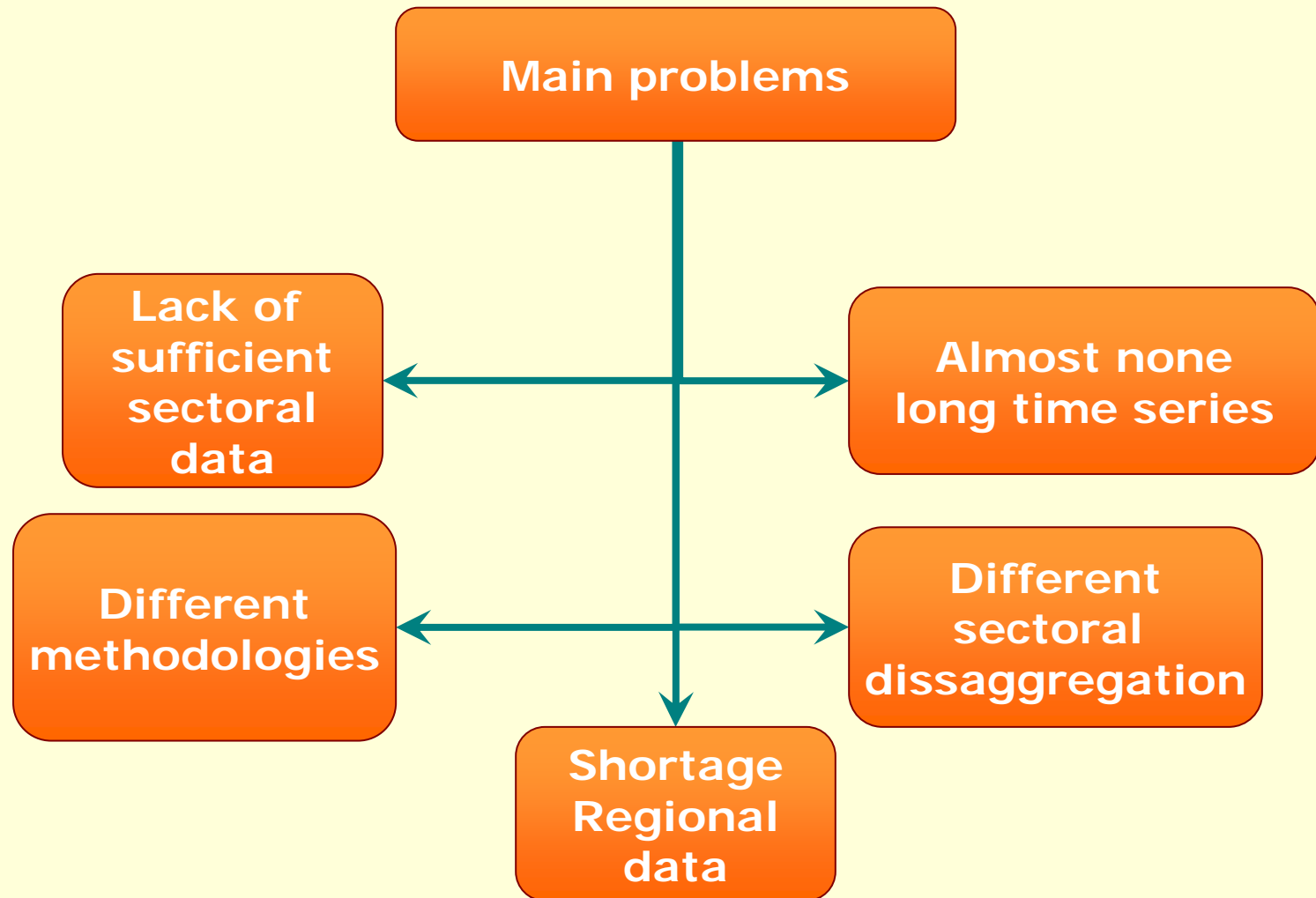


MEDEA : A regional Inforum type model for Andalucía.

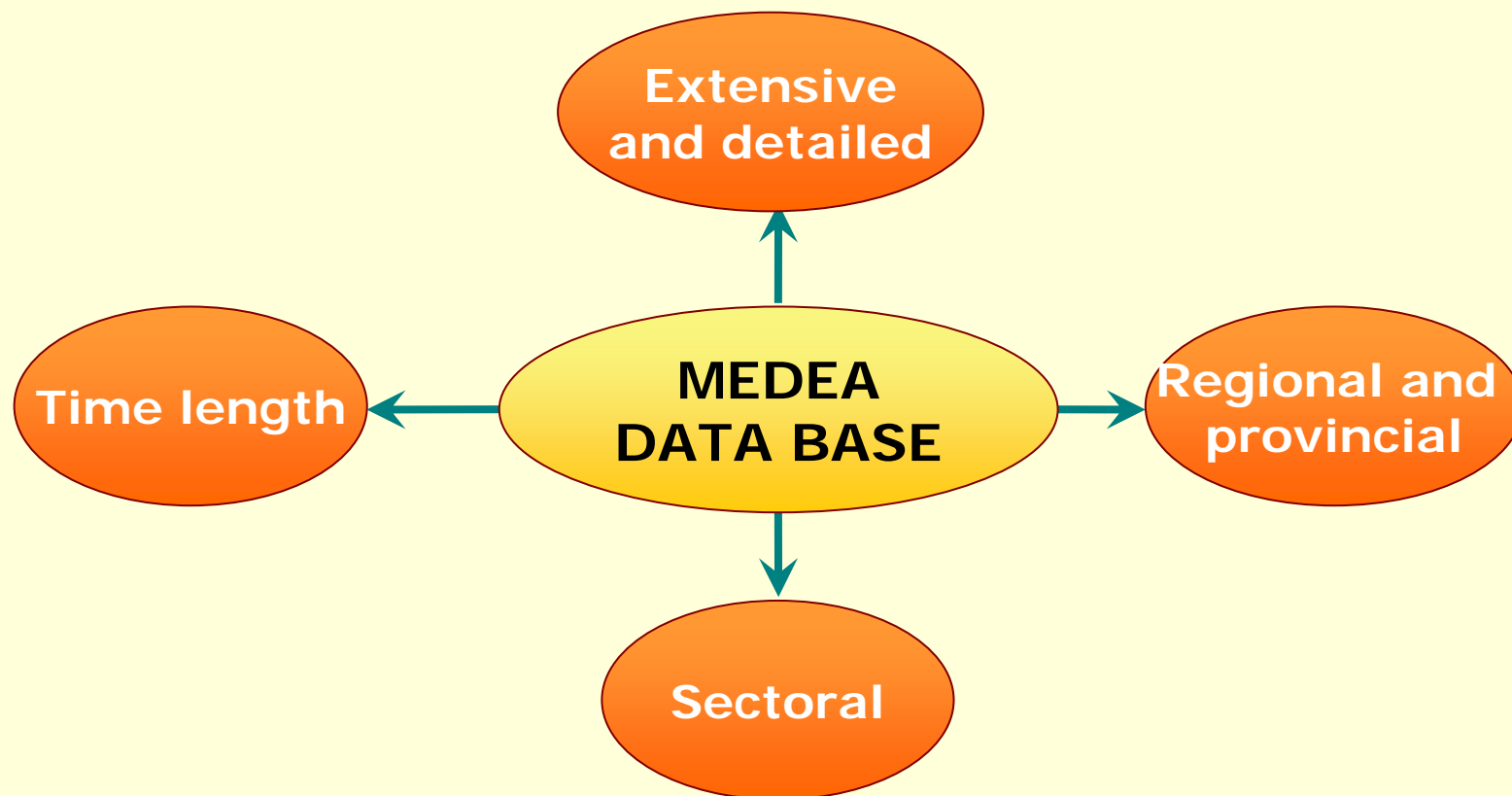
Outline of the presentation:

- *Main problems with the database*
 - *A brief outline of the model*
 - *A few simulations*
 - *The user-friendly interphase*
-
- *The needs and perceptions of the user/client.*

MEDEA: Data Base. To start with



MEDEA: Data Base. Our result



MEDEA: Data base. Main characteristics.

- Clasification: 30 sectors**
- Period: 1980-2002**
- Units: (1000) euros / (1000) people**
- Base: 1995. I-O table for Andalucía.**

MEDEA: Data base Variables

- **Production**
- **Value added**
- **Profits**
- **Wages**
- **Production taxes**

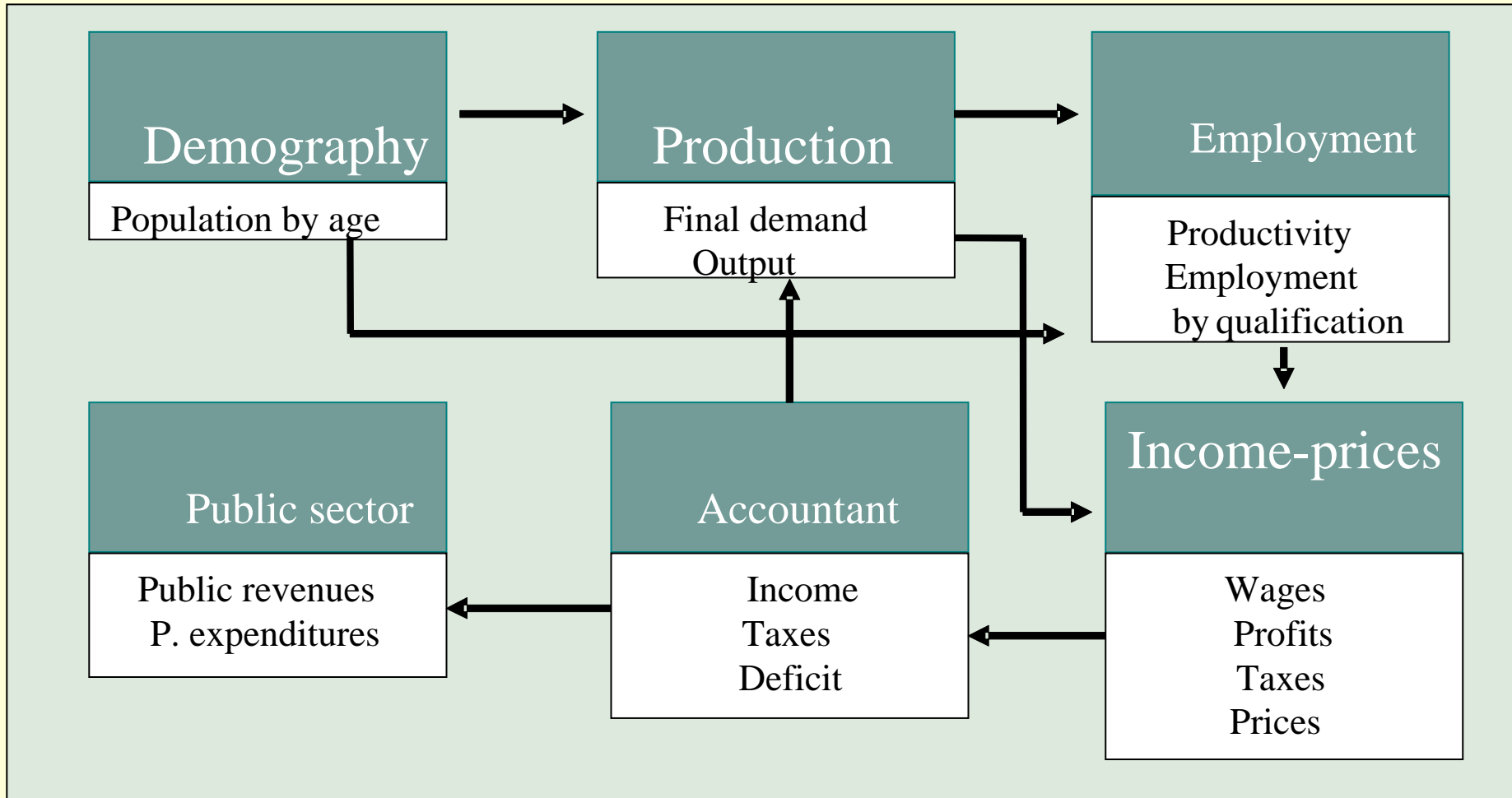
- **Employment**
- **Hours of work**
- **Investment**
- **Investment matrix**
- **Public consumption**

- **Total exports**
- **Total imports**
- **Exports to the EU**
- **Imports to the EU**
- **Exports to the rest of the world**
- **Imports to the rest of the world**
- **Exports to Spain**
- **Imports to Spain**

Input-Output framework of MEDEA

| | | DEMAND | GDP Components | | | | | | |
|----------------------------|---|-------------------------------|---|----------------------------------|-------------------------------|-------------------------|----------------|---------------|------------------------------------|
| | | Intermediate Consumptions | Private Consumption (c) | Public Consum. (g) | Gross Fixed Investment (i) | Inventory Change (v) | Export. (x) | Import (m) | Output (q) |
| S U P P L Y | 130 | 130 | | 111 | | | | | $q = Aq + Cc + g + Bi + v + x - m$ |
| | . | A Matrix | C Matrix Consumption Bridge | B Matrix Investment Bridge | | | | | |
| | . | | | | | | | | |
| | . | | | | | | | | |
| | . | | | | | | | | |
| | . | | | | | | | | |
| 30 | | | | | | | | | |
| | Intermediate Consumptions | Total Final Demand | | | | | | | <div></div> |
| Primary Inputs | Gross Wages & Salaries + Social Security Cont. | I N C O M E | <div></div> <div>Gross Domestic Product</div> | | | | | | |
| | Gross Profits | | | | | | | | |
| | Net Output Taxes | | | | | | | | |
| | Import Taxes | | | | | | | | |
| | VAT | | | | | | | | |
| | TOTAL INPUTS | <div></div> <div>Output</div> | | | | | | | |

Building blocks of MEDEA.



Demographics

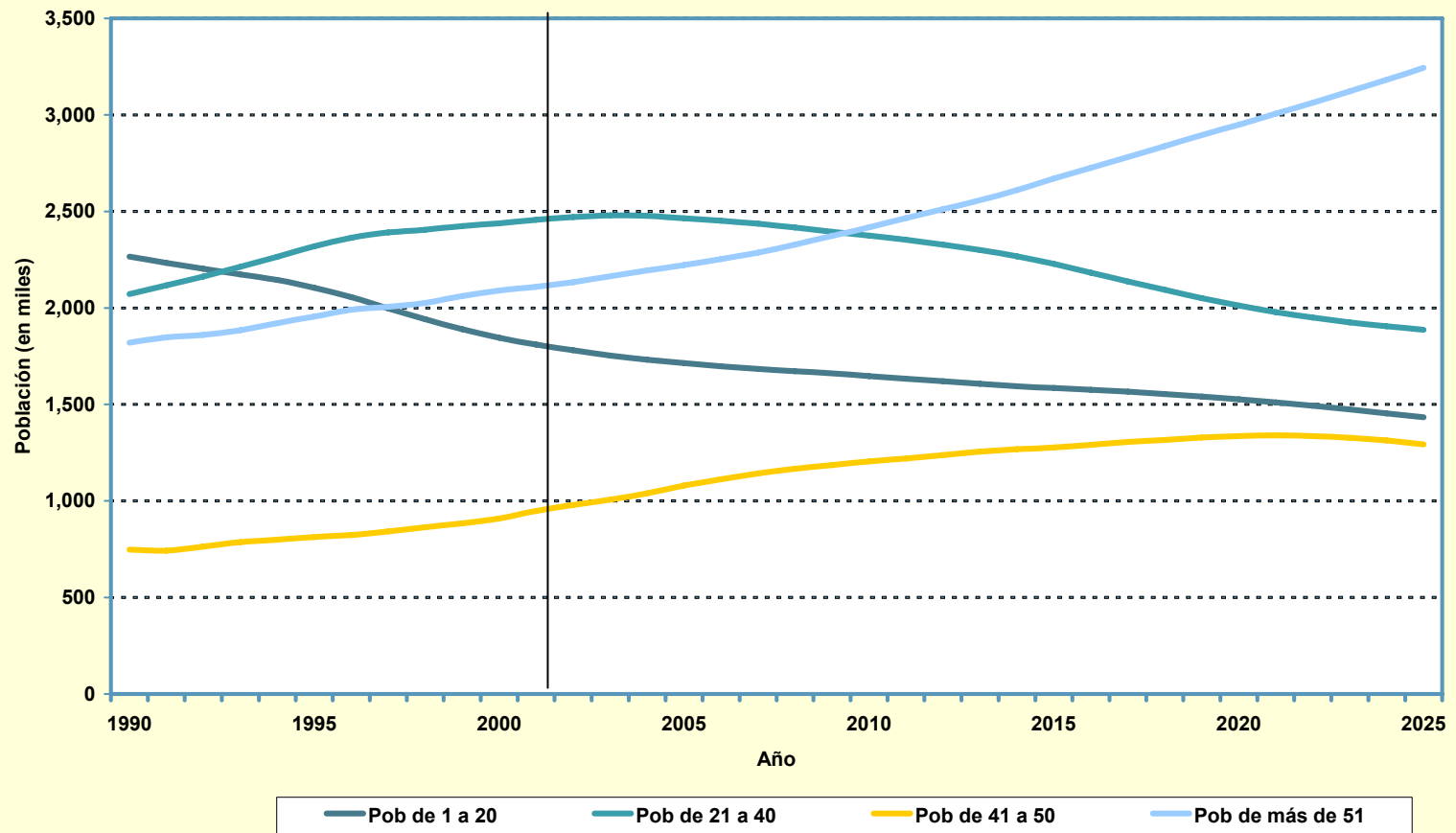
- $frt_i = a + b * 1/t88 + c * 1/t88^2$
- $srf_i = a + b * 1/t88 + c * 1/t88^2$
- $srmi_i = a + b * 1/t88 + c * 1/t88^2$

- $t88t = 0$ $t < 1988$
- $t88t = t - 1987$ $t \geq 1988$

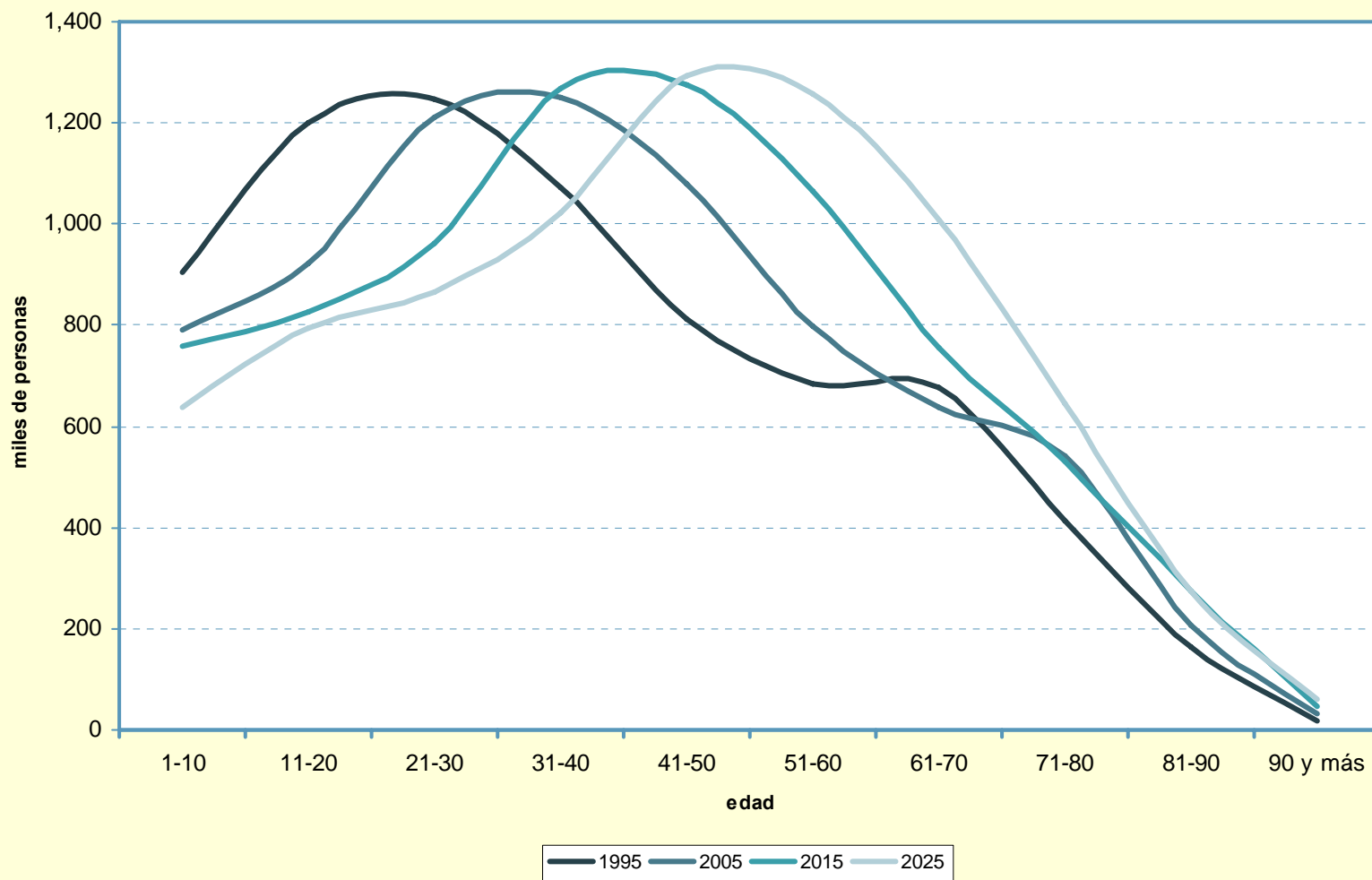
Survival function
Fecundity function
Population function

- $pf1 = pf0[t-1] * srf1 + 0,5 * (nim0 + nim1) * (1 + srf1)^{0,5}$
 - $pf1$ = Women population of 1 year
 - $pf0[t-1]$ = Women population of 0 years in t-1
 - $srf1$ = Survival rate of women 1 year
 - $nim0$ = Net inmigration
- $pf0 = fpop0 * (frt14*pf14 + ... + frt55*pf55) * srf0$
 - $frt14$ = Fecundity of women 14 years old
 - $fpop0$ = Women share in poulation of 0 years

Population by age



Population Evolution



Production : Demand and real output

Private consumption

- $\log(\text{cpc}_t) = f(\log(\text{rdpc}_t))$
 - cpc_t Real per capita consumption
 - rdpc_t Real disposable income per capita
- Shares of sectors follow the 1995 shares that evolve with the national trend.

Investment

$$I_{i,t} = a_i + b_i \text{dep}_{i,t} + c_i \Delta q_{i,t} + d_i \Delta q_{i,t-1} + e_i \Delta q_{i,t-2}$$

$I_{i,t}$ Gross investment of sector i in period t
 $\text{dep}_{i,t}$ Capital stock depreciation of sector i
In period t.

$\Delta q_{i,t}$ Change in output of sector i in period t

$$\text{fcio}_t = \text{bm}_t * \text{inv}_t$$

Public consumption

- $\text{dcgapN}_i = f(\text{pibpcN}, \text{pop}_i)$
- $\text{cgapNio}_t = \text{cgapbr}_t * \text{dcgapN}_t$
- $\text{cgccNio}_t(26) = f(\text{dcgapN.sum})$
- $\text{cgioN}_t = \text{cgccNio}_t + \text{cgapNio}_t$
- $\text{cgio}_t = \text{cgioN}_t / \text{cgdef}_t$

External trade

$$Y = (a + bD + cX) * P^\eta$$

Y: Dependent variable (imports or exports)

D: Demand variables (foreign or domestic)

X: Time trend

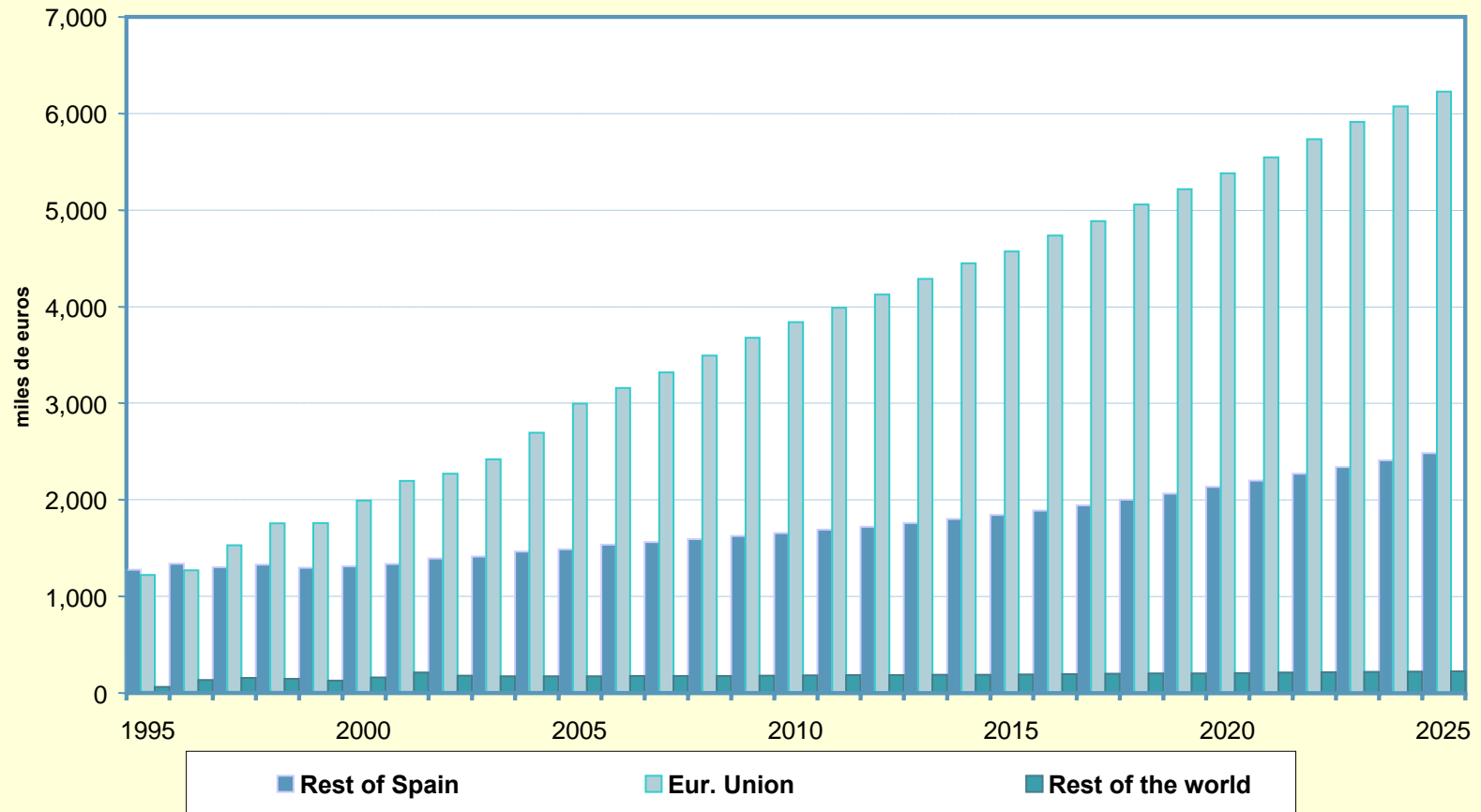
P: Relative prices

a, b, c, η Parameters to be estimated

External trade

Exports for Agriculture. Constant prices.

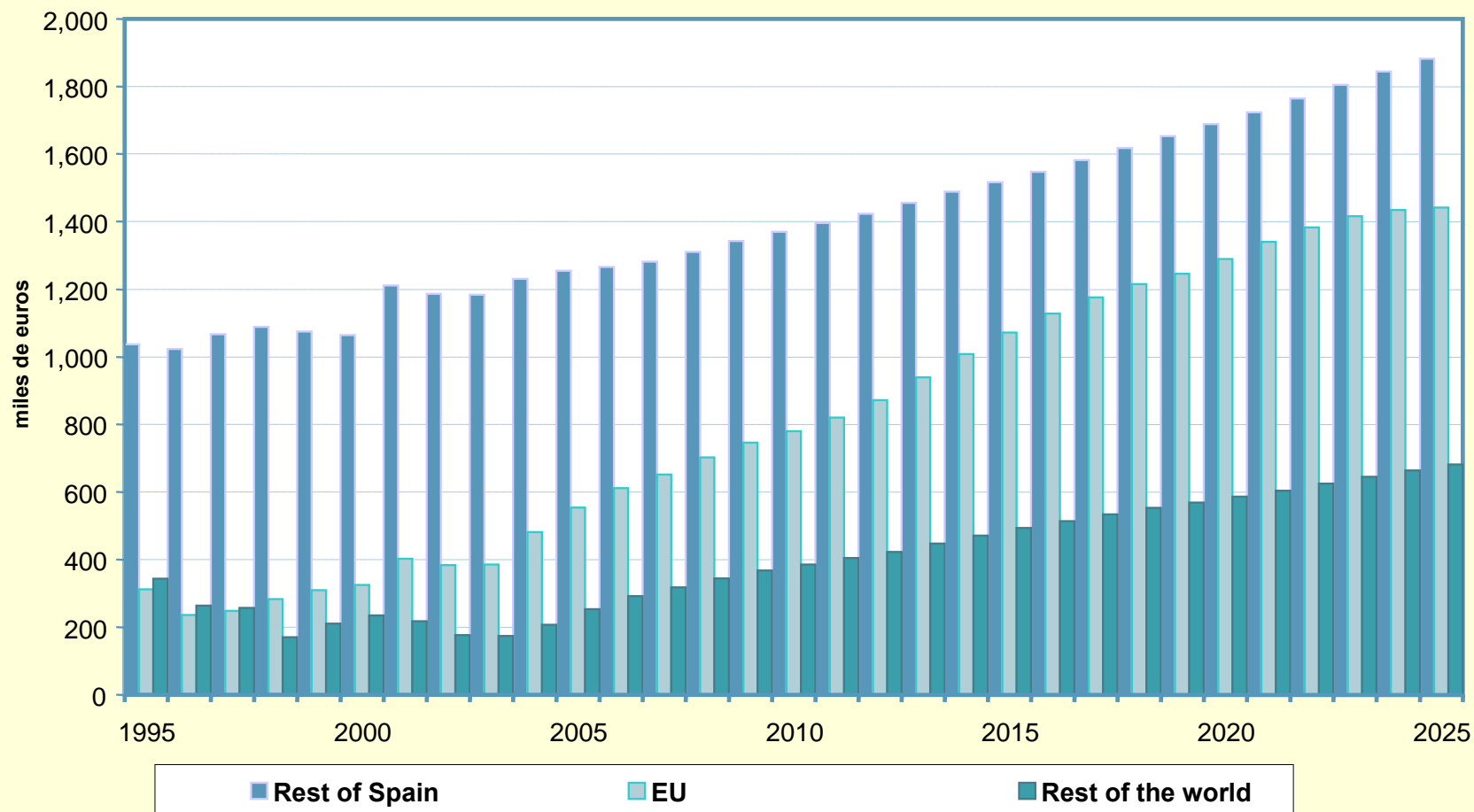
Base 1995



External trade

Imports for Agriculture. Constant prices.

Base 1995



Technical coefficients

$$cci_{i,t} = \sum_j a_{i,j,95} * q_{j,t}$$

$$di_{i,t} = q_{i,t} + m_{i,t} - df_{i,t}$$

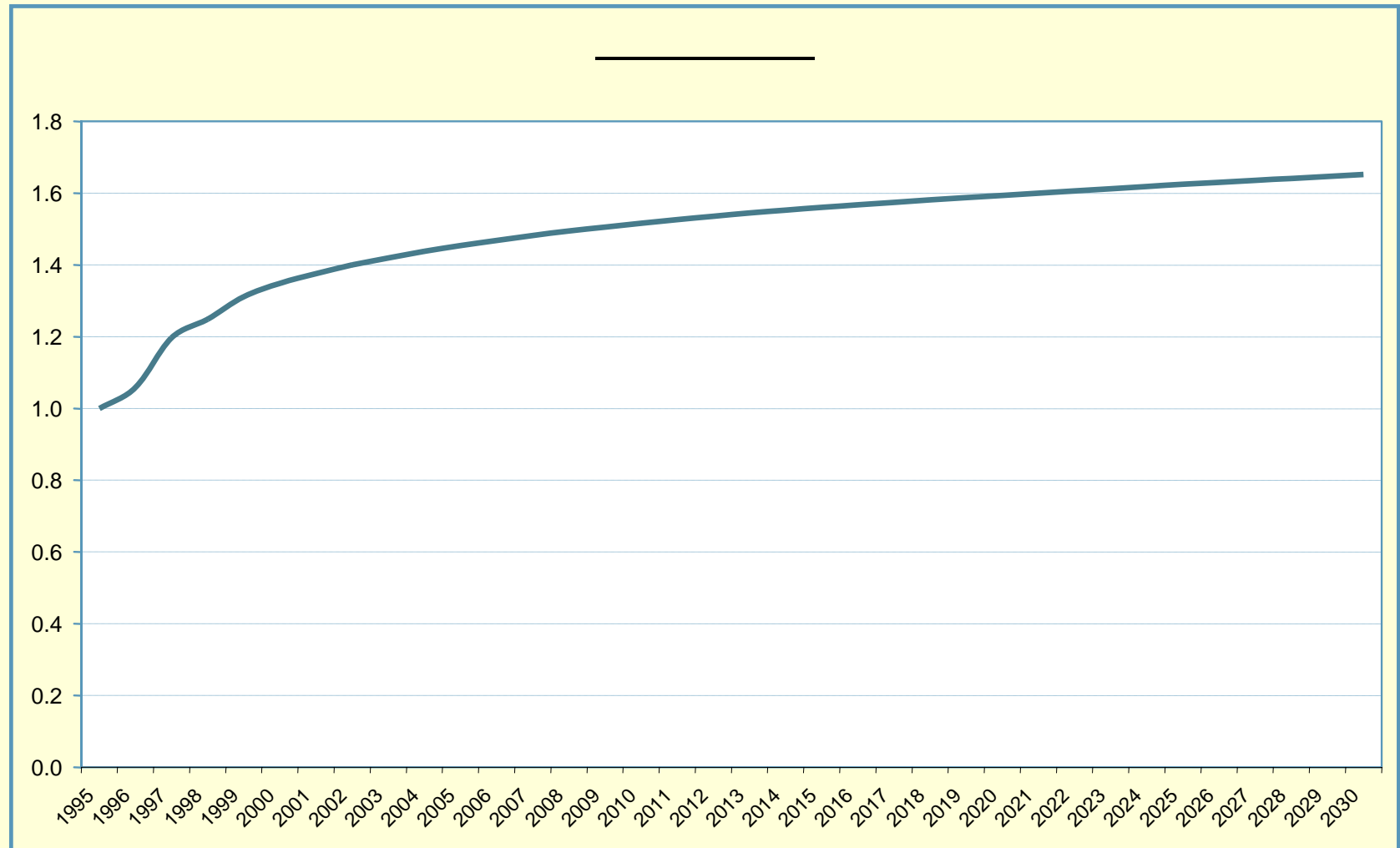
$$r_{i,t} = \frac{di_{i,t}}{cci_{i,t}}$$

Output

- $f = cpio + fcio + cgio + xio$

$$q_i = \sum_j a_{i,j} q_j + f_i - m_i + v_i$$

Chemicals: Technical coefficient



Employment , productivity and hours

$$\ln\left(\frac{q_{it}}{hrs_{it}}\right) = a_i + b_i T1_t + c_i T2_t + d_i qdn_{it} + e_i qup_{it}$$

$$\ln(hpy_{i,t}) = a_i + b_i tend_{i,t} + c_i dum_{i,t} + d_i \ln(dq_{i,t})$$

| | | | |
|---------|---|----------|--|
| q_t | Production of sector i in time | hpy_t | Average year hours in sector i and time t |
| hrs_t | Total hours of work in sector i and time t | $tend_t$ | Tendencia temporal para el sector i y el año t. |
| $T1$ | Time trend for all the period. | dum_t | Dummy for variable in period 1976- 1985 For sector i and time t |
| $T2$ | Time trend 0 since 1986. | | |
| qdn_t | $\ln(q_t) - \ln(qpk_{t-1})$ si $qpk_t > q_{t-1}$; 0 si $qpk_t < q_{t-1}$ | dq_t | First difference in output. |
| qup_t | $\ln(q_t) - \ln(qpk_{t-1})$ si $qpk_t < q_{t-1}$; 0 si $qpk_t > q_{t-1}$ | | |
| qpk_t | q_{t-1} si $q_t > qpk_{t-1}$; qpk_{t-1} si $q_t < qpk_{t-1}$. | | |

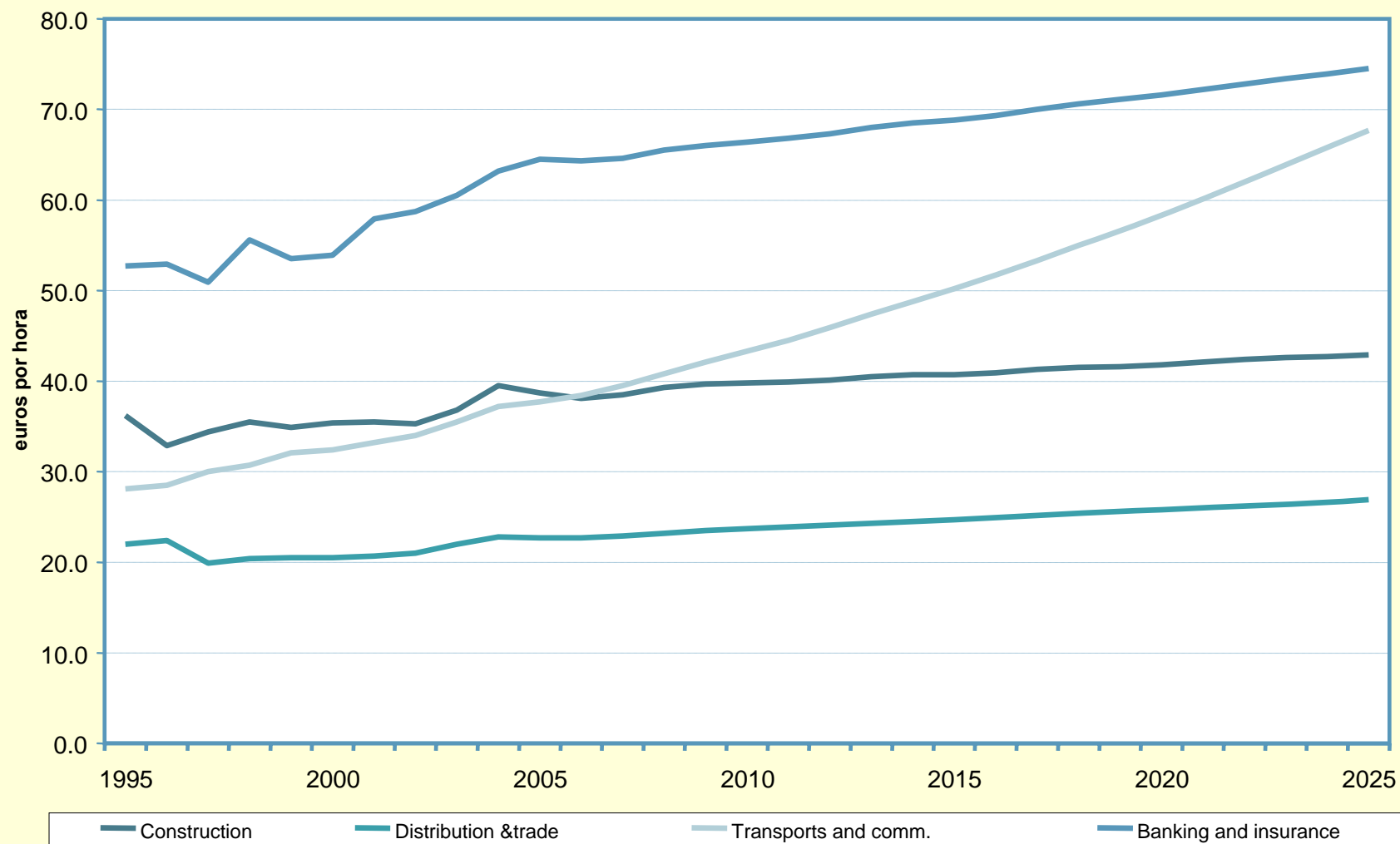
$$hrs_{i,t} = \frac{q_{i,t}}{prd_{i,t}} \quad emp_{i,t} = \frac{hrs_{i,t}}{hpy_{i,t}}$$

$$LF = labpar * pop17-91$$

$$U = \text{Unemployment} = LF - emp$$

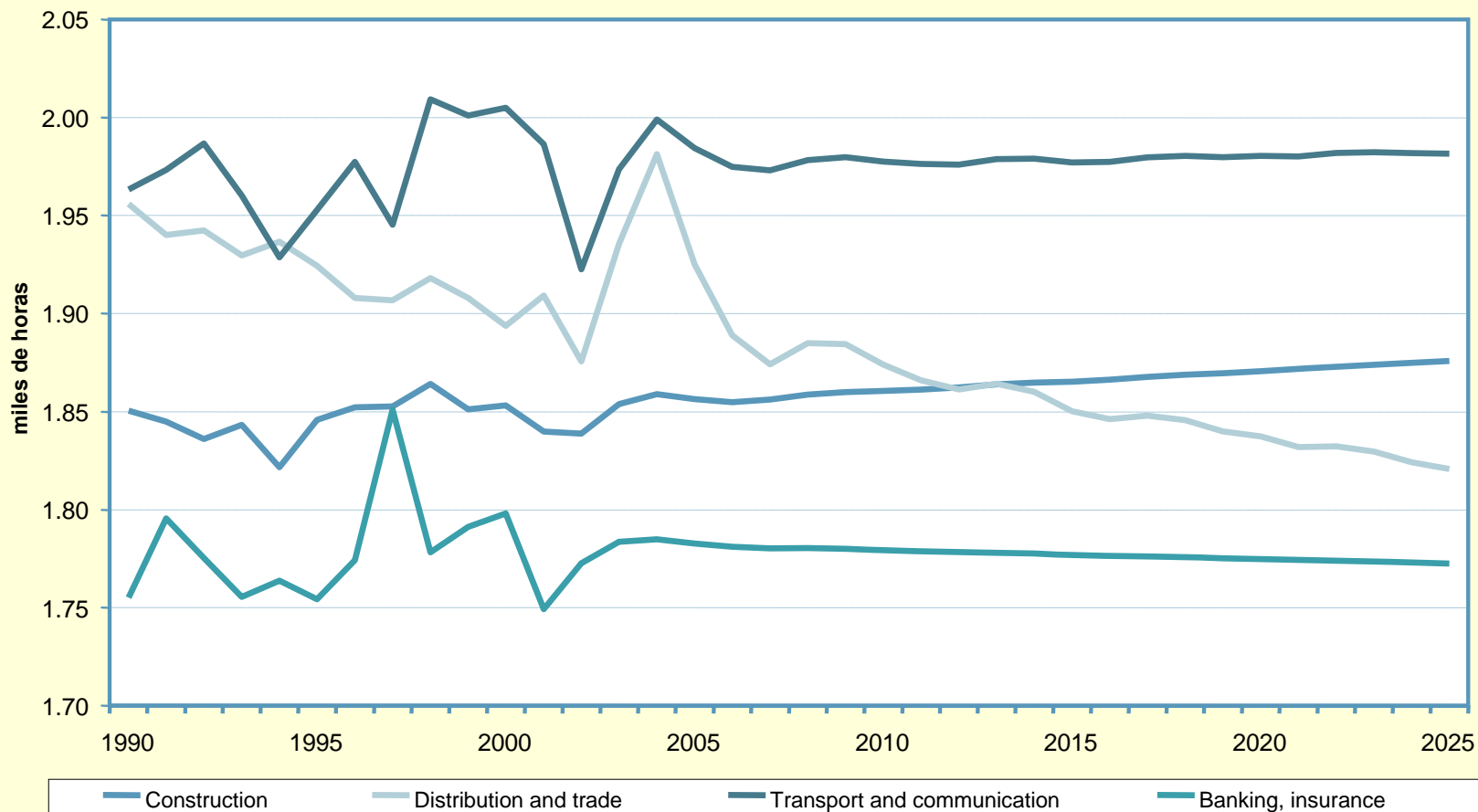
$$Unrat = (U / LF) * 100$$

Productivity



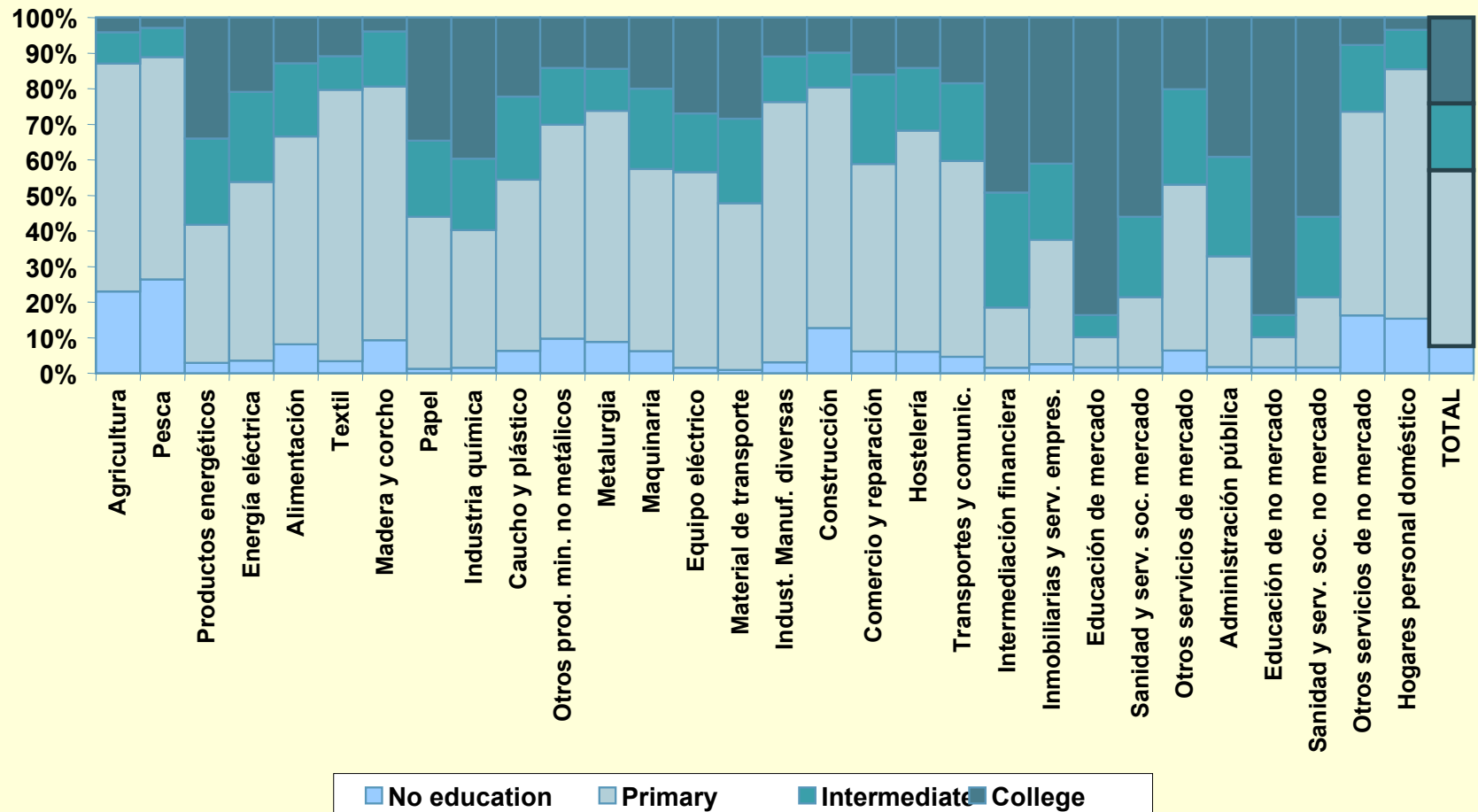
Working hours

Average working hours by year and person. Different sectors.

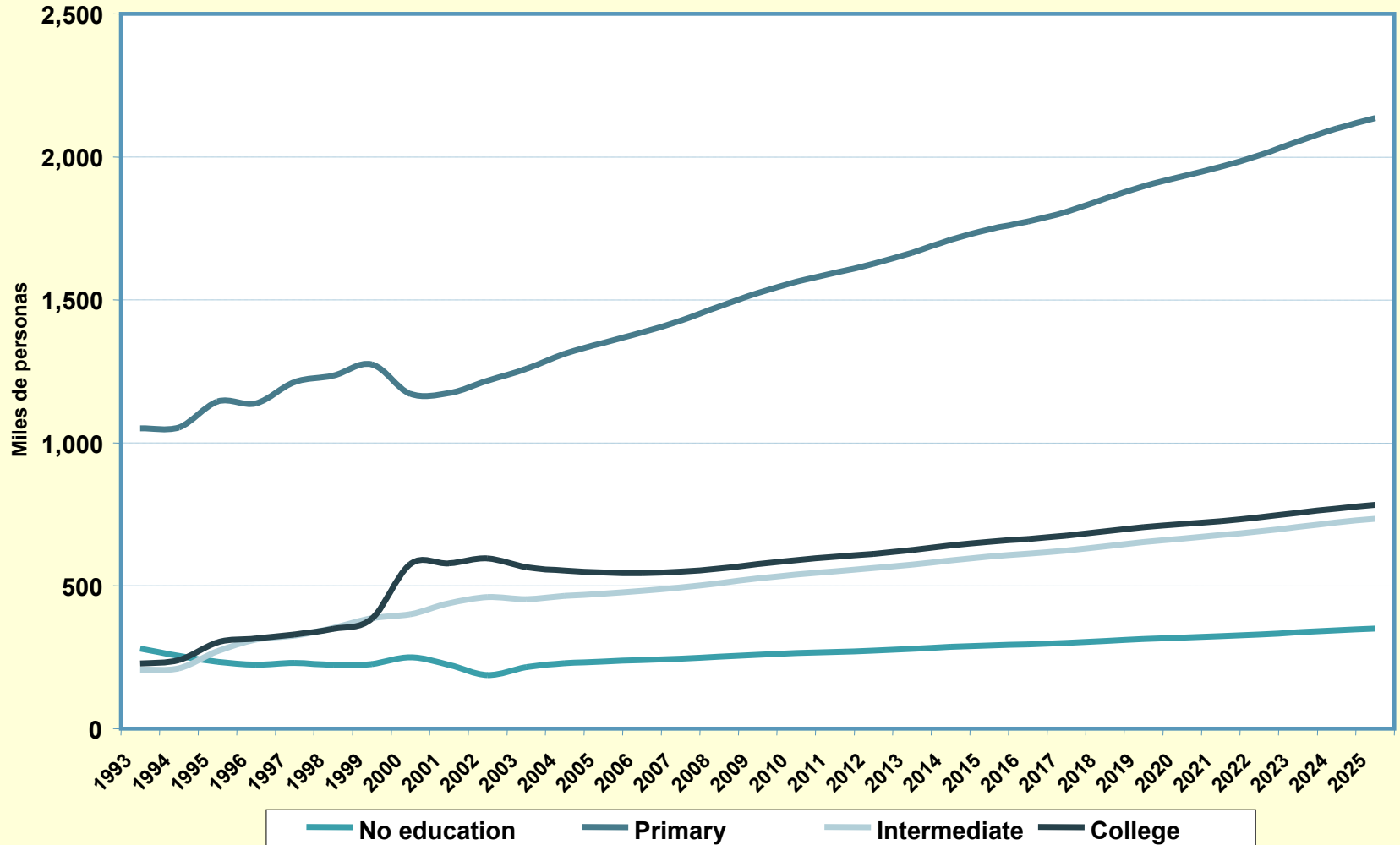


Matrix of qualifications

Employment demand by sector and qualification. 2002. (in %)



Employment by qualifications



Income: Components of value added

$$vaN_{i,t} = c_i qN_{i,t}$$

$$\frac{vaN_{i,t}}{qN_{i,t}} = a_i + b_i TREND_{i,t}$$

Value added

$$\log(agwag_t) = -0,81847 + 0,99997 \log\left(\frac{pib_t}{empt_t}\right) + 0,99979 \log(pcp_t)$$

$$\log\left(\frac{ras_{i,t}}{emp_{i,t}}\right) = a_i + b_i \log\left(\frac{rast_t}{empt_t}\right) + c_i dlprd_{i,t}$$

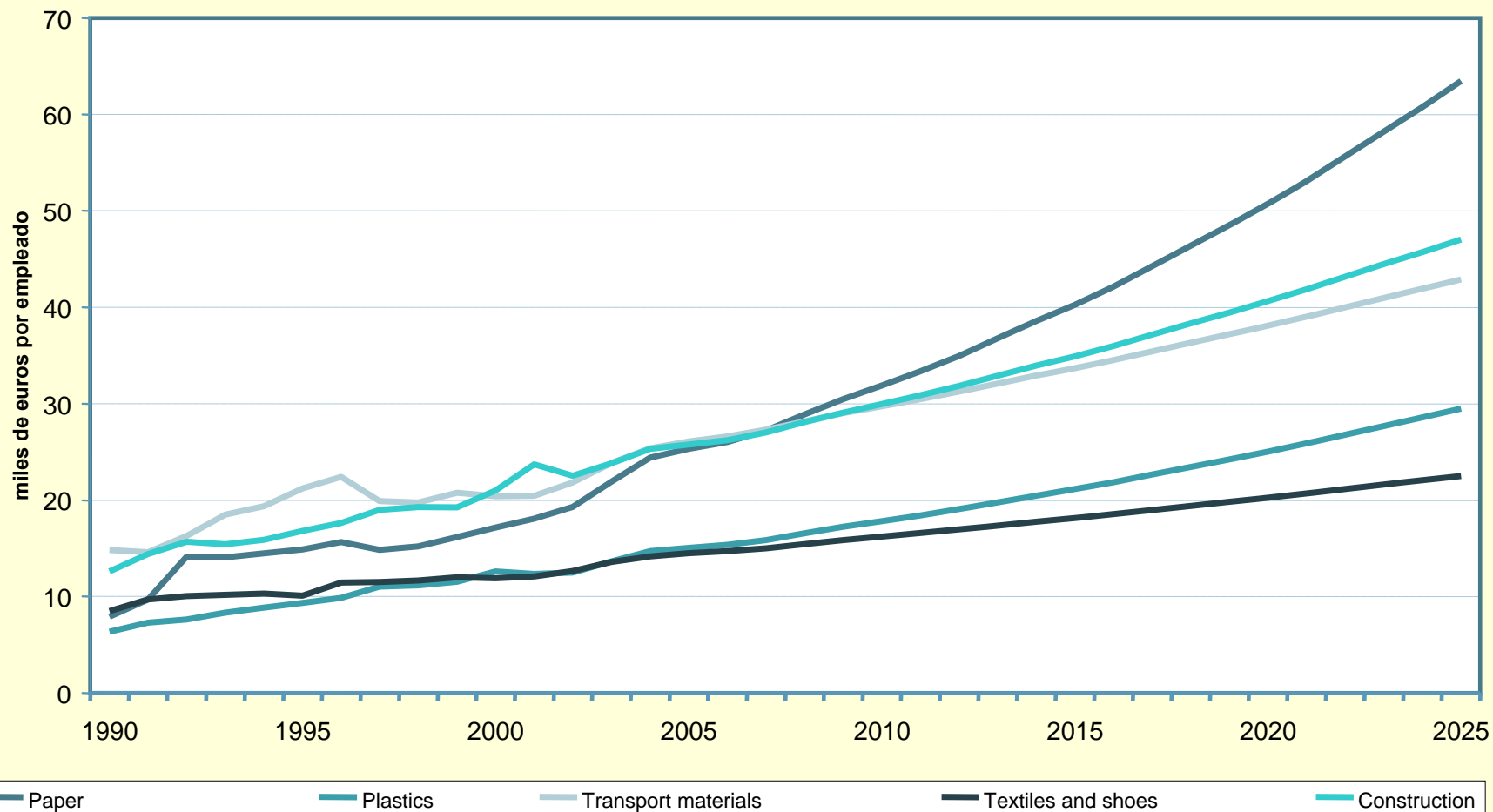
Wages

$$ebeN = vabN - rasN - tpoN$$

Profits

Wages

Average wage per person. Different sectors.



Closing the model: aggregates and convergence

$$pib_t = cpiot_t + fcio_t + vent_t + cgio_t + exiot_t - mior_t$$

$$pibN_t = rasN_t + ebeN_t + tpoN_t$$

$$ppib_t = \frac{pibN_t}{pib_t}$$

$$\text{Log}(rdh) = f(\log(ebeN + rasN))$$

Public consumption: $cgioN = cgioN_{save}$?

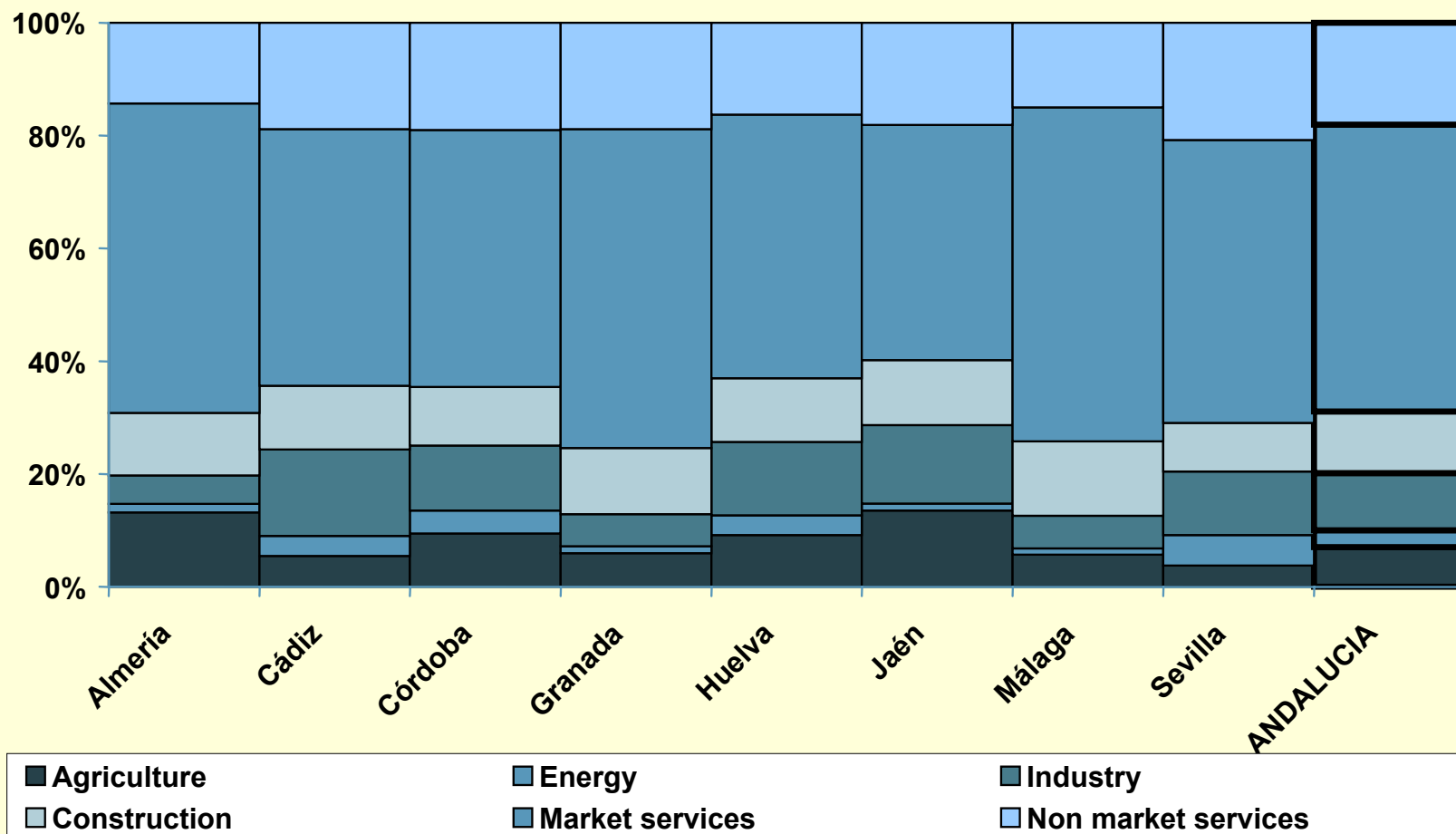
Private consumption: $Cpio = cpio_{save}$?

Investment: $Fcio = fcio_{save}$?

Value added: $vabN = vabN_{save}$?

Closing the model: Provincial results

Value added, current prices. 2002



Public sector financing

$astaxt = f(pibNt)$

$irpft = f(rasNttt + ebeNttt)$

$altaxt = f(boozshrt, cpioN5t)$

$pitaxt = f(\sum cpioNi, t)$

$cervezataxt = f(beershrt, cpioN5t)$

$tabacotaxt = f(tobshrt, cpioN5t)$

$hidrotaxt = f(gasshrt, (ddioN3t - cpioN3t))$

$electaxt = f(qN4t)$

$transtaxt = f(qN20t)$

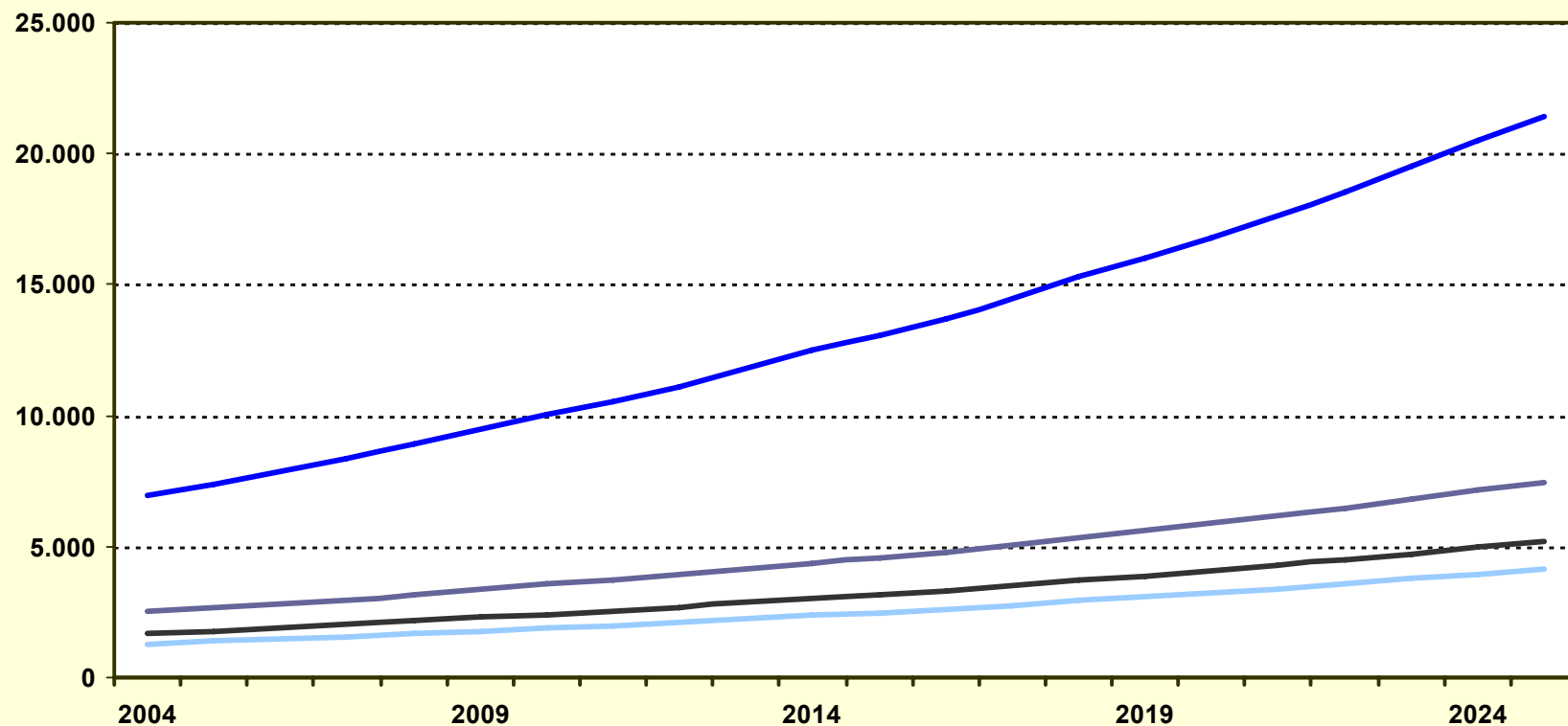
$minhidrotaxt = f(retgasshrt, cpioN3t)$

$ivat = f(\sum tpvNi)$

$fdst = f(astaxt, irpft, ivat)$

Public sector financing

Evolution of the most important sources of public revenues for Andalucía



T. Cedidos

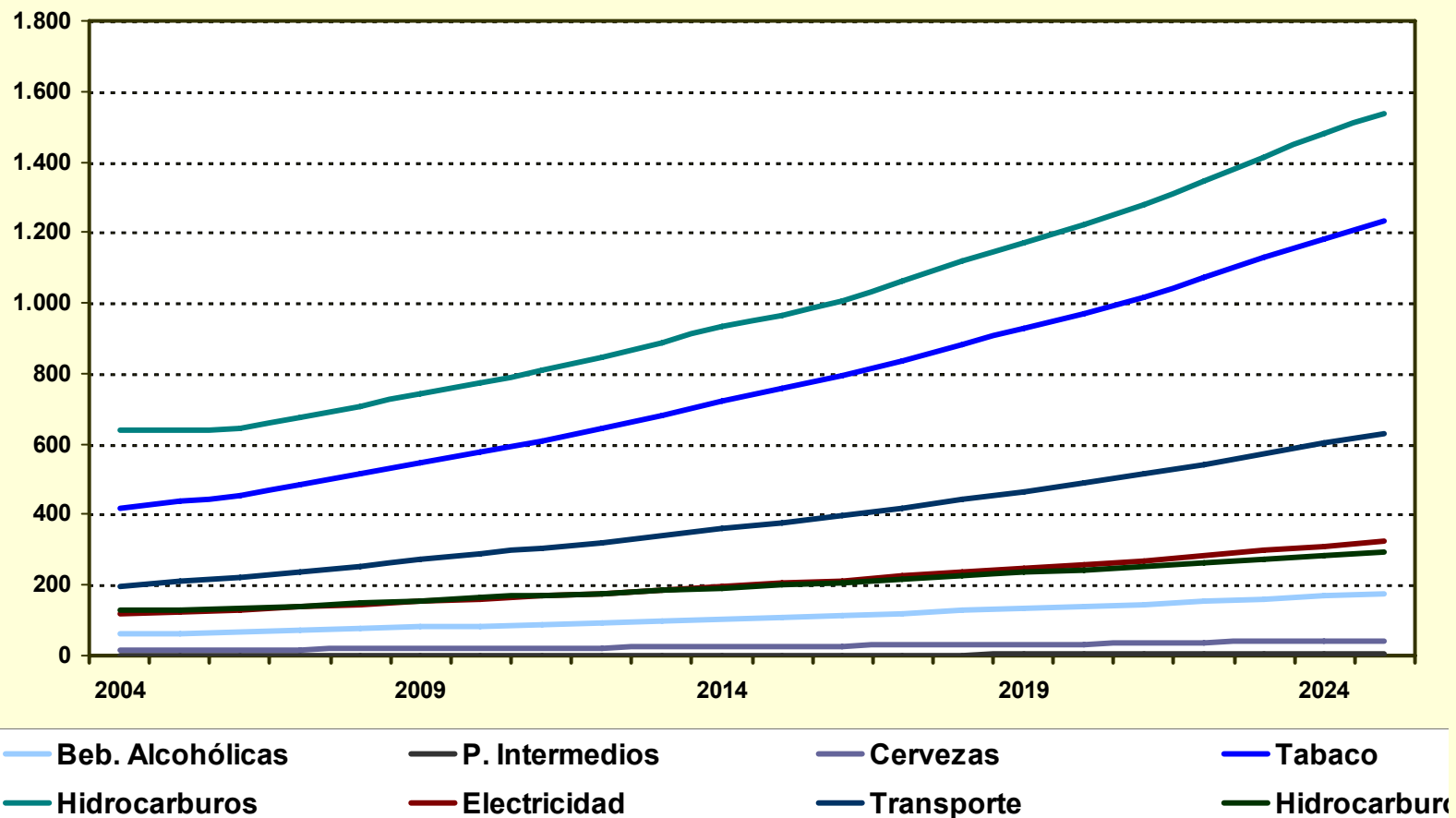
IRPF

IVA

Fondo Suficiencia

Public sector financing

Evolution of financing sources of Andalucía public sector



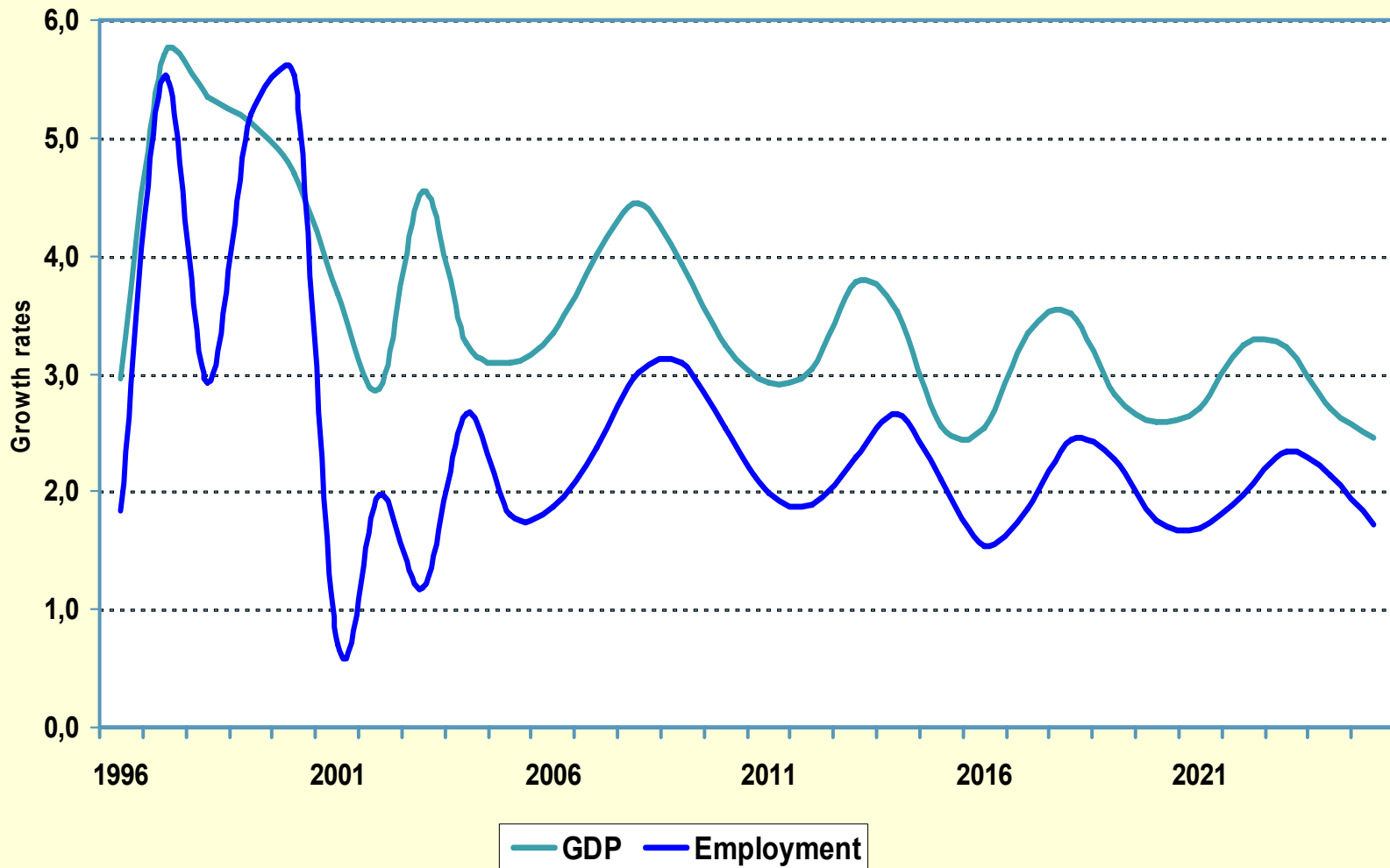
MEDEA

Baseline

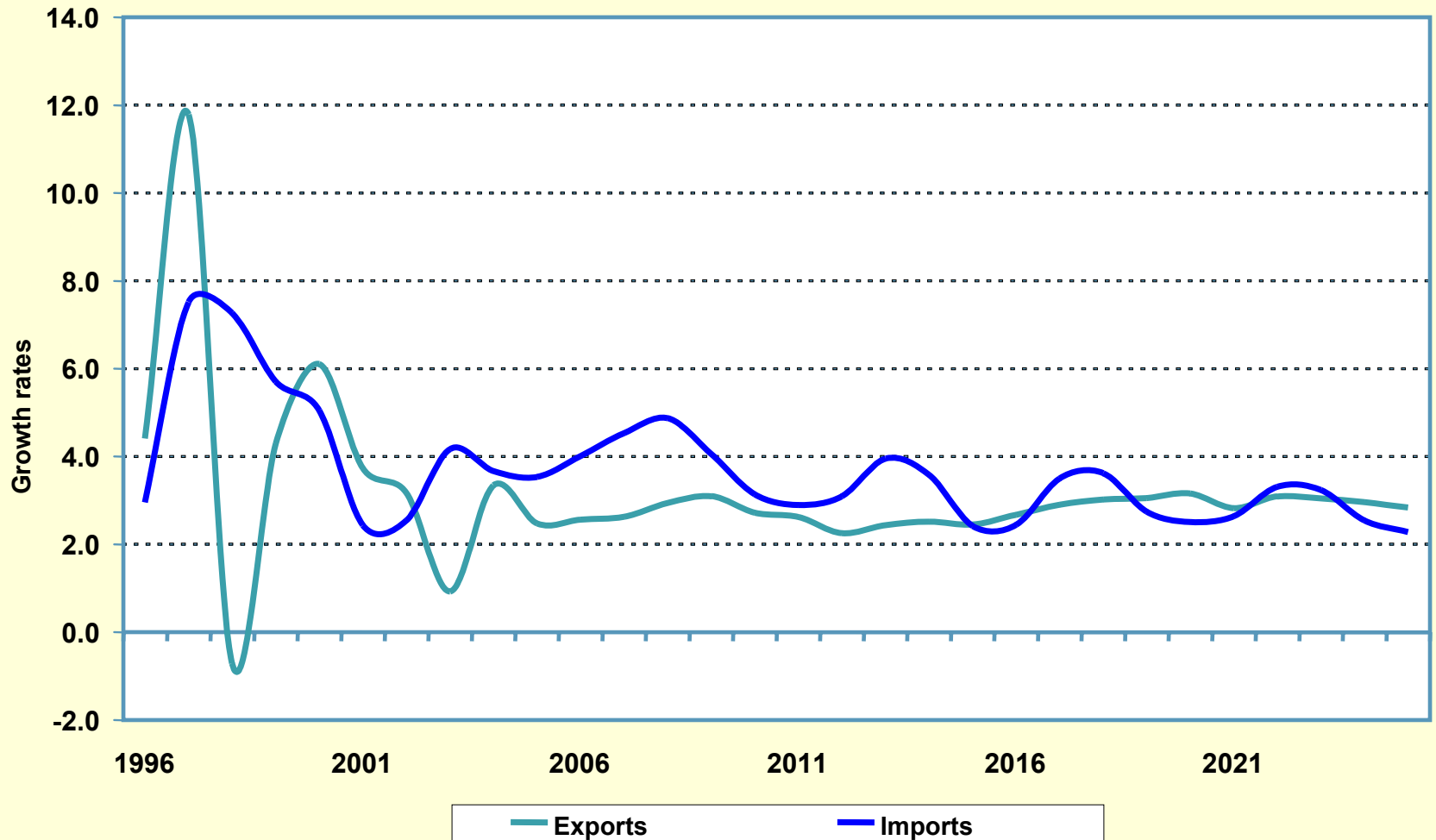
Main assumptions for the calibration of the baseline

- **Short term: world recovery in 2004-2005**
- **Depreciation of the \$ due to its double deficit.**
- **Oil prices relatively down.**
- **Date of the baseline: December 2003.**

Baseline: GDP and employment growth. 1996-2025.



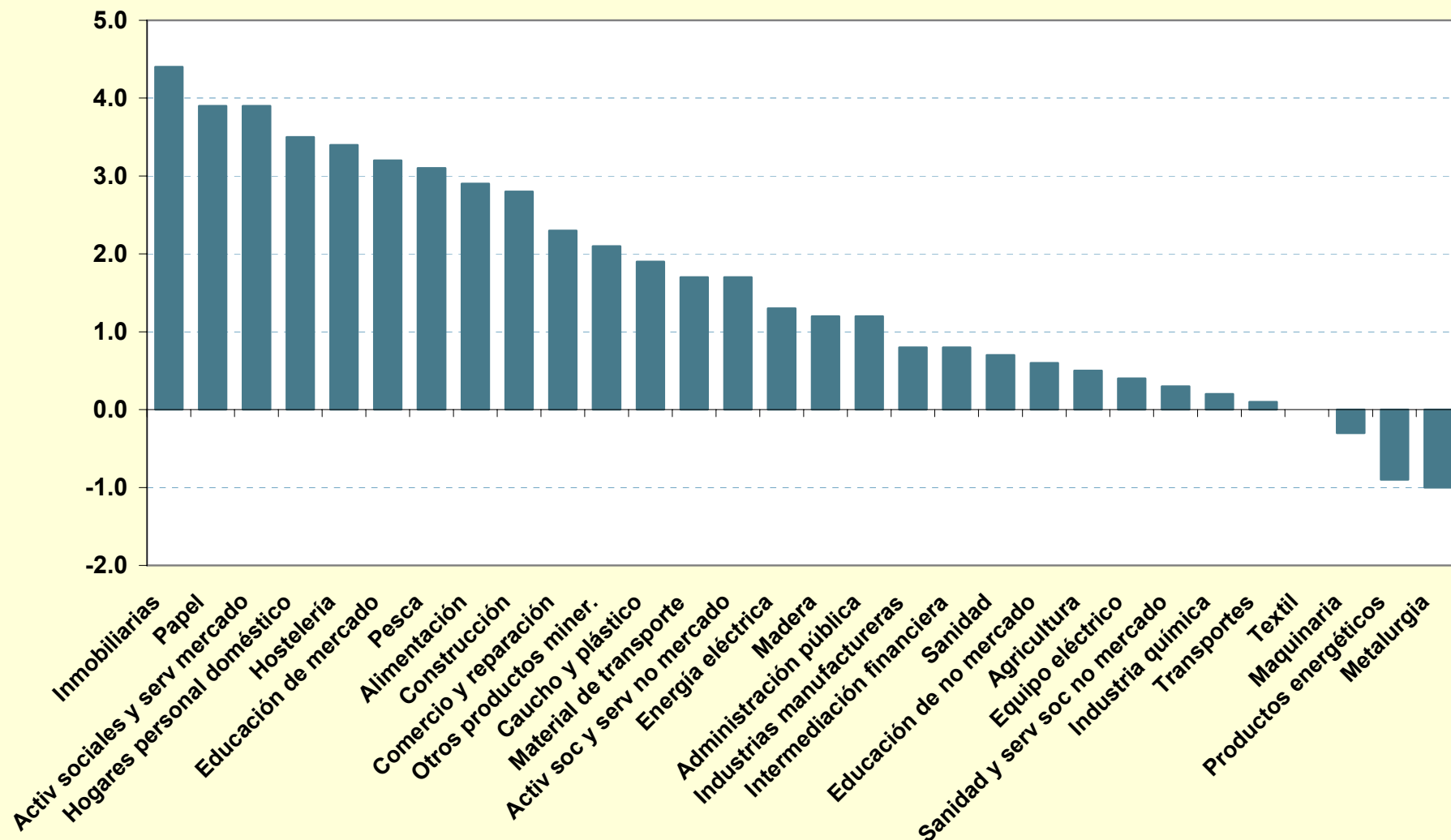
Baseline: External trade growth. 1996-2025.



Baseline: Price and employment growth

| | 2003-25 | 2000-05 | 2005-10 | 2010-15 | 2015-20 | 2020-25 |
|-------------------------|---------|---------|---------|---------|---------|---------|
| Employment growth | 2.2 | 1.6 | 2.5 | 2.2 | 2.0 | 1.9 |
| Unemployment | 11.8 | 20.0 | 16.2 | 11.8 | 8.8 | 7.1 |
| Inflation | 1.91 | 2.43 | 1.92 | 1.95 | 2.90 | 1.98 |
| Exchange rate \$ / Euro | 1.42 | 1.08 | 1.39 | 1.45 | 1.48 | 1.47 |

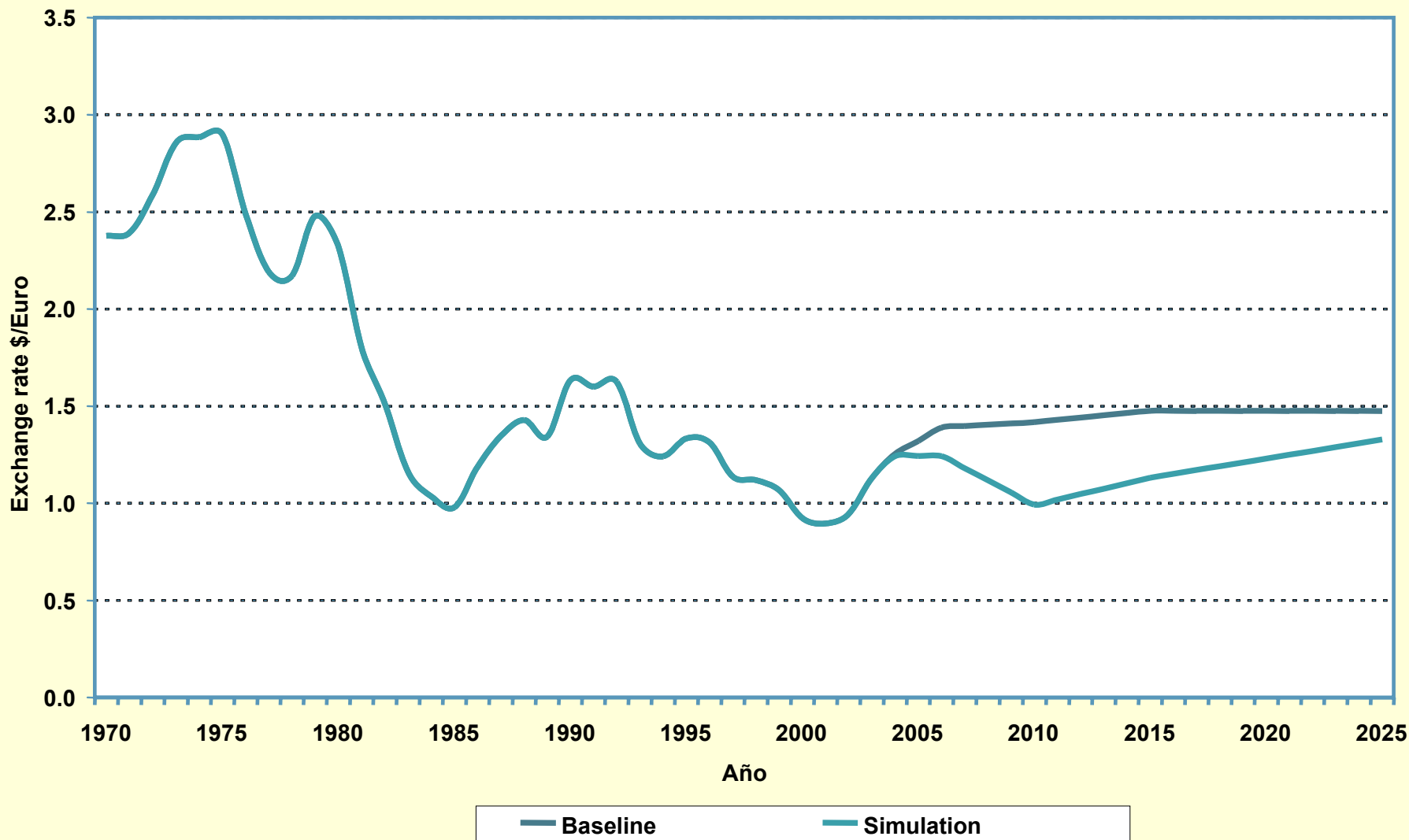
Baseline: Employment growth by sector 2003-2025



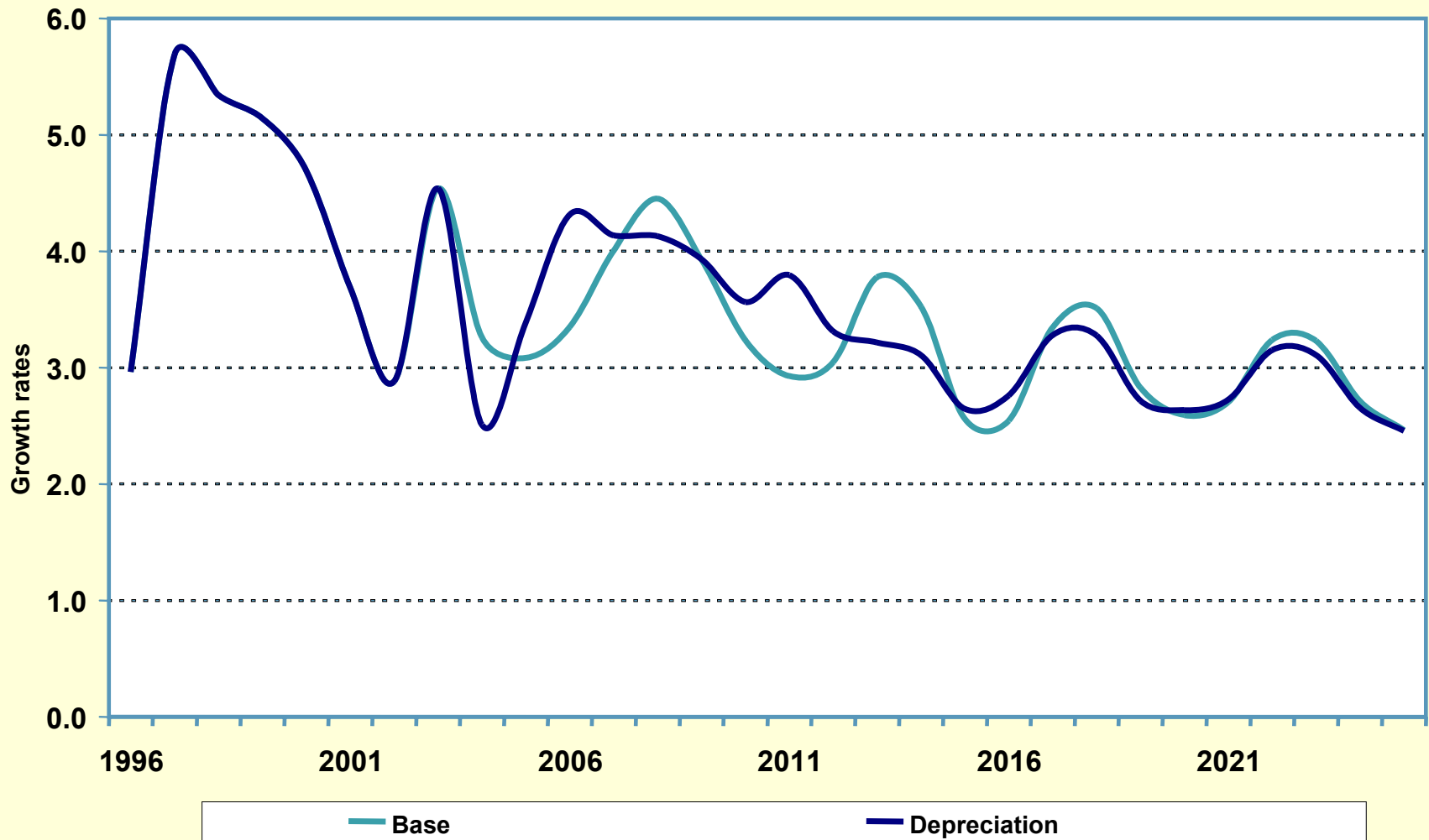
MEDEA

SIMULATIONS

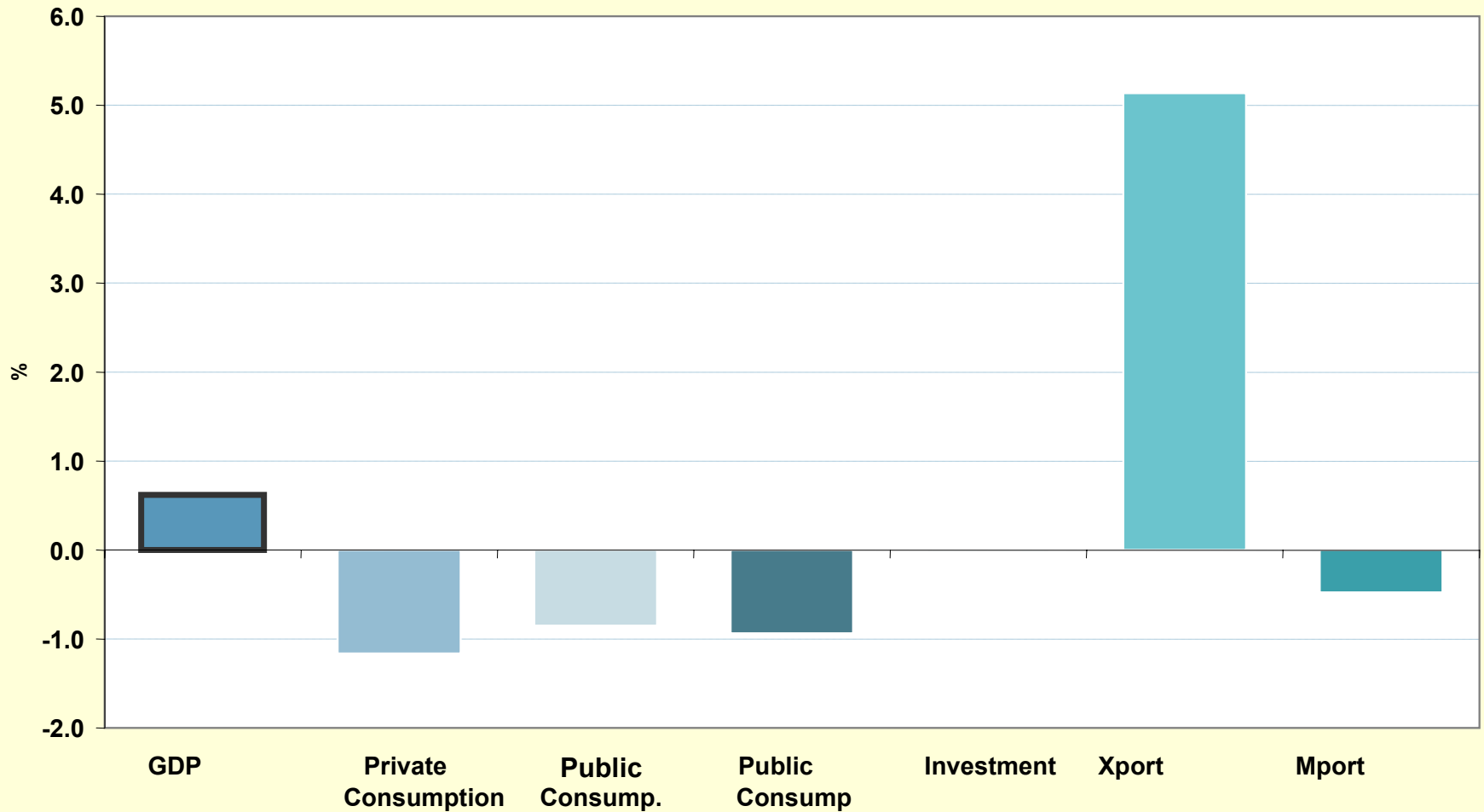
Exchange rate in baseline and with depreciation



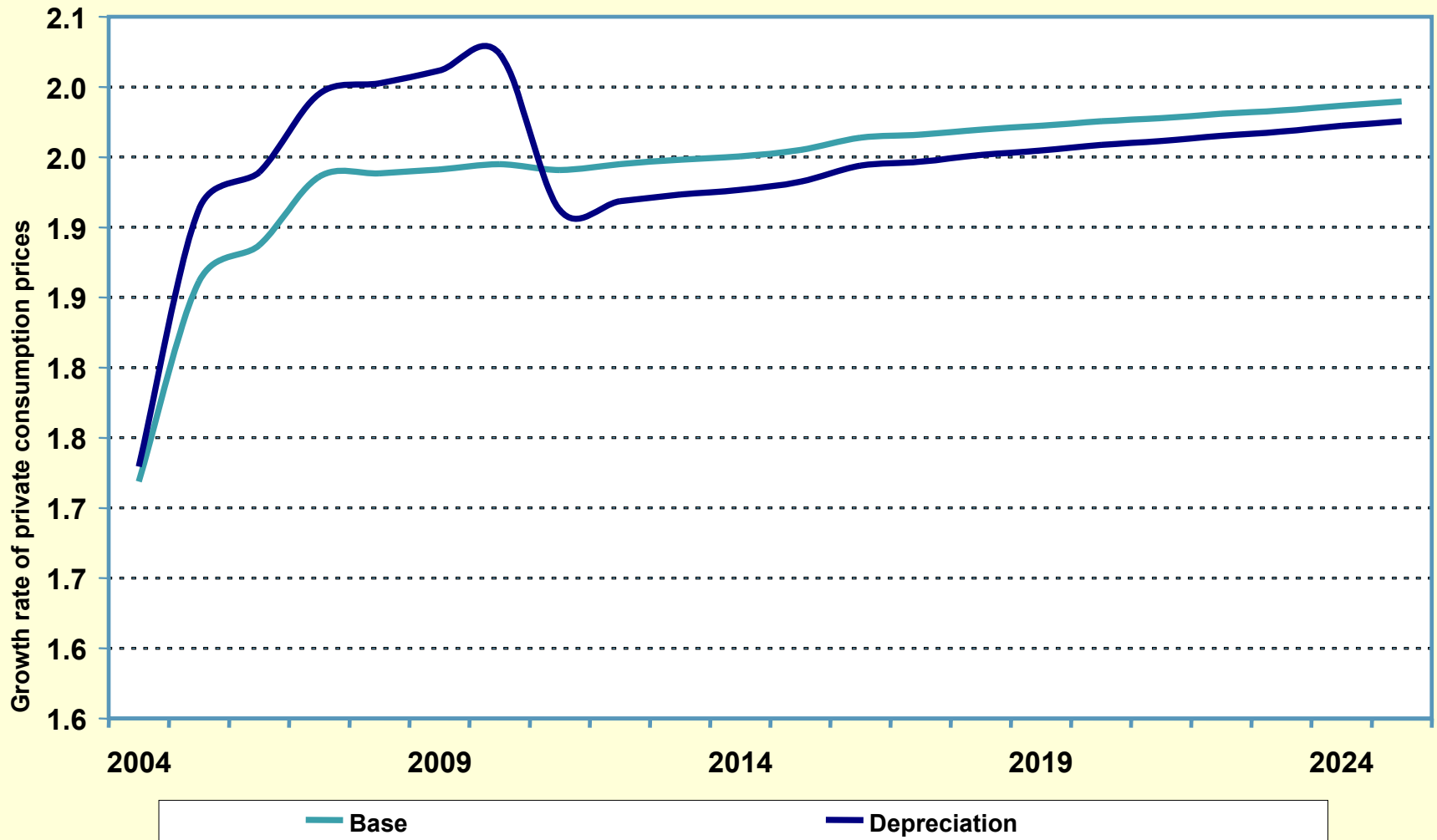
GDP growth in baseline and depreciation scenarios.



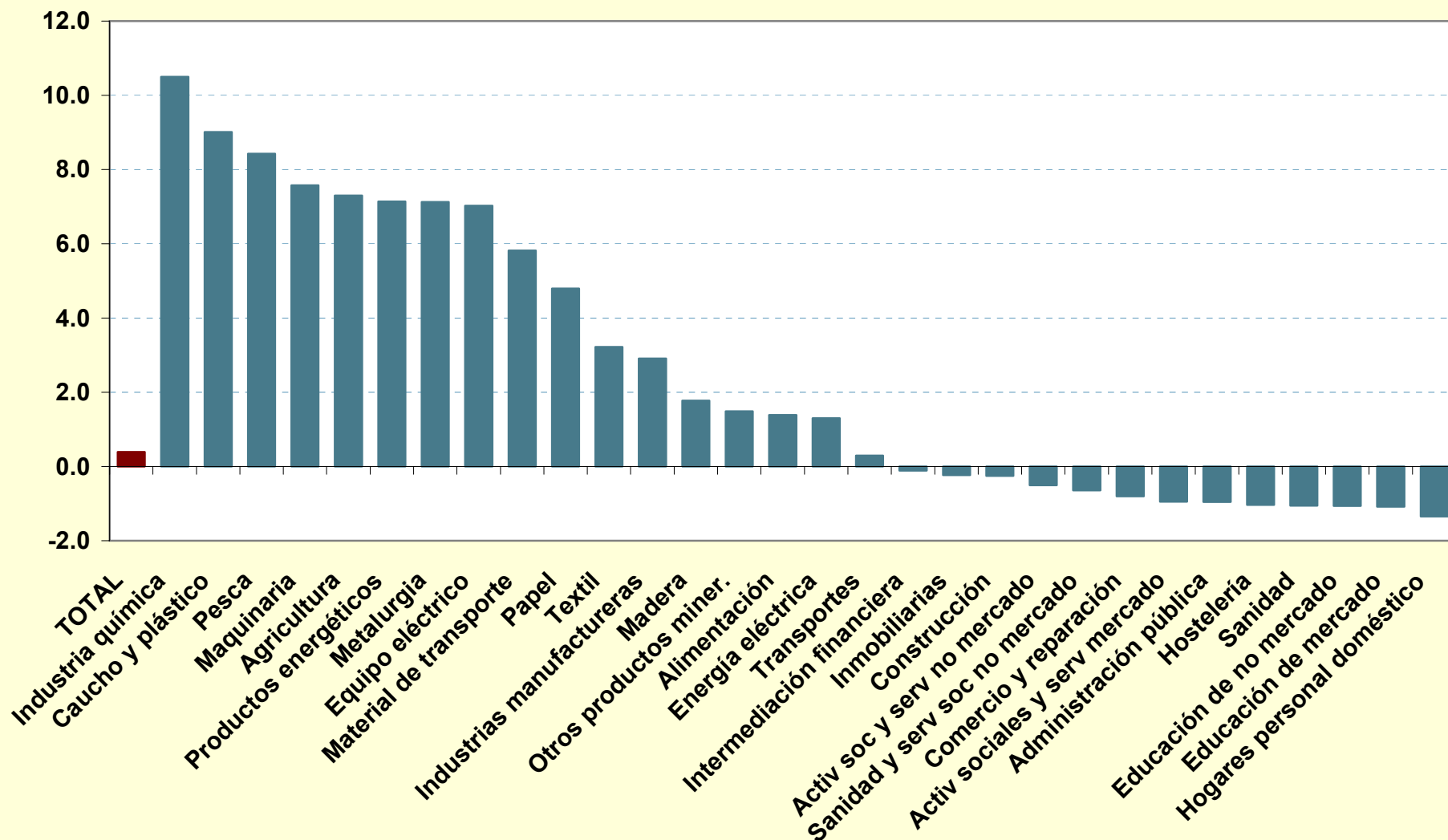
Depreciation and demand components. % deviations from baseline. 2004-2025



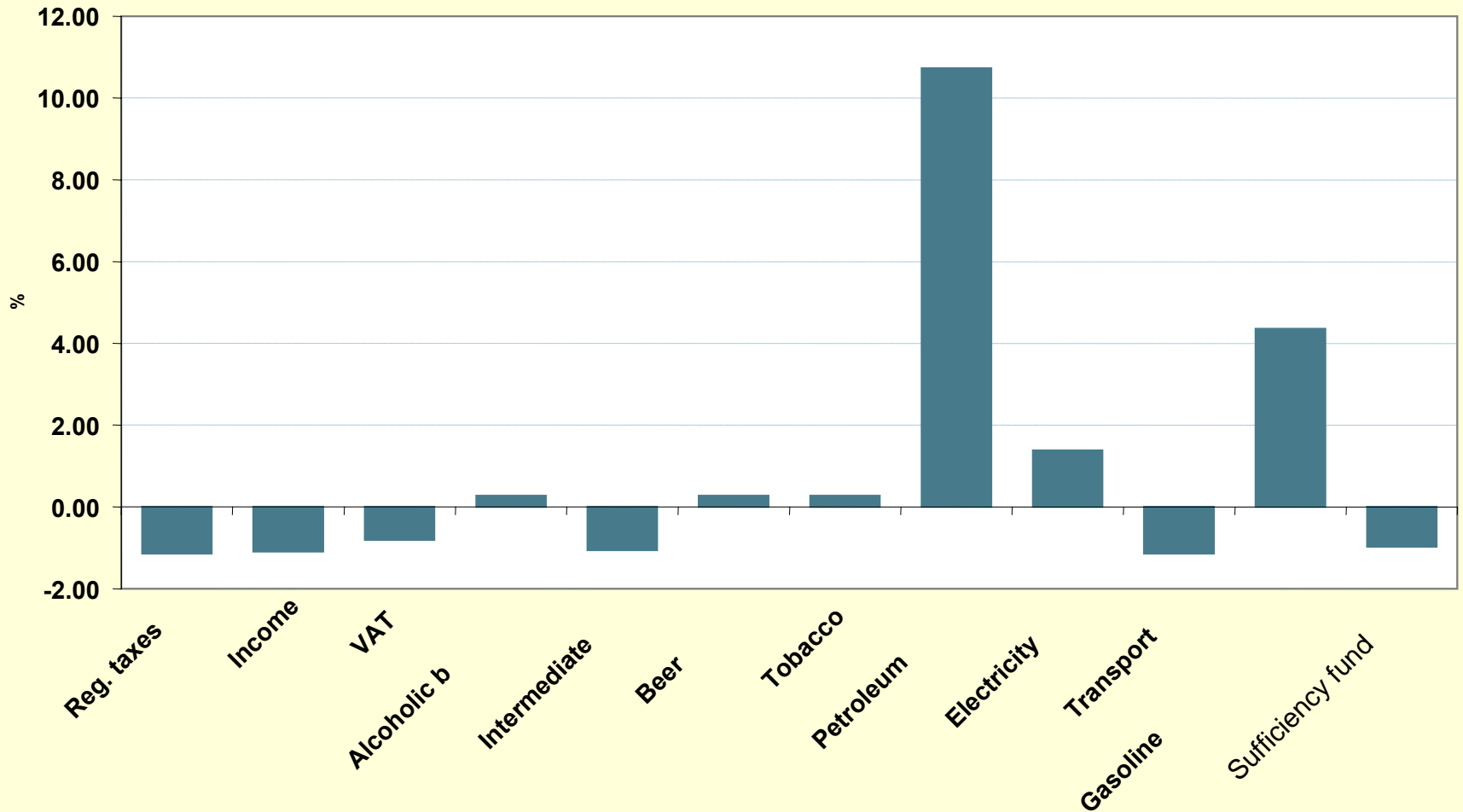
Depreciation and inflation



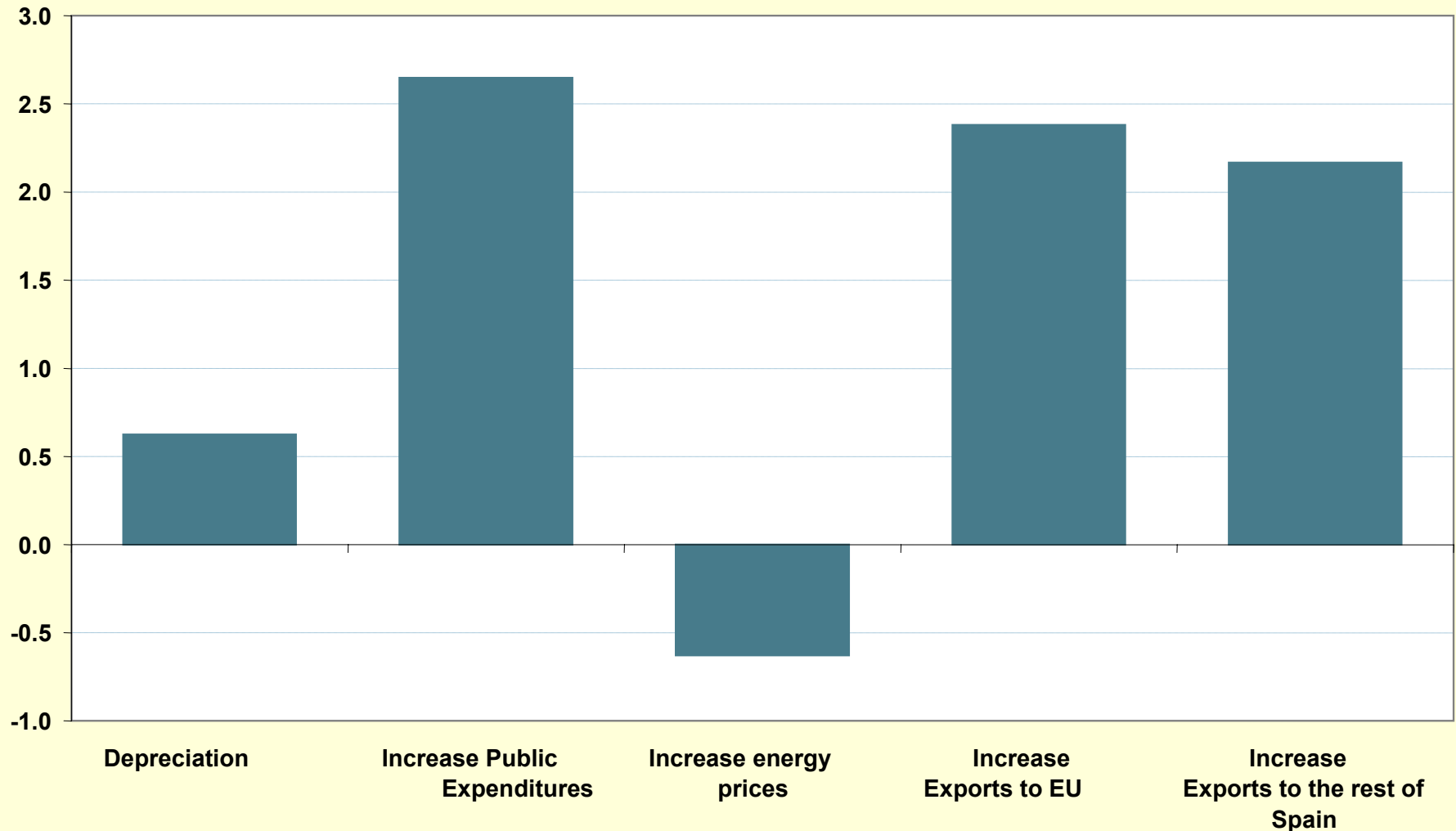
Depreciation and employment. % deviations from baseline. 2004-2025



Depreciation and public revenues. % deviations from baseline. 2004-2025



GDP in 5 scenarios. in % deviations from baseline.2004-2025



**A more complicated scenario:
Increase of the oil price of 36\$/b in
2004 and 44\$/b 2005**

AGGREGATE RESULTS

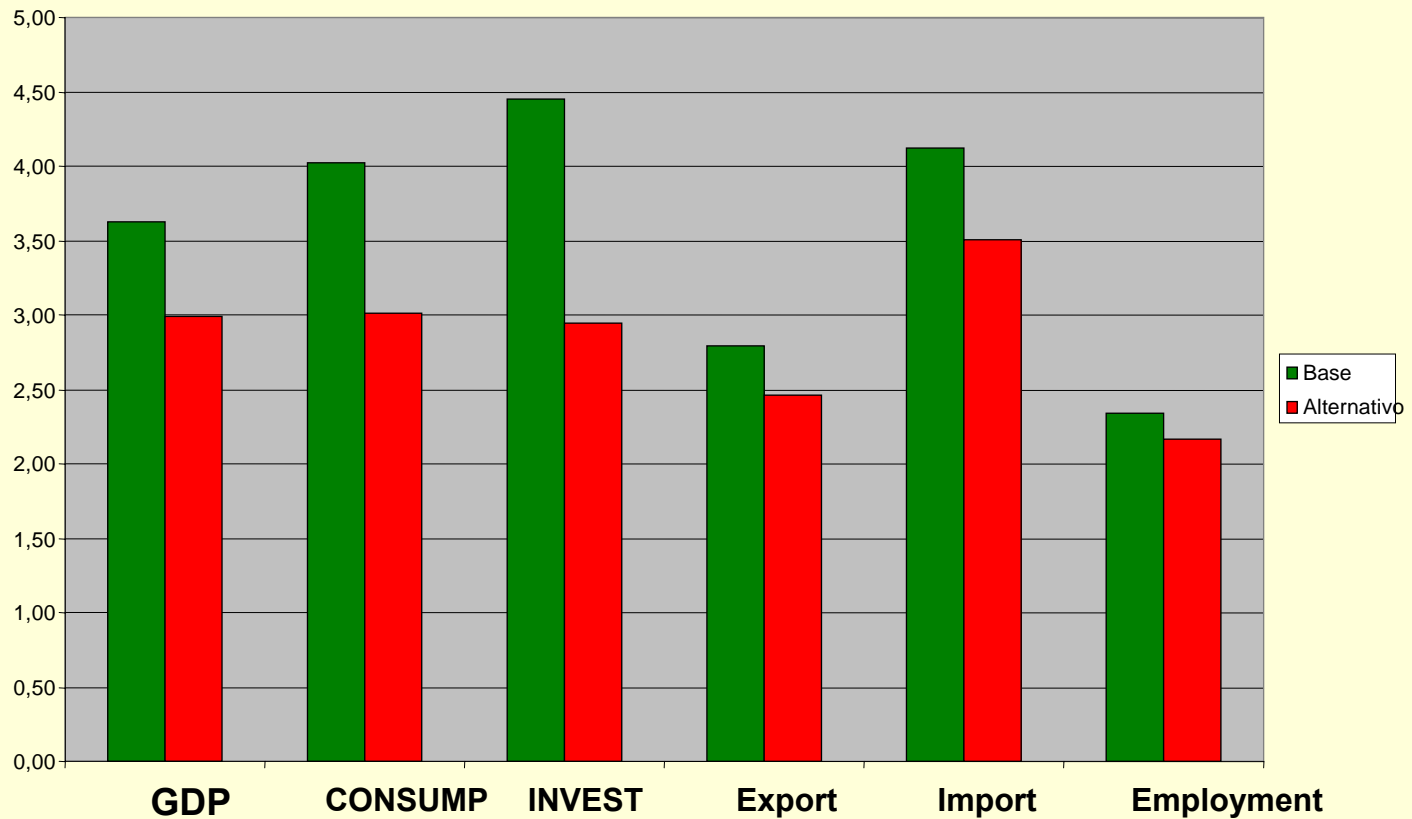
| % deviations between base and alternative (GDP, employment and unemployment) | | | |
|--|--------------|--------|---------|
| | Pib, mill. € | Empleo | Parados |
| 2003 | 0 | 0 | 0 |
| 2004 | -1,6 | -0,5 | 2,3 |
| 2005 | -2,3 | -1,7 | 7,5 |
| 2006 | -1,0 | -1,7 | 7,6 |
| 2007 | -0,8 | -0,8 | 3,6 |
| 2008 | -1,4 | -0,9 | 4,6 |

| Deviations between unemployment rate and inflation rate in base and alternative | | |
|--|--------------|-----------|
| | Tasa de paro | Inflación |
| 2003 | 0 | 0 |
| 2004 | 0,4 | 2,9 |
| 2005 | 1,4 | 3,2 |
| 2006 | 1,4 | 0,0 |
| 2007 | 0,6 | 0,0 |
| 2008 | 0,7 | 0,0 |

| Deviations in growth rates in base and alternative | | | | | |
|--|------|---------|-----------|--------|--------|
| | PIB | Consumo | Inversión | Export | Import |
| 2004 | -1,6 | -2,6 | -2,8 | 0,1 | -1,9 |
| 2005 | -0,8 | -1,9 | -0,1 | 0,0 | -0,8 |
| 2006 | -0,4 | -0,4 | -0,6 | -0,5 | 0,2 |
| 2007 | -0,1 | 0,0 | -1,6 | -0,9 | 0,0 |
| 2008 | -0,3 | -0,1 | -2,4 | -0,3 | -0,5 |

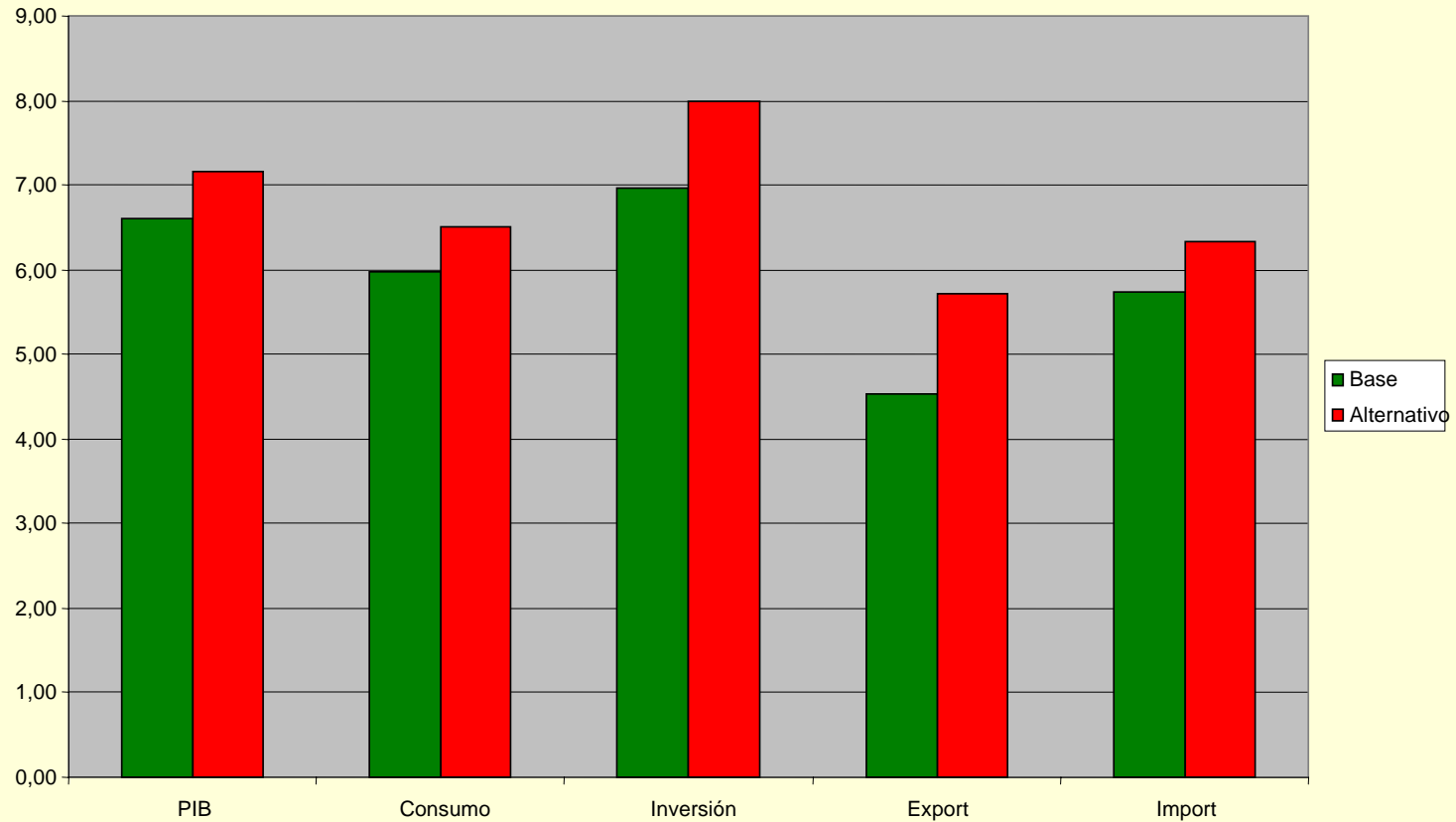
AGGREGATE RESULTS

Average growth rates 2004-2008. Constant prices



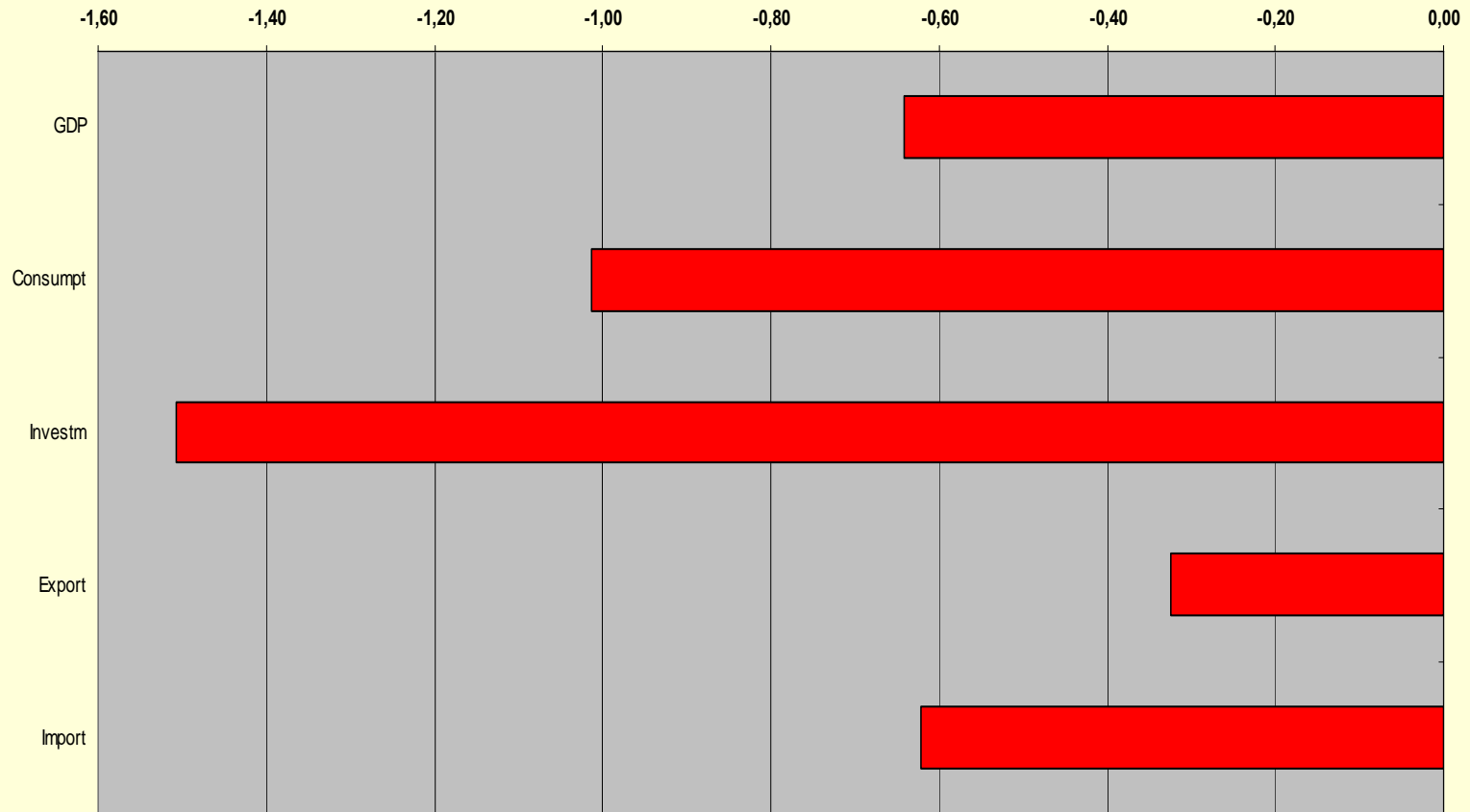
AGGREGATE RESULTS

Average growth rates 2004-2008. Nominal prices



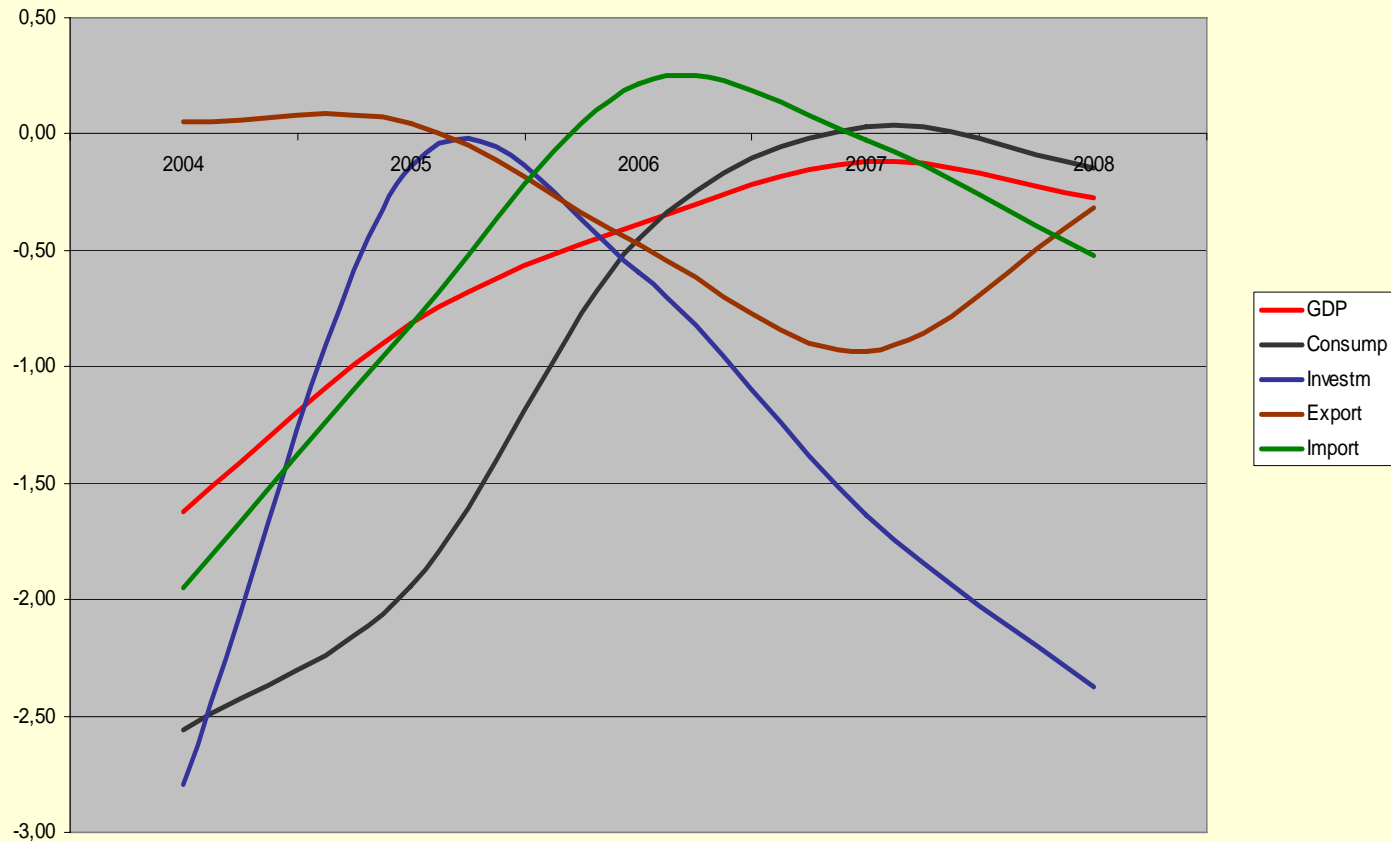
AGGREGATE RESULTS

Growth rates deviations between base and alternative. Average 2004-2008



AGGREGATE RESULTS

Growth rates deviations yearly between base and alternative



SECTORAL RESULTS

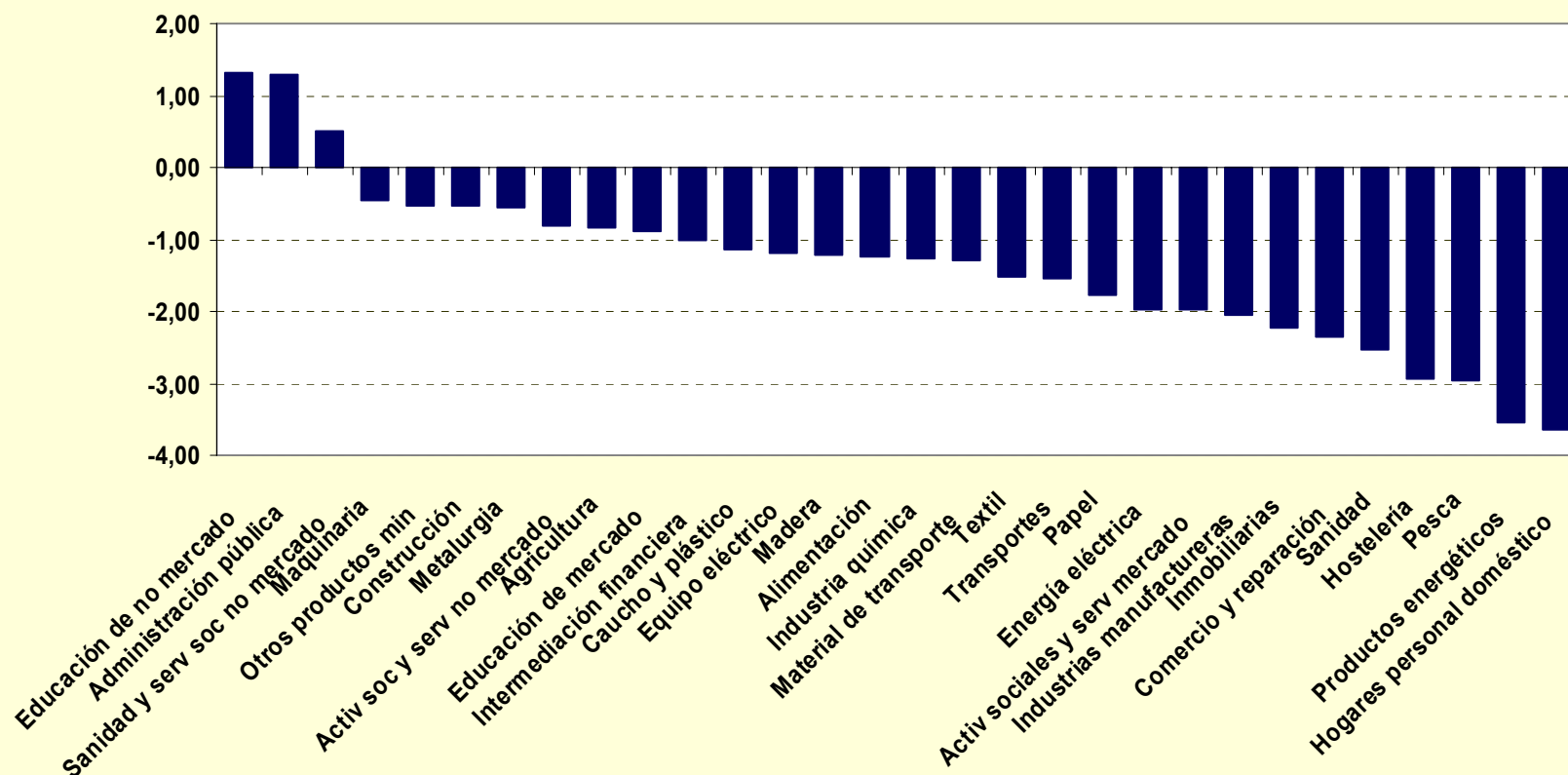
SECTORAL RESULTS. SCENARIO OF AN OIL PRICE INCREASE

Average percentage deviations from base 2004-2008.

| Sector | output | empleo | export | import |
|------------------------|--------------|--------------|--------------|--------------|
| Agriculture | -0,85 | -0,77 | -0,07 | -1,00 |
| Fishing | -2,95 | -2,93 | -0,45 | -1,45 |
| Energy products | -3,55 | -3,55 | -0,62 | 0,49 |
| Electricity | -1,96 | -1,76 | 0,00 | -1,95 |
| Food | -1,23 | -1,23 | 0,00 | -2,55 |
| Textiles | -1,53 | -1,47 | -0,01 | -2,59 |
| Wood | -1,21 | -1,21 | 0,00 | -1,69 |
| Paper | -1,77 | -1,31 | -0,09 | -1,54 |
| Chemicals | -1,27 | -0,60 | 0,00 | -1,38 |
| Plastic, rubber | -1,13 | -0,53 | -0,28 | -1,52 |
| Other min. products | -0,52 | -0,51 | -0,58 | -0,46 |
| Iron, steel | -0,55 | -0,27 | 0,03 | -0,57 |
| Machinery | -0,47 | -0,23 | -0,34 | -1,24 |
| Electric equipment | -1,19 | -1,04 | 0,22 | -1,13 |
| Transport material | -1,30 | -1,24 | 0,21 | -2,58 |
| Manufacturing ind. | -2,04 | -1,82 | 0,00 | -1,68 |
| Construction | -0,54 | -0,49 | - | - |
| Distribution, trade | -2,35 | -1,80 | 0,00 | -2,96 |
| Restaurants | -2,94 | -2,79 | - | - |
| Transports | -1,55 | -1,31 | 0,00 | -1,90 |
| Banking, insurance | -1,02 | -0,74 | - | -0,95 |
| Real state | -2,24 | -1,87 | 0,00 | -2,70 |
| Education_market | -0,89 | -0,83 | - | - |
| Health_market | -2,52 | -2,50 | - | - |
| Social services_market | -1,99 | -1,63 | 0,00 | -3,48 |
| Public administration | 1,30 | 1,11 | - | - |
| Education_non market | 1,32 | 1,21 | - | - |
| Health_non market | 0,52 | 0,50 | - | - |
| Non market services | -0,81 | -0,71 | - | - |
| Household services | -3,64 | -3,48 | - | - |
| TOTAL | -1,39 | -1,10 | -0,05 | -1,41 |

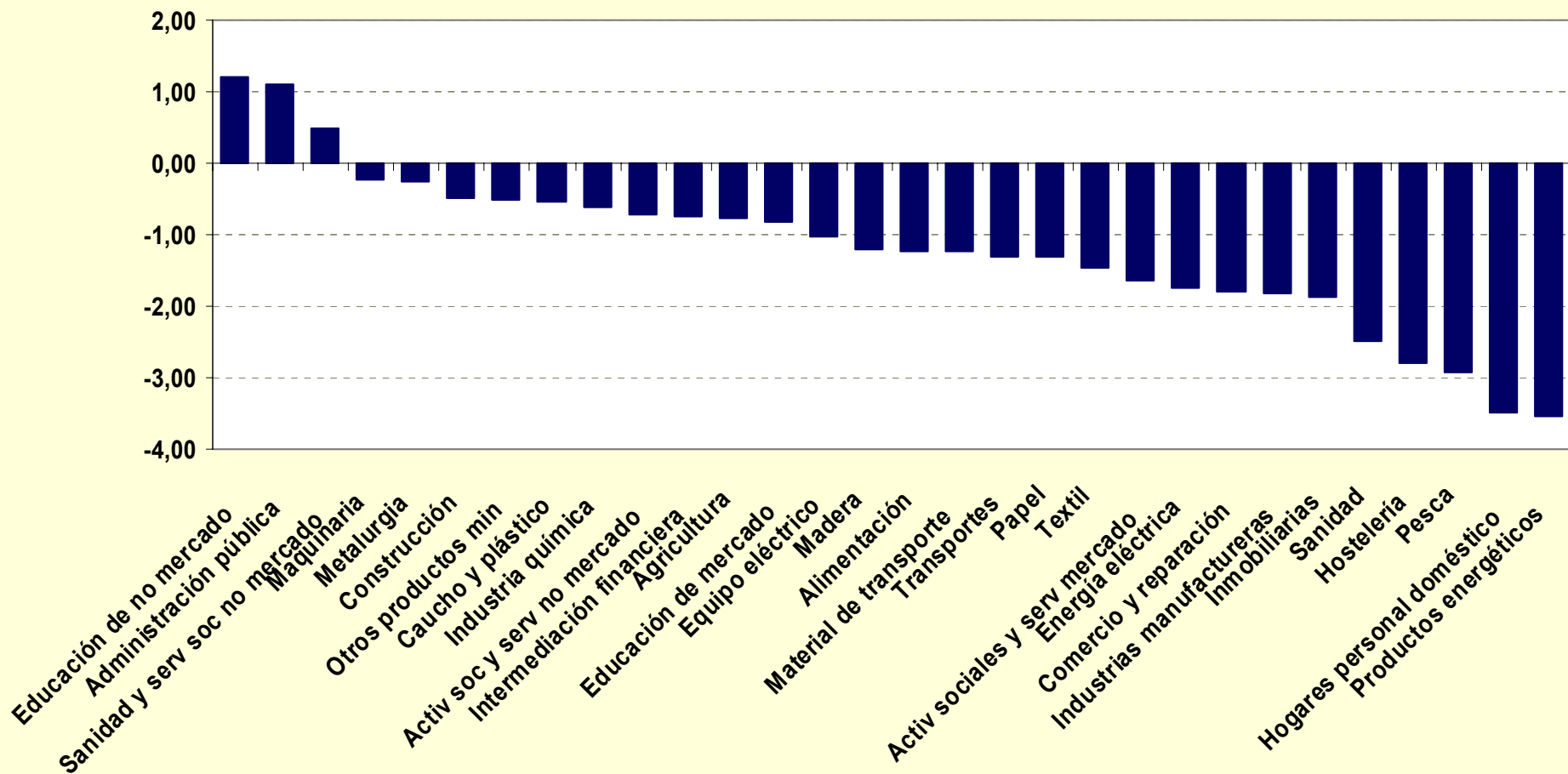
SECTORAL RESULTS. OUTPUT

Average deviations in 2004-2008. Output



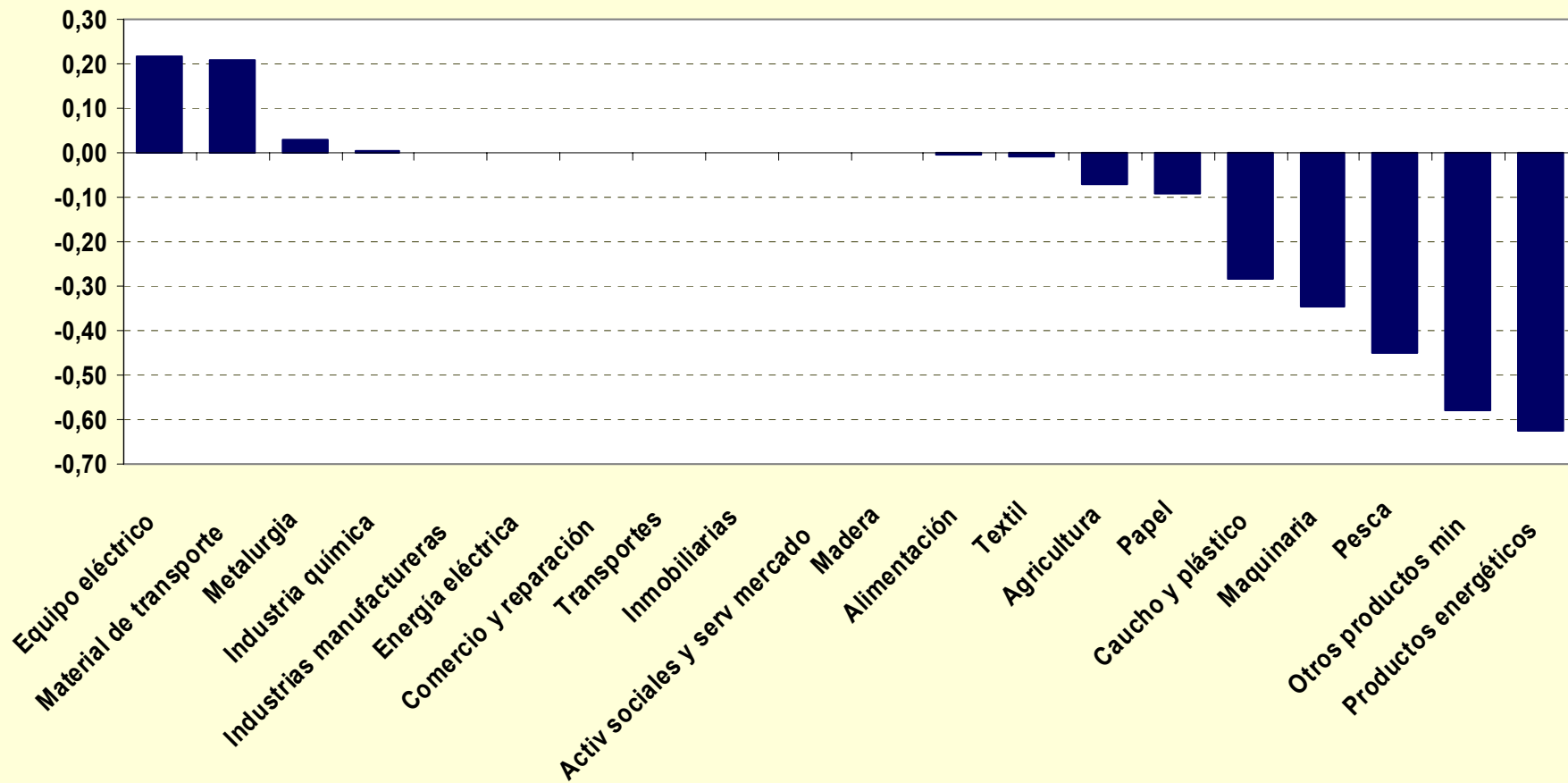
SECTORAL RESULTS. EMPLOYMENT

Average deviations in 2004-2008. Employment



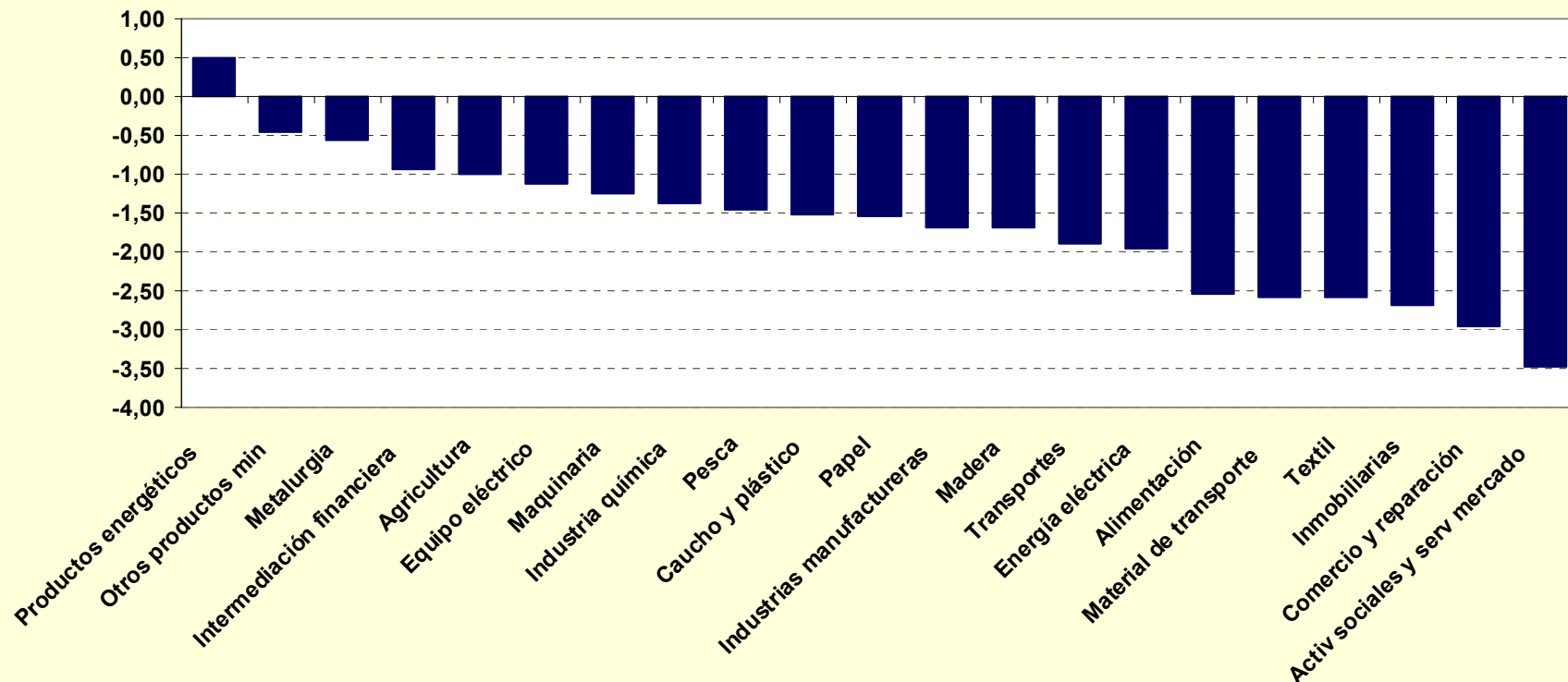
SECTORAL RESULTS. EXPORTS

Average deviations in 2004-2008. Exports

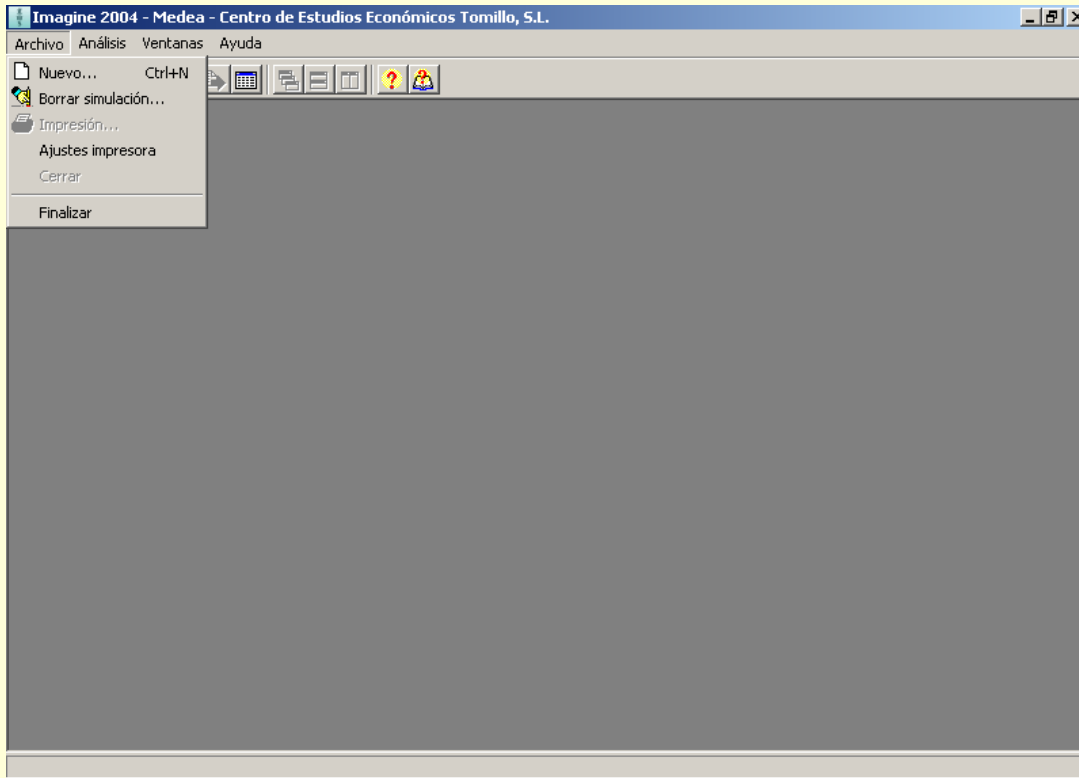


SECTORAL RESULTS. IMPORTS

Average deviations 2004-2008. Imports



The main screen



File:

- ***New***
- ***Erase simulation***
- ***Print***
- ***Adjust printer***
- ***Exit***

Analysis:

- ***One simulation***
- ***Several simulations***
- ***Data***
- ***Export***
- ***Simulation scenario***
- ***Table maker***

Windows:

- ***Arrange***
- ***Cascade***
- ***Horizontal***
- ***Vertical***

Help

Making a simulation

Asistente de simulación

Paso 1º: Establecer parámetros de simulación

Introduzca un comentario para la simulación (max. 50 caracteres):
Simulación 1

Año final de la simulación:
2025

Plantilla para la simulación:

| Fecha y hora | Descripción |
|---------------------|--|
| 19/03/2004 12:40:30 | Escenario base [0] |
| 19/03/2004 13:18:58 | Escenario de depreciación del tipo de cambio [1] |
| 19/03/2004 13:21:00 | Escenario de incremento del gasto público [2] |
| 19/03/2004 13:23:30 | Escenario de incremento de precios de la energía [3] |
| 19/03/2004 13:25:36 | Escenario de incremento de demanda de la UE [4] |
| 19/03/2004 13:32:26 | Escenario de demanda del resto de España [5] |

Ayuda << >> Cancelar

Asistente de simulación

Paso 2º: Establecer escenario de simulación

Parámetros macro Parámetros vectoriales Buscar

```
mul spexr  
2004 0.99  
2010 0.70  
2025 0.90
```

Ayuda << Terminar Cancelar

Asistente de simulación

Paso 2º: Establecer escenario de simulación

Parámetros macro Parámetros vectoriales Buscar

```
mul pq 3  
2003 1.2  
mul pq :a1130  
2003 1.02  
mul pcpio :a1130  
2003 1.02  
mul pimneue 3  
2003 1.2  
mul pimterm 3  
2003 1.2
```

Ayuda << Terminar Cancelar

Confirmación

¿Esta seguro que desea cerrar el asistente de simulación?


Información

¡Simulación calculada correctamente!

Choosing a simulation and variables

Selección de simulación

| Escenario base [0] | vacío |
|--------------------|-------|
| vacío | vacío |



| Fecha y hora | Descripción |
|---------------------|--|
| 19/03/2004 12:40:30 | Escenario base [0] |
| 19/03/2004 13:18:58 | Escenario de depreciación del tipo de cambio [1] |
| 19/03/2004 13:21:00 | Escenario de incremento del gasto público [2] |
| 19/03/2004 13:23:30 | Escenario de incremento de precios de la energía [3] |
| 19/03/2004 13:25:36 | Escenario de incremento de demanda de la UE [4] |
| 19/03/2004 13:32:26 | Escenario de demanda del resto de España [5] |
| 24/03/2004 14:36:08 | Simulación 1 [7] |

☒ OK ☐ Cancelar ☐ Ayuda



Selección de simulación

| Fecha y hora | Descripción |
|---------------------|--|
| 19/03/2004 12:40:30 | Escenario base [0] |
| 19/03/2004 13:18:58 | Escenario de depreciación del tipo de cambio [1] |
| 19/03/2004 13:21:00 | Escenario de incremento del gasto público [2] |
| 19/03/2004 13:23:30 | Escenario de incremento de precios de la energía [3] |
| 19/03/2004 13:25:36 | Escenario de incremento de demanda de la UE [4] |
| 19/03/2004 13:32:26 | Escenario de demanda del resto de España [5] |
| 24/03/2004 14:36:08 | Simulación 1 [7] |

☒ OK ☐ Cancelar ☐ Ayuda

Selección de variables

| vacío | vacío | vacío | vacío |
|-------|-------|-------|-------|
|-------|-------|-------|-------|

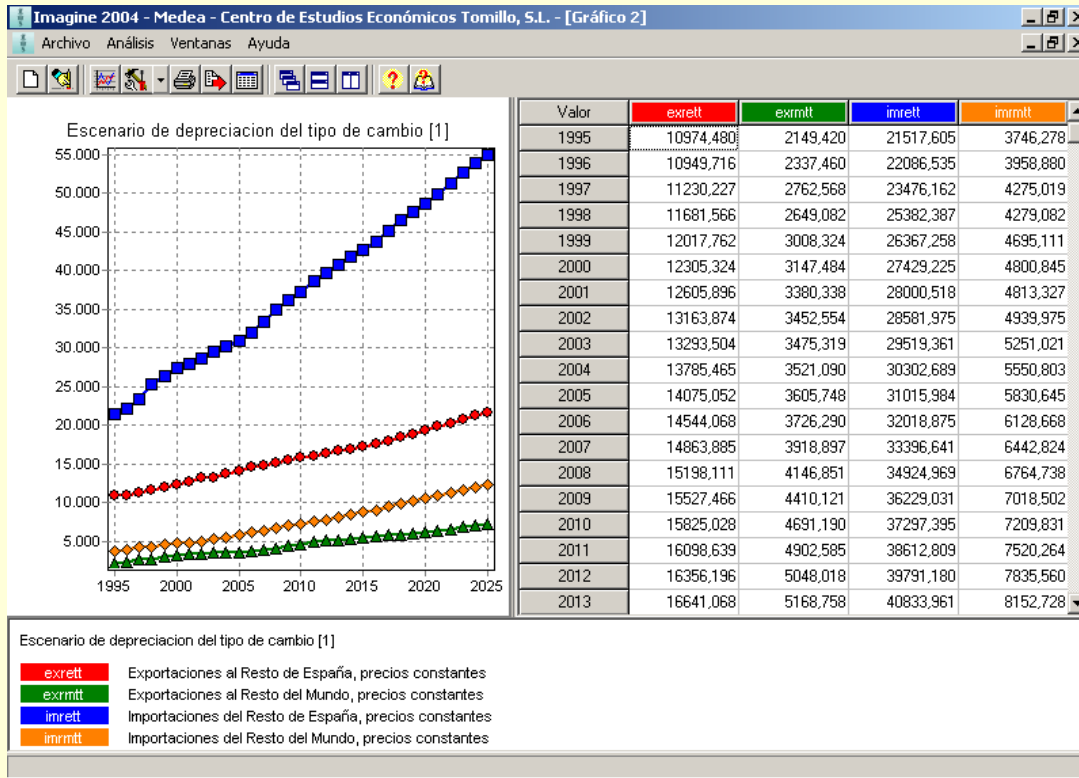
 

| | |
|-----------|--|
| agwag | Salario medio per cápita en Andalucía |
| altax | Financiación por impuestos sobre alcohol |
| astax | Financiación por tributos cedidos y tasas |
| avgprd | Productividad media total |
| cervzatax | Financiación por impuestos sobre cerveza |
| cgap | Gasto en consumo individual de las AAPP e ISFLSH, precios constantes |
| cgapN | Gasto en consumo individual de las AAPP e ISFLSH, precios corrientes |
| cgcc | Gasto en consumo colectivo, precios constantes |
| cgccN | Gasto en consumo colectivo, precios corrientes |
| cp | Gasto en consumo individual de los hogares, precios constantes |
| cpN | Gasto en consumo individual de los hogares, precios corrientes |
| ebeNtt | Excedente Bruto de Explotación y Renta Mixta, precios corrientes |
| electax | Financiación por impuestos sobre electricidad |
| empleo | Empleo total España |
| emptt | Empleo total Andalucía, en miles |
| exreNtt | Exportaciones al Resto de España, precios corrientes |
| exrett | Exportaciones al Resto de España, precios constantes |
| exrmNtt | Exportaciones al Resto del Mundo, precios corrientes |
| exrmtt | Exportaciones al Resto del Mundo, precios constantes |
| exttNtt | Exportaciones Totales, precios corrientes |
| extttt | Exportaciones Totales, precios constantes |
| exueNtt | Exportaciones a la UE, precios corrientes |
| exuett | Exportaciones a la UE, precios constantes |
| fbcc | Formación Bruta de Capital a precios constantes |
| fbccN | Formación Bruta de Capital a precios corrientes |
| fds | Financiación por el Fondo de Suficiencia |

Macro Andalucía Macro España Vectores Andalucía Vectores España Matrices Andalucía Matrices España

☒ OK ☐ Cancelar ☐ Ayuda

Analysing a simulation: Aggregated data



- ✓ 3D
- Gradiente
- ✓ Cuadrícula
- Espesor de línea ▶
- ✓ Marcas
- Monocromo
- eje-X...
- Tipo de presentación ▶

Fijar eje X

Primer año del gráfico: 1991



Último año del gráfico: 2025

OK Cancelar

- Valores absolutos
- Índice...
- Diferencia
- Diferencia en porcentos
- Tasas de crecimiento

Analysing a simulation: Sectoral data




Selección de variables

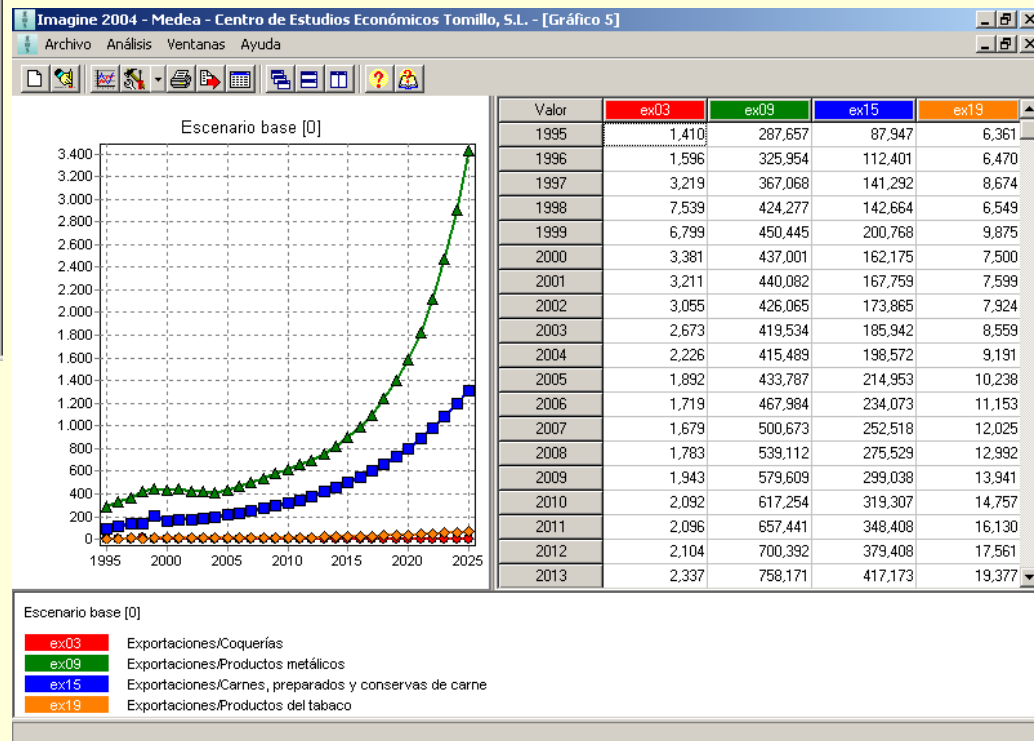
ex03 ex09 ex15 ex19  

ex19 - Exportaciones/HotelRest

| | | | |
|---------|--|----|---------------|
| cio | Gasto en consumo de los hogares, p. constantes | 1 | Agricul |
| ciorwm | Gasto en consumo de los hogares, p. corrientes, importado del resto de | 2 | Fish |
| ciospm | Gasto en consumo de los hogares, p. corrientes, importado del resto de | 3 | Cokecoaloil |
| dd | Demanda interna | 4 | ElectGas |
| distexp | distance factors for exports to Spain | 5 | FoodTobac |
| distimp | distance factors for imports from Spain | 6 | TxApShoes |
| emp | Empleo, en miles | 7 | WoodFurn |
| ex | Exportaciones | 8 | Paper |
| exrw | Exportaciones al resto del mundo | 9 | Chemical |
| exSP | Exportaciones al resto de España | 10 | RubberPlast |
| exSPrat | Ratio de exportaciones al resto de España sobre la demanda intern. | 11 | StoneClay |
| fd | Demanda final total | 12 | SteelMetal |
| females | Población femenina por edad | 13 | Machinery |
| gio | Gasto en consumo de las AAPP, p. constantes | 14 | CompElecMac |
| hpy | Horas por año y empleado, en 100's | 15 | AutShipPlanes |
| hrs | Horas totales trabajadas por rama | 16 | Oth mfg |
| io | Formación Bruta de Capital Fijo, p. constantes | 17 | Construction |
| iorwm | Formación Bruta de Capital Fijo, p. corrientes, importado del resto de | 18 | Repairtrade |
| iospm | Formación Bruta de Capital Fijo, p. corrientes, importado del resto de | 19 | HotelRest |
| imp | Importaciones | 20 | Transcomm |
| imprw | Importaciones del resto del mundo | 21 | Banking |
| impshr | Imports shares from rest of world | 22 | RentlingOth |
| impshSP | Imports shares from rest of Spain | 23 | EducMarket |
| impSP | Importaciones del resto de España | 24 | HealthMarket |
| ish | Imports shares | 25 | Othsocmarket |
| males | Población masculina por edad | 26 | Pubsector |

Macro Andalucía Macro España **Vectores Andalucía** Vectores España Matrices Andalucía Matrices España



Analysing a simulation: Matrices

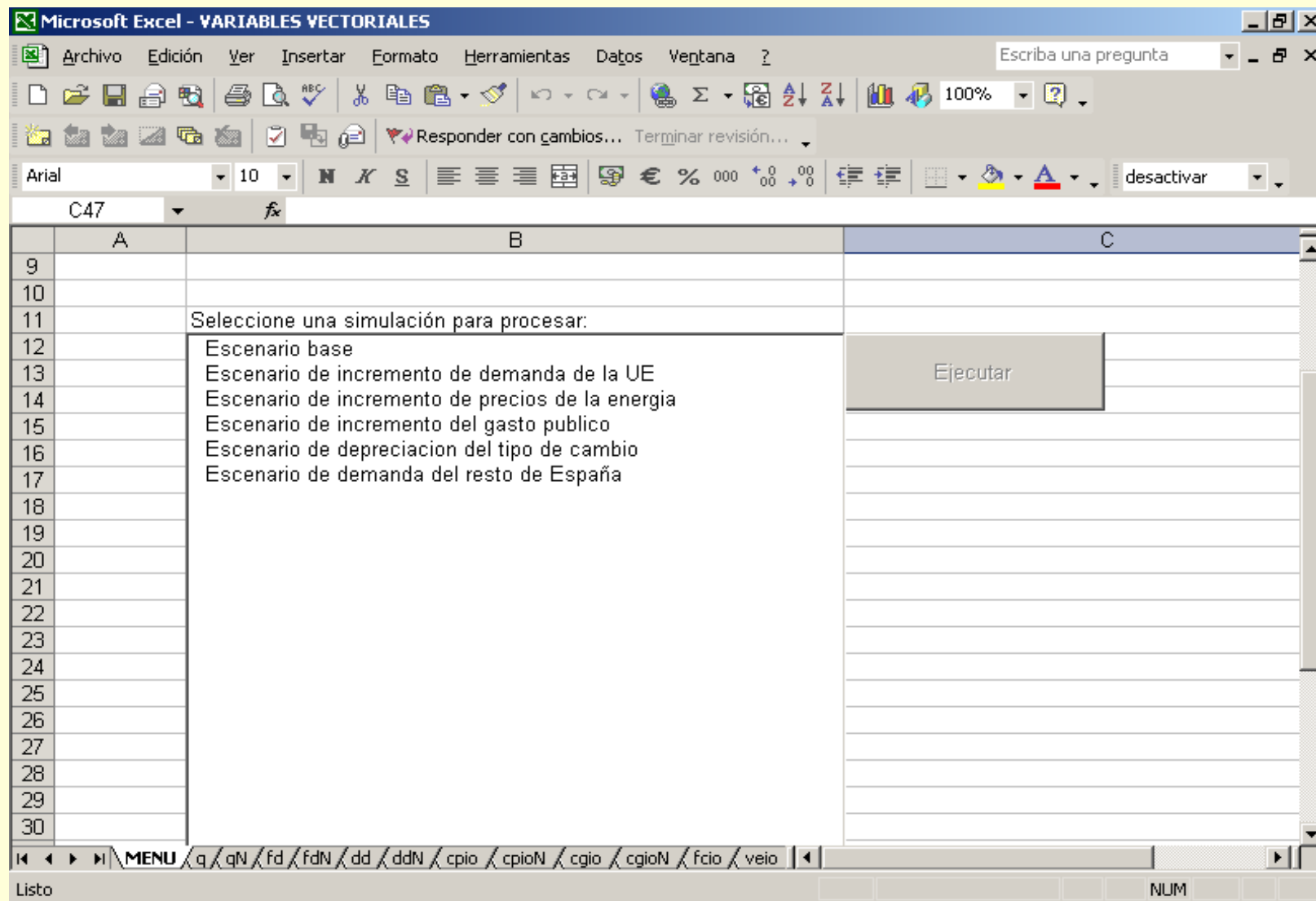
Imagine 2004 - Medea - Centro de Estudios Económicos Tomillo, S.L. - [am - Matriz de coeficientes técnicos, Total, Otros produc...]

Archivo Análisis Ventanas Ayuda

| 1995 | am | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|------|----------------|-------|-------------|-------|----------------|--------------|------------|------------|----------|
| | | | AgricGanSil | Pesca | ExtrPrEnerPetr | EnerElectGas | AlimBebTab | TextilCalz | MaderaCo |
| | | Suma | 0,357 | 0,365 | 0,775 | 0,610 | 0,775 | 0,657 | 0,657 |
| 1 | AgricGanSil | 0,768 | 0,093 | 0,000 | 0,000 | 0,000 | 0,366 | 0,090 | |
| 2 | Pesca | 0,073 | 0,000 | 0,030 | 0,000 | 0,000 | 0,007 | 0,000 | |
| 3 | ExtrPrEnerPetr | 1,344 | 0,017 | 0,051 | 0,598 | 0,139 | 0,010 | 0,004 | |
| 4 | EnerElectGas | 0,954 | 0,022 | 0,003 | 0,020 | 0,396 | 0,011 | 0,014 | |
| 5 | AlimBebTab | 0,628 | 0,059 | 0,047 | 0,007 | 0,001 | 0,205 | 0,003 | |
| 6 | TextilCalz | 0,578 | 0,000 | 0,020 | 0,002 | 0,000 | 0,009 | 0,438 | |
| 7 | MaderaCorcho | 0,508 | 0,000 | 0,004 | 0,000 | 0,000 | 0,002 | 0,001 | |
| 8 | Papel | 0,594 | 0,000 | 0,005 | 0,001 | 0,001 | 0,019 | 0,006 | |
| 9 | Química | 1,253 | 0,068 | 0,011 | 0,007 | 0,003 | 0,013 | 0,006 | |
| 10 | CauchoPlást | 0,368 | 0,002 | 0,002 | 0,001 | 0,001 | 0,019 | 0,006 | |
| 11 | OtProdMinNoMet | 0,319 | 0,000 | 0,000 | 0,000 | 0,000 | 0,009 | 0,001 | |
| 12 | ProdMetál | 1,154 | 0,001 | 0,005 | 0,001 | 0,001 | 0,005 | 0,007 | |
| 13 | Maquinaria | 0,433 | 0,008 | 0,024 | 0,017 | 0,011 | 0,004 | 0,008 | |
| 14 | MatEléctOpt | 0,636 | 0,001 | 0,016 | 0,004 | 0,003 | 0,001 | 0,001 | |
| 15 | MatTransporte | 0,161 | 0,004 | 0,005 | 0,000 | 0,000 | 0,000 | 0,000 | |
| 16 | OtrasManuf | 0,110 | 0,000 | 0,007 | 0,000 | 0,000 | 0,000 | 0,004 | |
| 17 | Construc | 0,311 | 0,015 | 0,005 | 0,001 | 0,003 | 0,001 | 0,001 | |
| 18 | ComercioRepar | 0,796 | 0,046 | 0,041 | 0,019 | 0,007 | 0,020 | 0,014 | |
| 19 | HotelRest | 0,104 | 0,000 | 0,002 | 0,002 | 0,003 | 0,002 | 0,002 | |
| 20 | TranspComunic | 1,051 | 0,012 | 0,049 | 0,043 | 0,015 | 0,036 | 0,026 | |
| 21 | Bancos | 0,260 | 0,002 | 0,013 | 0,003 | 0,006 | 0,005 | 0,007 | |

Taste <+> für nächstes, Taste <-> für voriges Jahr drücken

Creating tables in “excel” out of templates



Help window



Some difficulties for the client

- What happens to Andalucía when European forecasts change?
- Year to year changes. Difficult to explain.
- Price behaviour is mostly Spanish price behaviour.
- The model should replicate “all” recent published data “at once”. Difficult to transmit that “a model” is not “official statistics”.
- They need training to make “hand” corrections to scenario building.
- The short term behaviour versus the long term not clear in some simulations.
- They appreciated the front-end user.