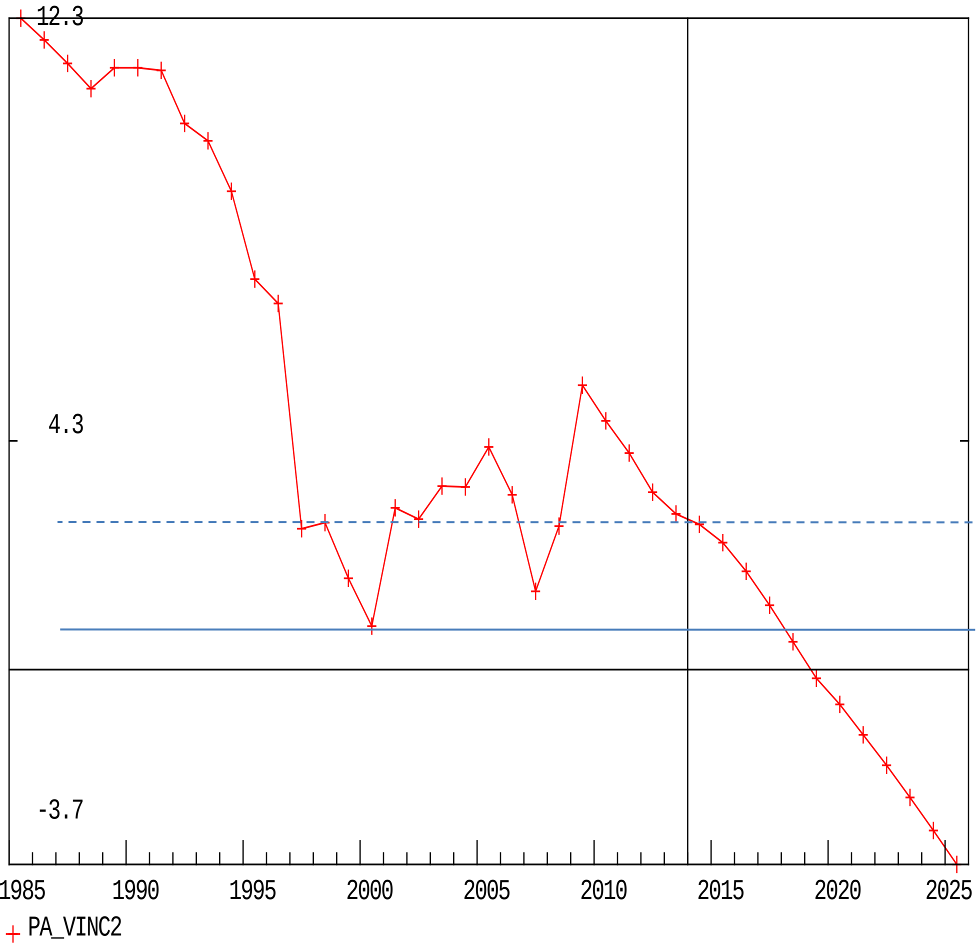


GDP
Annual % change (real terms)

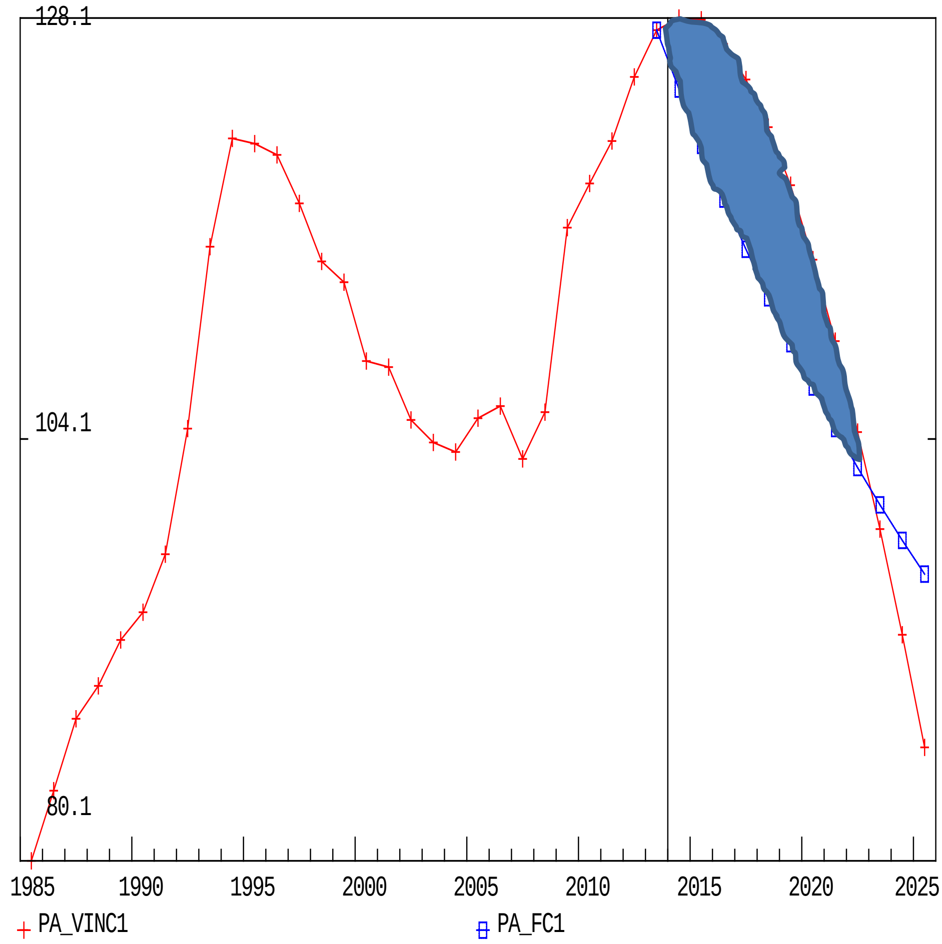


Main endogenous results

Balanced budget rule

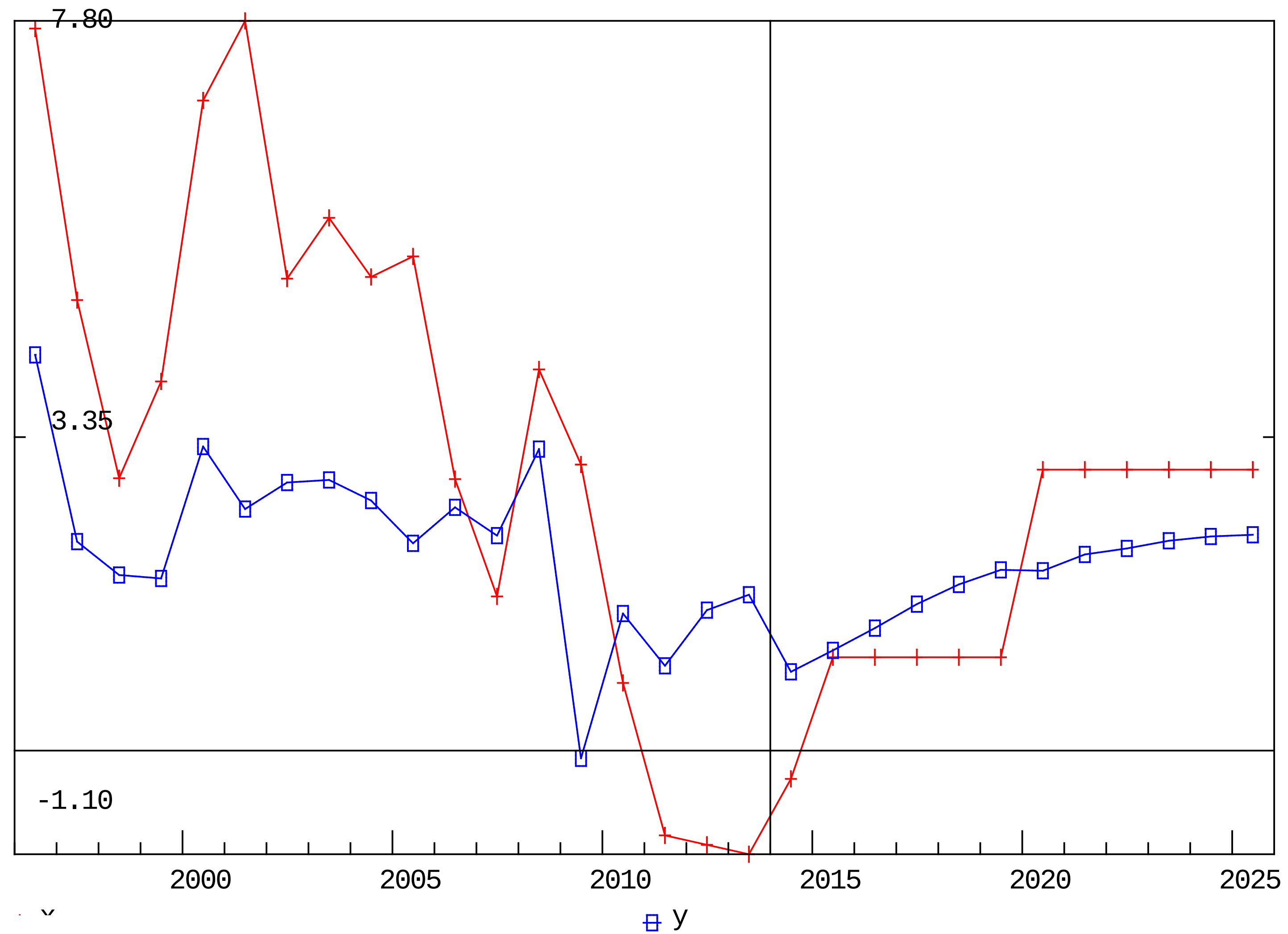


Debt brake rule

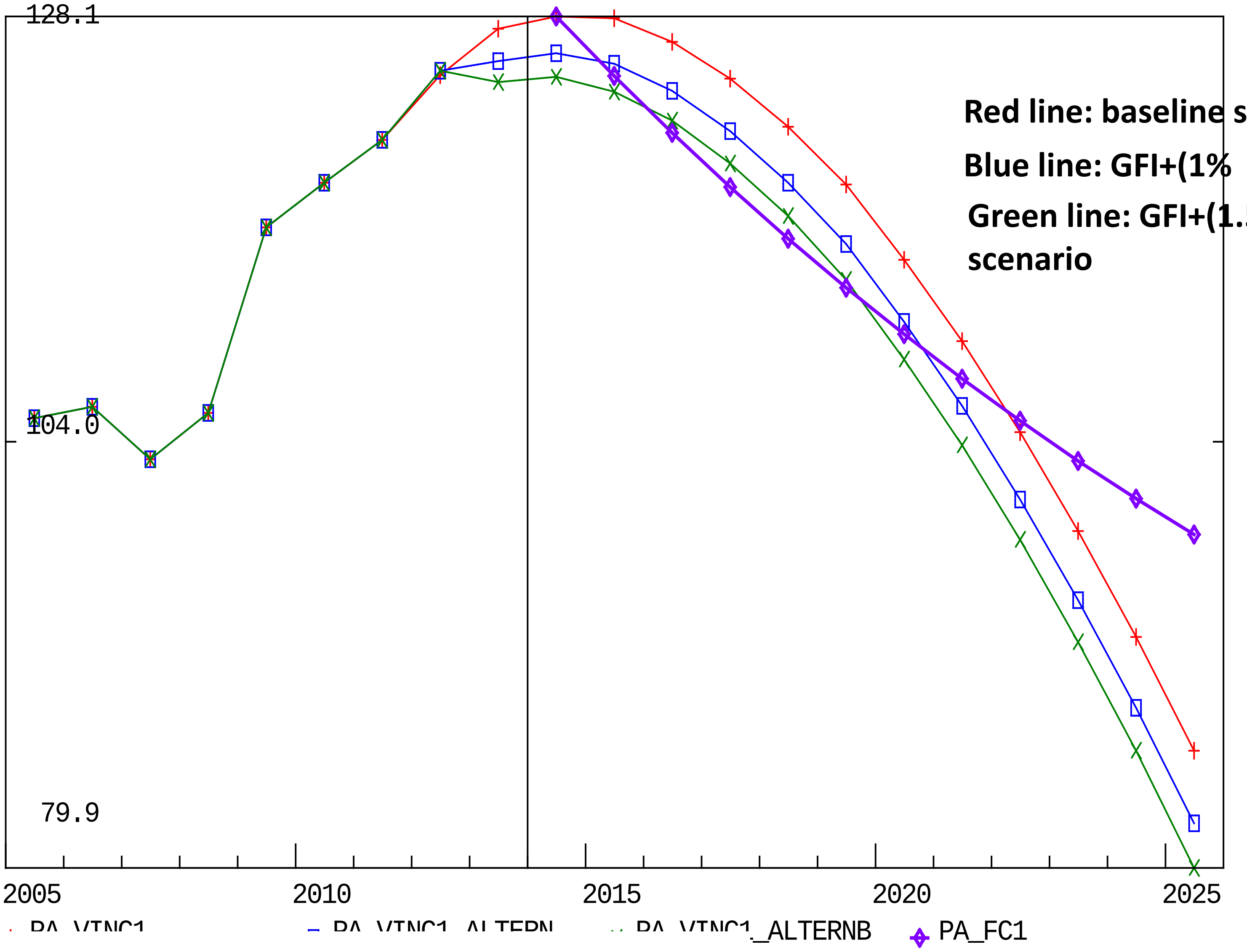


Public Administration Expenditures (Nominal term) and Prices.

Annual % change



forecast: alternative scenario



Time-series specification for PADS

$$\underbrace{x_i(t) = \left[a_i(t) + b_i \left(\frac{y}{P} \right) \right]}_{\text{Income term}} \cdot \underbrace{\left(\frac{p_i}{P} \right)^{-\lambda_0} \cdot \prod_{k=1}^{n} \left(\frac{p_i}{p_k} \right)^{-\lambda_k \cdot s_k} \cdot \left(\frac{p_i}{P_G} \right)^{-\mu_G}}_{\text{Price term}}$$

Income term **Price term**

See:

- **Almon C. (2011)** ***The Craft of Economic Modeling. Part III.*** [*http://www.inforum.umd.edu/papers/publishedwork/books/craft3.pdf*](http://www.inforum.umd.edu/papers/publishedwork/books/craft3.pdf)
- **Almon C. (1979)** ***A system of consumption functions and its estimation for Belgium***, Southern Economic Journal, vol. 46, No. 1, July, pp. 85-106