

# Macroeconomic Imbalances in the Euro Area

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# Europe: Growing imbalances within, balanced without

Figure 1A: Current Account Balances

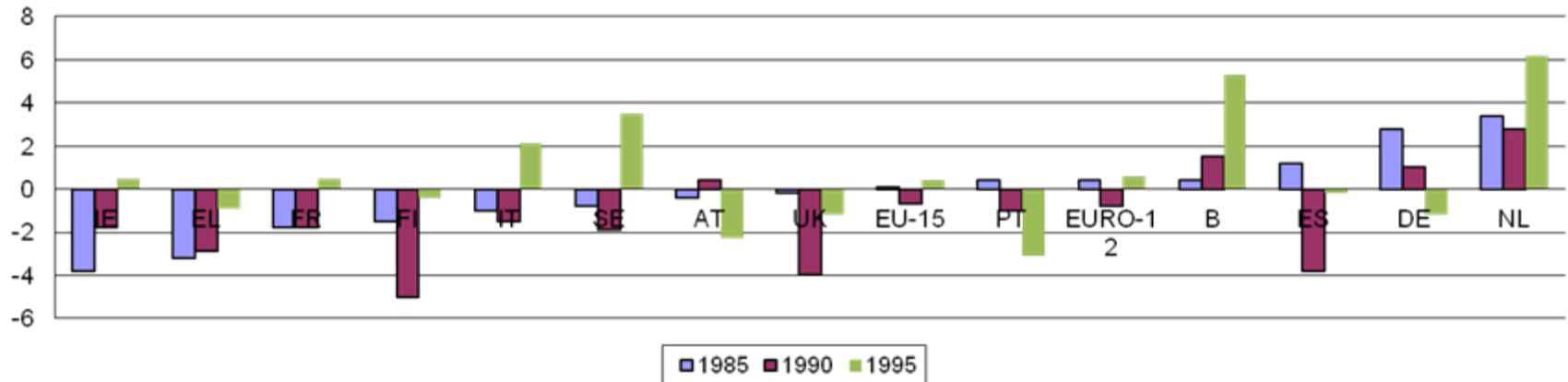
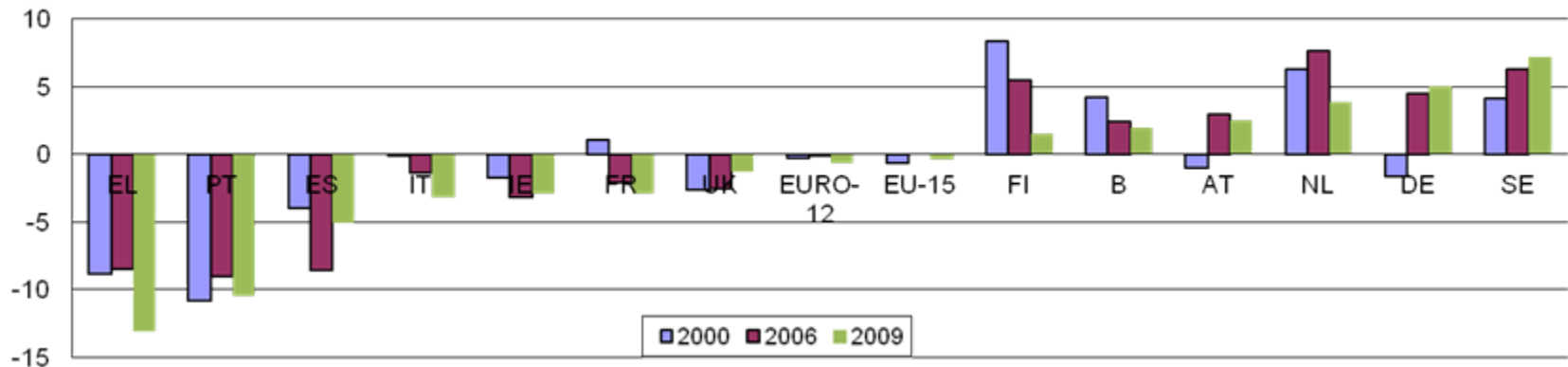
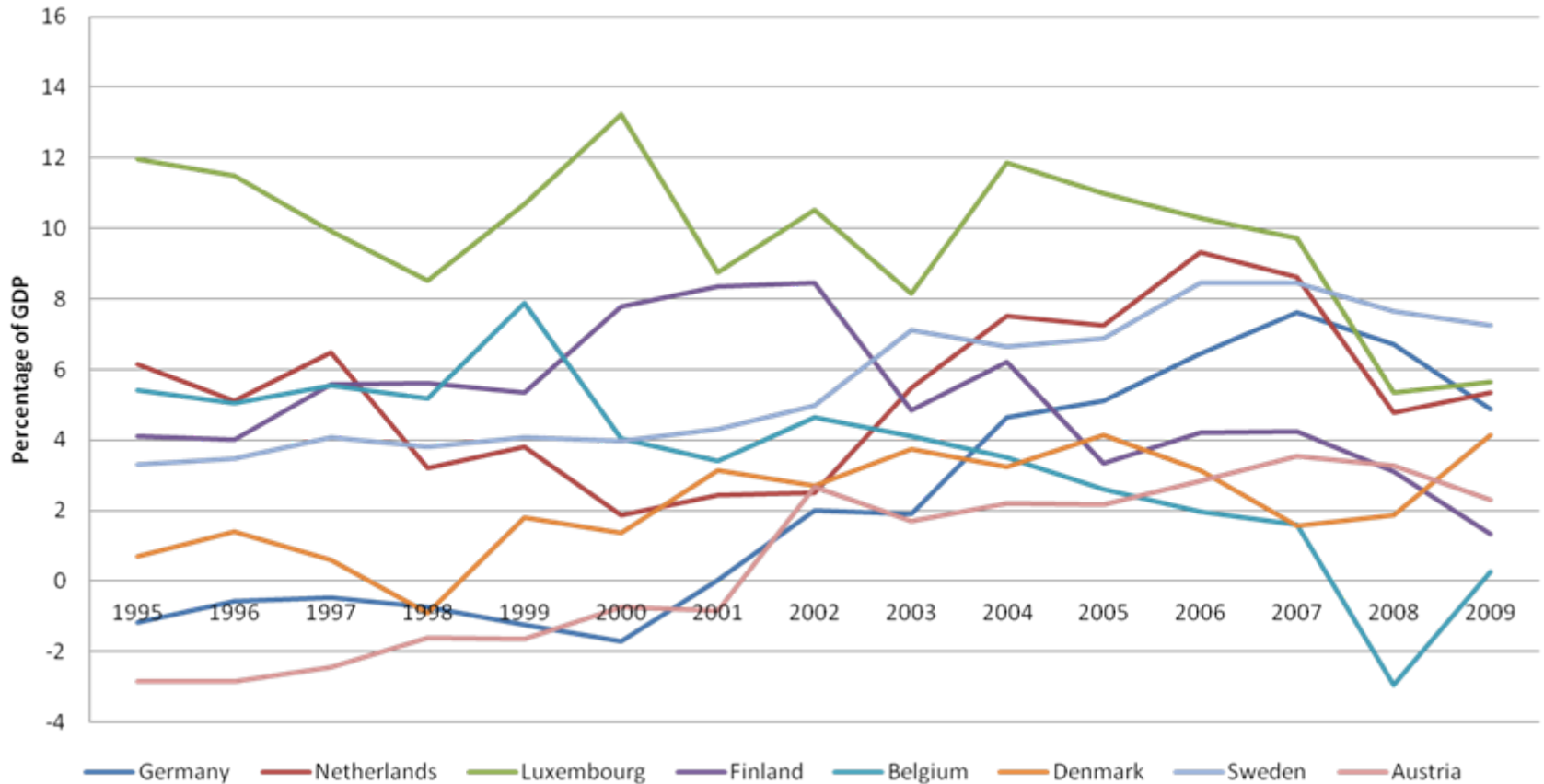


Figure 1B: Current Account Balances



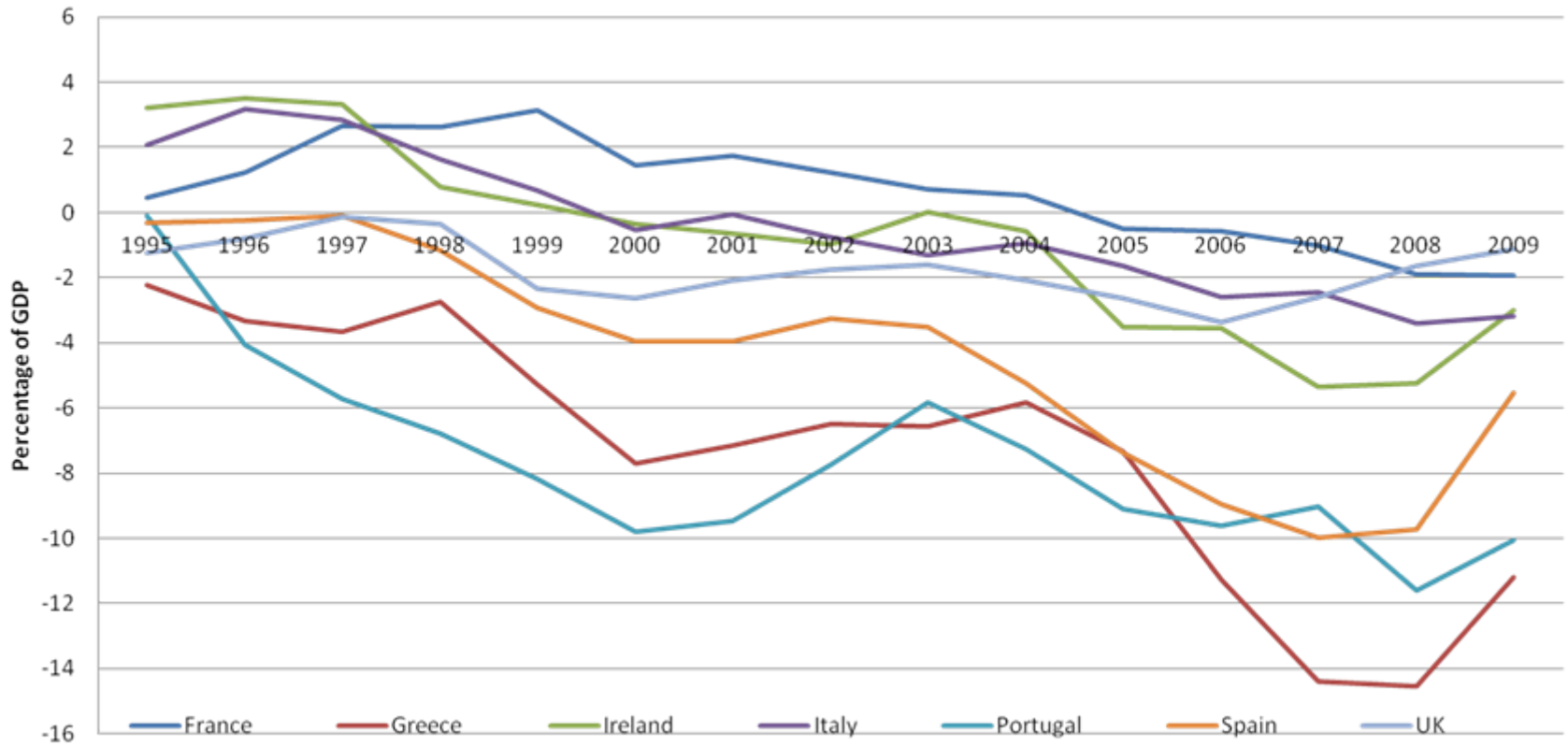
# Macroeconomic Imbalances in the Euro Area

Figure 2A: Current Account Surplus Countries



# Macroeconomic Imbalances in the Euro Area

Figure 2B: Current Account Deficit Countries

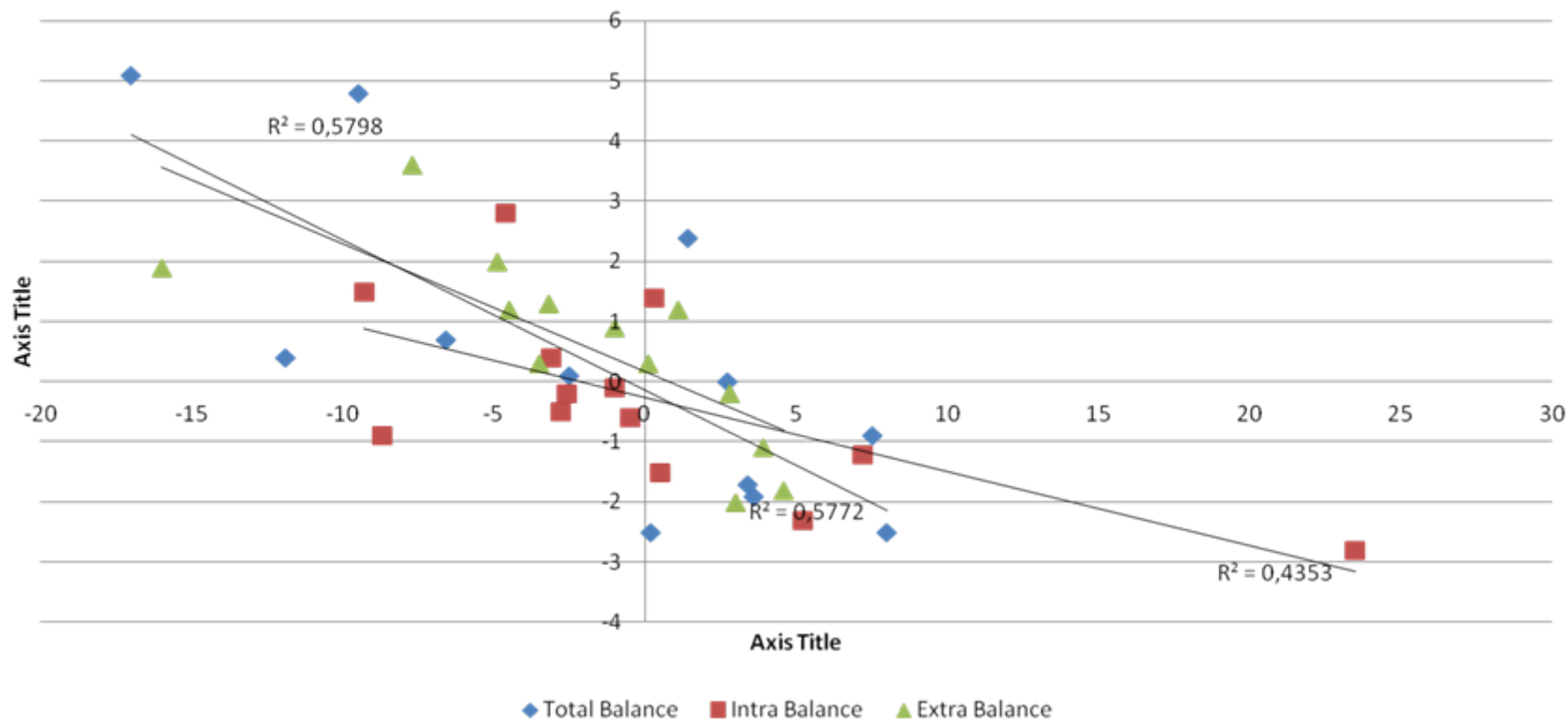


# Trade Accounts as Proxies for Current Account Balances

- Since intra-euro area current account data do not exist, we use bilateral trade data to construct balances vis-à-vis the euro area and the rest of the world.
- Global trade and current account balances are highly correlated except for Ireland (income balance).

# Trade Accounts as Proxies for Current Account Balances

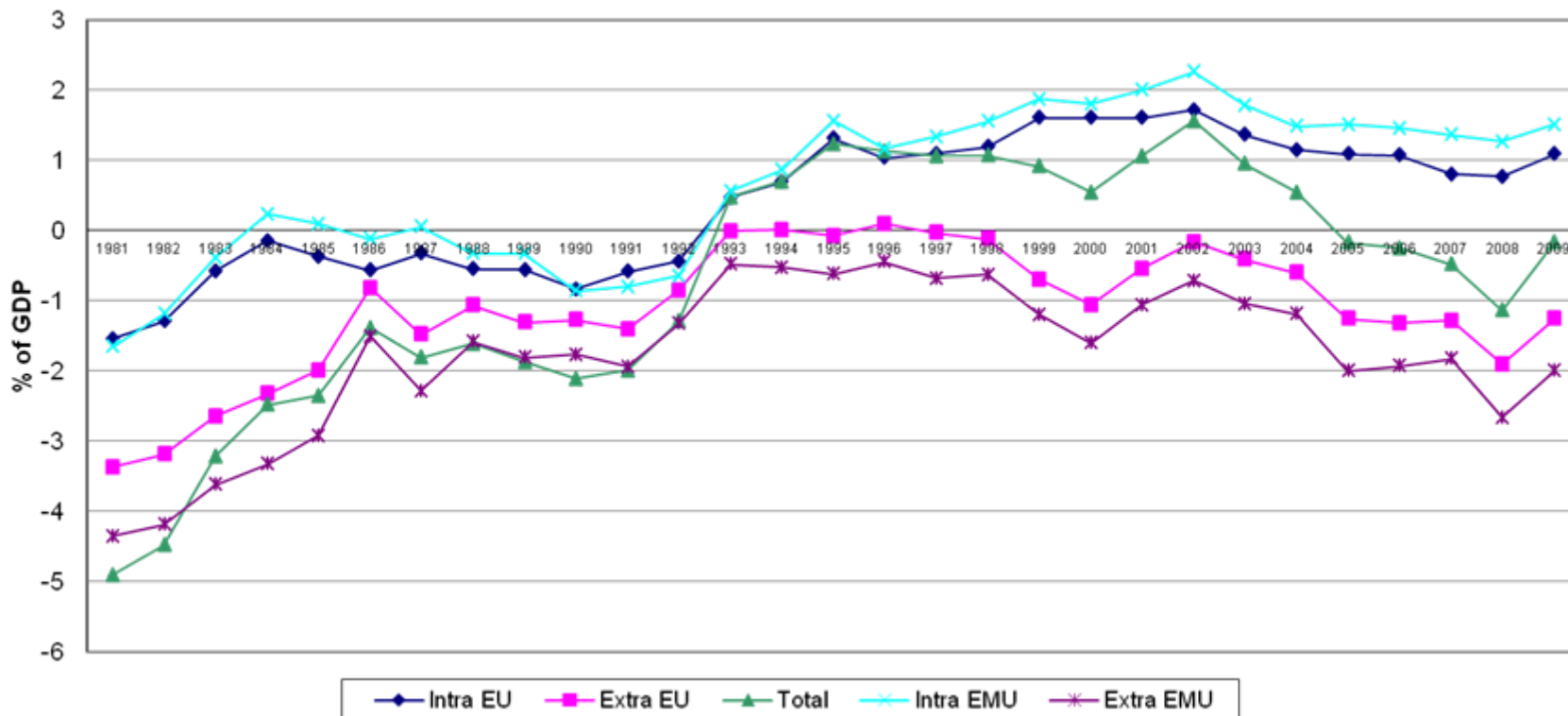
Figure 3: Corrections during the crisis



Adjustment dynamics are similar to current accounts (see Commission, 2010)

# Intra- and extra-euro area balances

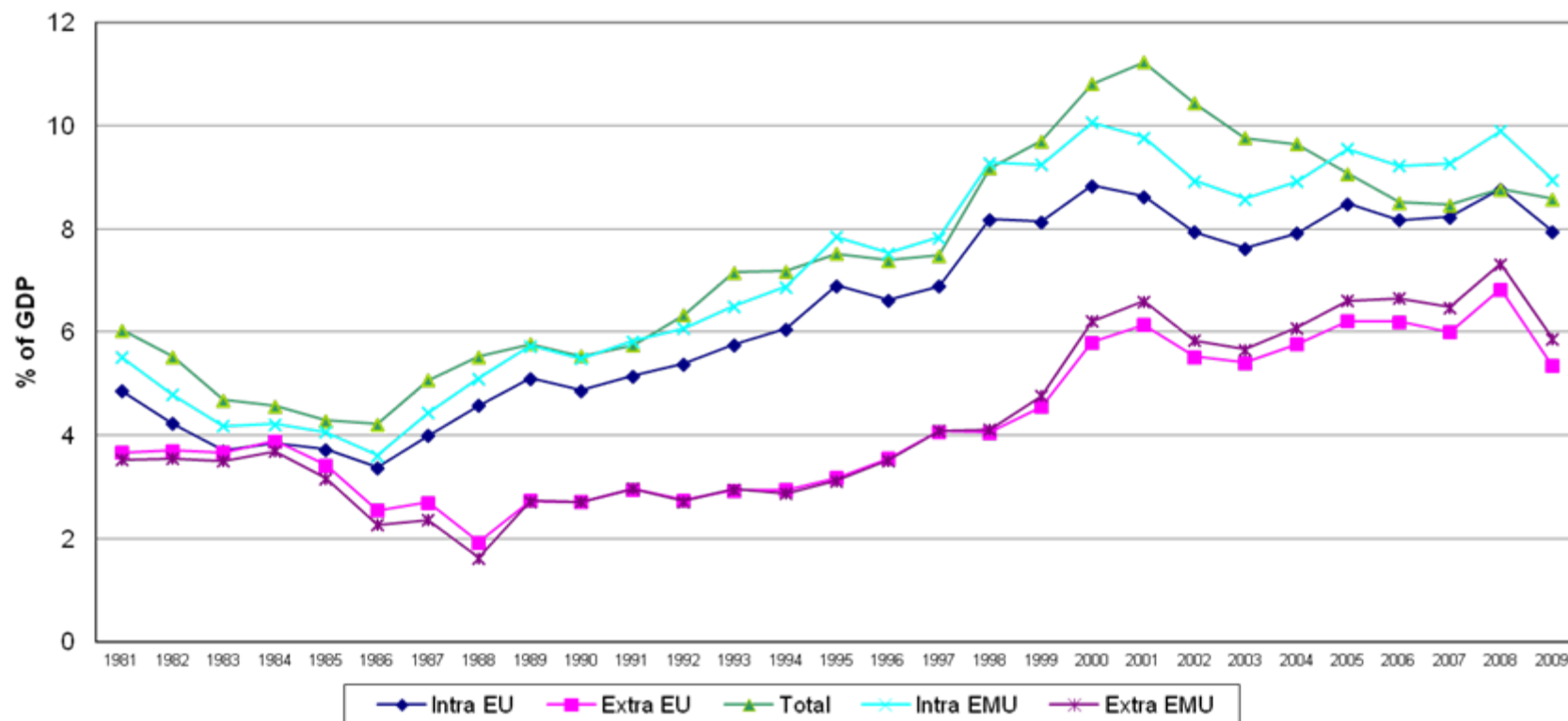
Figure 4A: Average Trade Balance



Average balances have been of opposite sign since the mid-1990s

# Intra- and extra-euro area balances

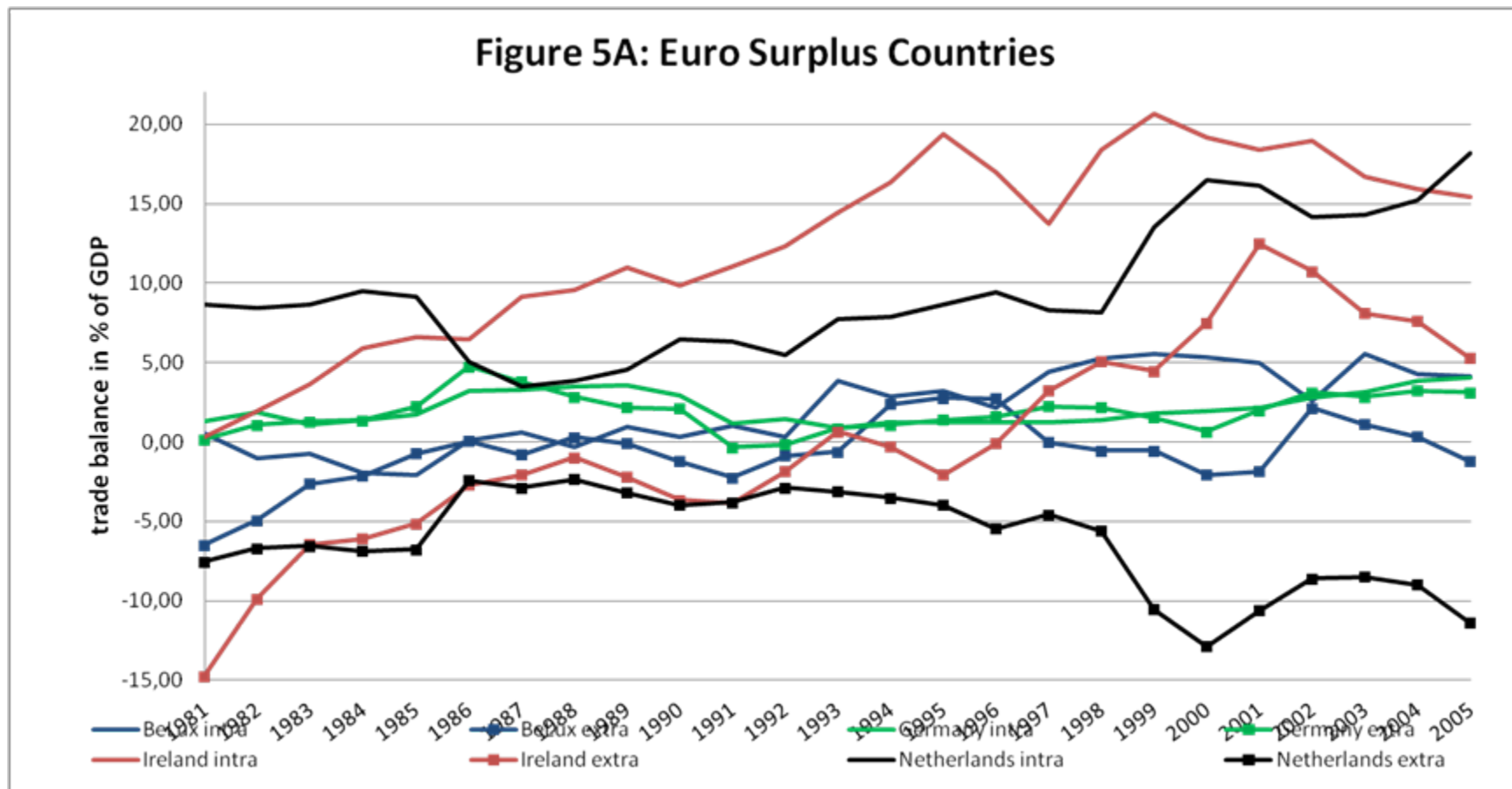
Figure 4B: Standard Deviation of Trade Balances



Imbalances are larger within the euro area than with the rest of the world.



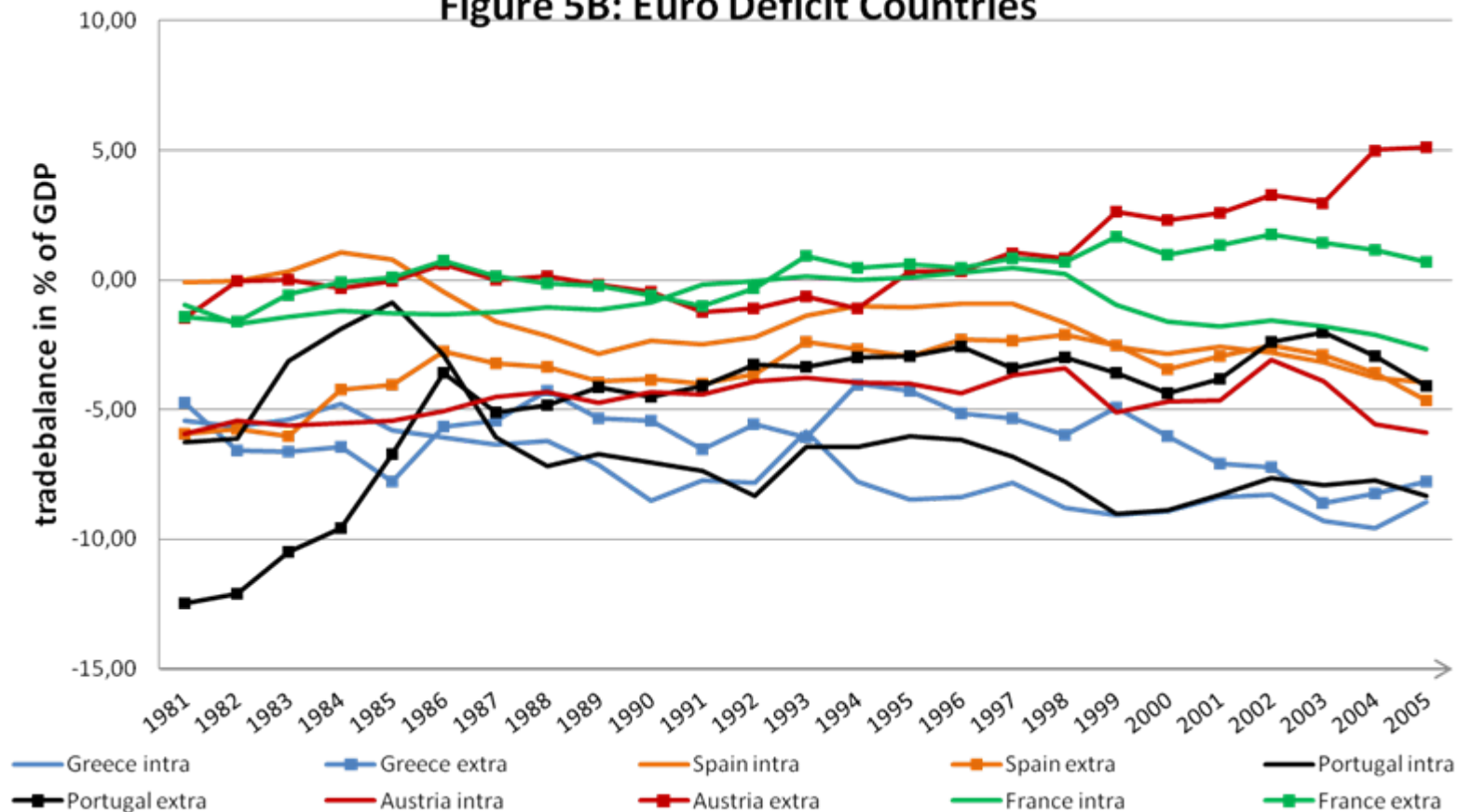
# Intra- and extra-euro area balances



Surpluses within the euro area do not imply overall surpluses...

# Intra- and extra-euro area balances

Figure 5B: Euro Deficit Countries



... and surpluses with the rest of the world do not imply surpluses with the euro area

# Intra- and extra-euro area balances

**Table 1: Intra and Extra Trade Balances**

| Share of Years of Same-sign Intra and Extra Balances            |         |           |          |         |           |
|---|---------|-----------|----------|---------|-----------|
|   | 1981-98 | 1999-2009 |          | 1981-98 | 1999-2009 |
| Belgium/Lux   | 44.44   | 42.86     | Austria  | 61.11   | 0.00      |
| France  | 83.33   | 0.00      | Portugal | 100.00  | 100.00    |
| Germany   | 88.89   | 100.00    | Spain    | 83.33   | 100.00    |
| Greece  | 100.00  | 100.00    | Finland  | 44.44   | 71.43     |
| Ireland   | 16.67   | 100.00    | Denmark  | 38.89   | 71.43     |
| Italy   | 94.44   | 0.00      | Sweden   | 66.67   | 14.29     |
| Netherlands   | 0.00    | 0.00      | UK       | 88.89   | 100.00    |
|   |         |           |          |         |           |
| Share of Years of Same-sign Changes in Intra and Extra Balances |         |           |          |         |           |
| Belgium/Lux   | 38.89   | 42.86     | Austria  | 61.11   | 42.86     |
| France  | 55.56   | 71.43     | Portugal | 61.11   | 57.14     |
| Germany   | 50.00   | 57.14     | Spain    | 72.22   | 85.71     |
| Greece  | 38.89   | 42.86     | Finland  | 44.44   | 57.14     |
| Ireland   | 55.56   | 57.14     | Denmark  | 77.78   | 14.29     |
| Italy   | 61.66   | 42.86     | Sweden   | 55.56   | 28.57     |
| Netherlands   | 22.22   | 14.29     | UK       | 66.67   | 42.86     |

The correlation between intra and extra balances is generally weak.

# Intra- and extra-euro area balances

**Table 2: Causality Tests Between Intra and Extra-Euro Area Trade Balances**

|         | <i>Intra =&gt; Extra</i> | <i>Extra =&gt; Intra</i> |             | <i>Intra =&gt; Extra</i> | <i>Extra =&gt; Intra</i> |
|---------|--------------------------|--------------------------|-------------|--------------------------|--------------------------|
| Belgium | 0.40                     | 0.44                     | Netherlands | 0.27                     | 0.60                     |
| Germany | 0.84                     | 0.54                     | Austria     | 0.16                     | 0.59                     |
| Greece  | 0.78                     | 0.24                     | Portugal    | 0.20                     | 0.14                     |
| Spain   | 0.13                     | 0.08                     | Finnland    | 0.09                     | 0.28                     |
| France  | 0.60                     | 0.85                     | Denmark     | 0.41                     | 0.12                     |
| Ireland | 0.07                     | 0.15                     | Sweden      | 0.38                     | 0.18                     |
| Italy   | 0.87                     | 0.99                     | UK          | 0.18                     | 0.53                     |

Note: Table entries are the p-values of an F-test of the significance of two lags of the potentially causal variable in a regression where two lags of the caused variable are used. All regressions are in first differences. Source: Own calculations

# Intra- and extra-euro area balances

- Intra balances have little information value for extra balances and vice versa.
- Global current account balances are not helpful to judge macroeconomic imbalances in the euro area.

# Determinants of trade balances

- Trade balance relative to GDP
- Euro-12 plus DK, SE, UK
- Annual data
- 1981-2006

# Determinants of intra balances

| Dependent Variable: intra balance |          |          |                            |                            |          |          |
|-----------------------------------|----------|----------|----------------------------|----------------------------|----------|----------|
|                                   | (1)      | (2)      | (3)                        | (4)                        | (5)      | (6)      |
| Method                            | FGLS     | FGLS     | PW-<br>OLS<br>with<br>PCSE | PW-<br>OLS<br>with<br>PCSE | FE       | FE       |
| Constant                          | -5.31*** | -5.32*** | -6.67***                   |                            | -4.20*** | -4.46**  |
| Dummy EMU                         | -4.22*** | -3.37*** | -4.97***                   | -3.40**                    | -7.44*** | -2.79    |
| DKSEUK                            | 4.57***  | 3.43***  | 5.63***                    | 4.47**                     |          |          |
| Dummy Non-EMU                     | 1.60     | 3.55*    | 0.28                       | 1.76                       | -2.52*   | 0.40     |
| GDP Per Capita                    | 0.33***  | 0.42***  | 0.40***                    | 0.50***                    | 0.35***  | 0.43***  |
| GDP Per Capita * EMU              | 0.19***  | 0.25***  | 0.22***                    | 0.24***                    | 0.28**   | 0.27**   |
| GDP Per Capita * DKSEUK           | -0.33*** | -0.30*** | -0.38***                   | -0.36***                   | -0.28    | -0.25    |
| GDP Per Capita * Non-<br>EMU      | -0.04    | -0.03    | 0.01                       | 0.03                       | 0.07*    | 0.11**   |
| Fiscal Balance                    | 0.04***  | 0.08***  | 0.05                       | 0.08                       | 0.17     | 0.22*    |
| Real Oil Price                    | 0.00     | -0.02*** | 0.00                       | -0.05***                   | 0.00     | -0.03*** |
| Time Dummies                      | No       | Yes      | No                         | Yes                        | No       | Yes      |

Within the euro area, balances follow differences in per-capita GDP. This effect has become stronger since the start of EMU. For DK, SE, and UK, the effect is not there.

# Determinants of intra balances

| Dependent Variable: intra balance |          |          |                  |                  |          |          |
|-----------------------------------|----------|----------|------------------|------------------|----------|----------|
|                                   | (1)      | (2)      | (3)              | (4)              | (5)      | (6)      |
| Method                            | FGLS     | FGLS     | PW-OLS with PCSE | PW-OLS with PCSE | FE       | FE       |
| Constant                          | -5.31*** | -5.32*** | -6.67***         |                  | -4.20*** | -4.46**  |
| Dummy EMU                         | -4.22*** | -3.37*** | -4.97***         | -3.40**          | -7.44*** | -2.79    |
| DKSEUK                            | 4.57***  | 3.43***  | 5.63***          | 4.47**           |          |          |
| Dummy Non-EMU                     | 1.60     | 3.55*    | 0.28             | 1.76             | -2.52*   | 0.40     |
| GDP Per Capita                    | 0.33***  | 0.42***  | 0.40***          | 0.50***          | 0.35***  | 0.43***  |
| GDP Per Capita * EMU              | 0.19***  | 0.25***  | 0.22***          | 0.24***          | 0.28**   | 0.27**   |
| GDP Per Capita * DKSEUK           | -0.33*** | -0.30*** | -0.38***         | -0.36***         | -0.28    | -0.25    |
| GDP Per Capita * Non-EMU          | -0.04    | -0.03    | 0.01             | 0.03             | 0.07*    | 0.11**   |
| Fiscal Balance                    | 0.04***  | 0.08***  | 0.05             | 0.08             | 0.17     | 0.22*    |
| Real Oil Price                    | 0.00     | -0.02*** | 0.00             | -0.05***         | 0.00     | -0.03*** |
| Time Dummies                      | No       | Yes      | No               | Yes              | No       | Yes      |

The effect of fiscal balances is small and insignificant when time dummies are used.



# Determinants of intra balances

Dependent variable: normalized bilateral trade balance between countries i and j

|                                   | A                   | B                              | C                    | D                     |
|-----------------------------------|---------------------|--------------------------------|----------------------|-----------------------|
| Relative GDP per capita           | 0.032**<br>(0.014)  | 0.042<br>(0.059)               | 0.009***<br>(0.0027) | 0.097<br>(0.085)      |
| (Relative GDP per capita)*EMU     | 1.55***<br>(0.41)   | 1.207***<br>(0.365)            | 0.169***<br>(0.028)  | 1.377***<br>(0.43)    |
| (Relative GDP per capita)*Dummy99 | -0.035**<br>(0.016) | -0.037**<br>(0.015)            | -0.004**<br>(0.02)   | -0.036<br>(0.122)     |
| EMU                               | -1.82***<br>(0.54)  | -1.417***<br>(0.475)           | -0.19***<br>(0.037)  | -1.656***<br>(0.551)  |
| Dummy99                           | 0.11***<br>(0.039)  | 0.109***<br>(0.036)            | 0.014***<br>(0.0038) | 0.133<br>(0.109)      |
| Government balance country i      |                     |                                |                      | 0.126**<br>(0.0049)   |
| Government balance country j      |                     |                                |                      | -0.0182**<br>(0.0073) |
| constant                          | -0.044<br>(0.036)   | -0.079<br>(0.079)              | 0.00<br>(0.00)       | -0.103<br>(0.089)     |
| #observations                     | 6237                | 6237                           | 6237                 |                       |
| R <sup>2</sup>                    | 0.062               | 0.17                           |                      | 0.103                 |
| Method                            | OLS                 | OLS with country fixed effects | GLS                  | OLS                   |

The results are similar for bilateral trade balances

# Determinants of extra balances

| Dependent Variable: extra balance |         |         |                  |                  |         |         |
|-----------------------------------|---------|---------|------------------|------------------|---------|---------|
| Method                            | (1)     | (2)     | (3)              | (4)              | (5)     | (6)     |
|                                   | FGLS    | FGLS    | PW-OLS with PCSE | PW-OLS with PCSE | FE      | FE      |
| Constant                          | -       | -       | -                | -                | -4.64   | -7.88   |
|                                   | 6.93*** | 9.30*** | 6.48***          |                  |         |         |
| Dummy EMU                         | -0.60   | -1.30   | -1.13            | -1.54            | -2.30   | -1.19   |
| DKSEUK                            | 8.37*** | 6.96*** | 9.74***          | 8.82***          |         |         |
| Dummy Non-EMU                     | -3.47** | -1.11   | -4.51            | -5.49*           | -5.78   | -5.91   |
| GDP Per Capita                    | 0.41*** | 0.47*** | 0.41***          | 0.49***          | 0.54**  | 0.66**  |
| GDP Per Capita*EMU                | 0.00    | -0.04   | 0.02             | -0.03            | 0.02    | -0.02   |
| GDP Per Capita*DKSEUK             | -       | -       | -                | -                | -       | -       |
|                                   | 0.35*** | 0.32*** | 0.40***          | 0.38***          | 0.92*** | 0.93*** |
| GDP Per Capita*Non-EMU            | 0.15*** | 0.00    | 0.19*            | 0.17*            | 0.30**  | 0.32*   |
| Fiscal Balance                    | 0.05*** | 0.06*** | 0.05             | 0.06             | 0.10*   | 0.09    |
| Real Oil Price                    | -       | 0.00    | -                | -                | -       | -0.01   |
|                                   | 0.01*** |         | 0.01***          | 0.04***          | 0.01*** |         |
| Time Dummies                      | No      | Yes     | No               | Yes              | No      | Yes     |

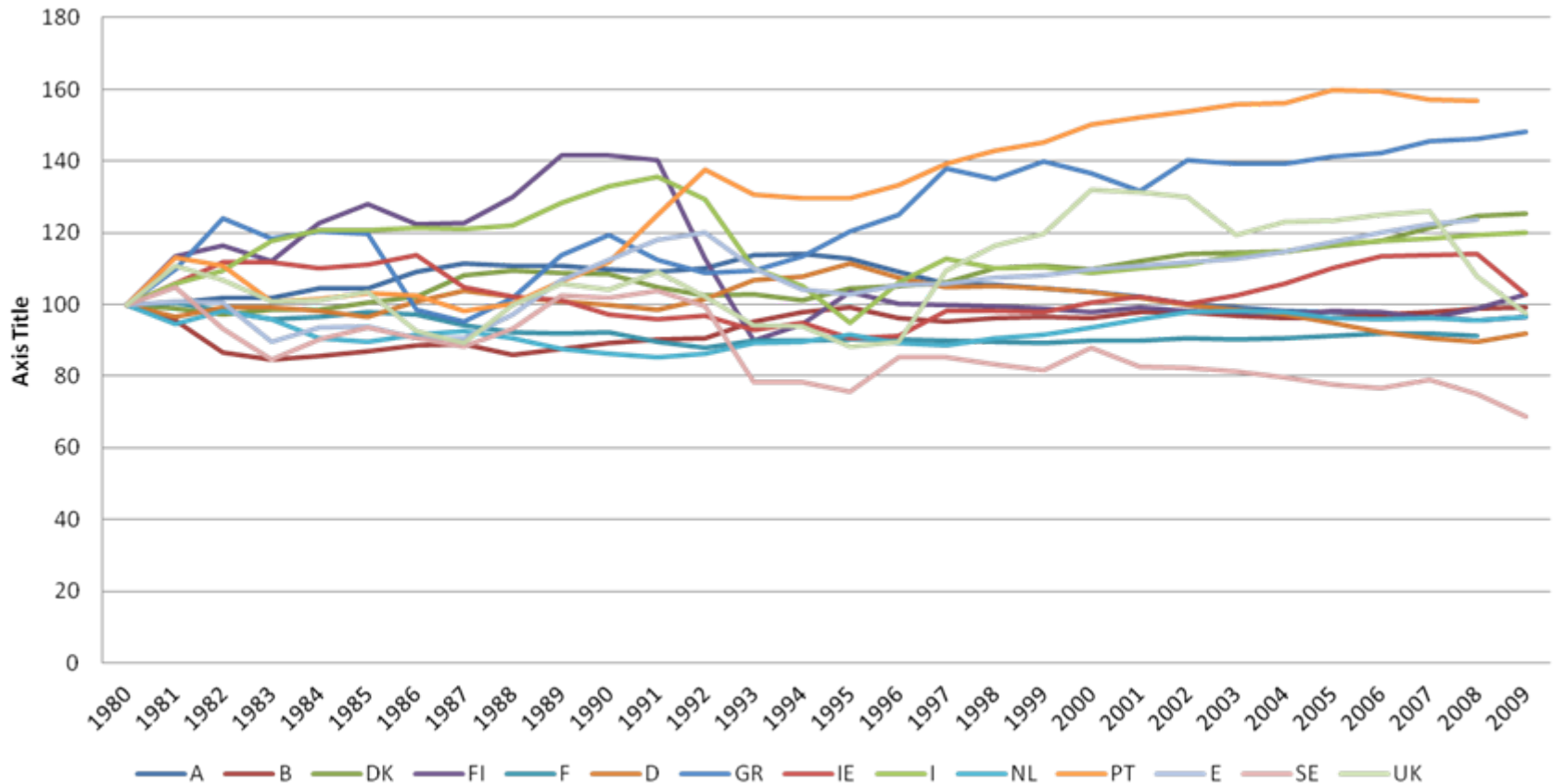
Balances with ROW follow differences in per-capita GDP. No euro effect. The effect has become stronger for non-euro countries after 1999.

# Competitiveness

- Relative unit labor cost
- Euro-area average as basis
- 1981 = 100

# Competitiveness

Figure 6: Relative Unit Labor Cost



Changes in competitiveness have remained small for most countries. Even for Sweden, Portugal and Greece, most changes occurred before 1995

# Competitiveness

The effect of RULC is significant but small when accounting for GDP per capita

Even for Portugal and Greece, RULC explains at most 1.1% of the increase in intra balances.

Results for GDP per capita remain unchanged.

No euro effect

| Dependent Variable: intra balance |           |           |           |
|-----------------------------------|-----------|-----------|-----------|
|                                   | (1)       | (2)       | (3)       |
| Method                            | FGLS      | FGLS      | FGLS      |
| Constant                          | -0.36     | -2.04     | -1.53     |
| Dummy EMU                         | -3.63***  | -2.28     | -3.20     |
| DKSEUK                            | 0.52      | 0.87      | -1.03     |
| Dummy Non-EMU                     | 1.03      | 2.19***   | 6.57***   |
| GDP Per Capita                    | 0.27***   | 0.40***   | 0.425***  |
| GDP Per Capita * EMU              | 0.16***   | 0.17***   | 0.173*    |
| GDP Per Capita *                  | -0.15**   | -0.202**  | -0.378*** |
| DKSEUK                            |           |           |           |
| GDP Per Capita * Non-EMU          | -0.022    | -0.01     | 0.075     |
| Fiscal Balance                    | 0.030**   | 0.069*    | 0.06***   |
| Real Oil Price                    | 0.00      | -0.017*** | -0.016*** |
| RULC                              | -0.037*** | -0.03***  | -0.04***  |
| RULC * EMU                        |           |           | 0.00      |
| RULC * DKSEUK                     |           |           | 0.058***  |
| RULC * Non-EMU                    |           |           | -0.06***  |
| Time Dummies                      | No        | Yes       | Yes       |

# Competitiveness

No effect of RULC when  
Time dummies are used.

Small effect for DK, SE, UK.

Table 6B: Extra-EMU Trade Balances

| Dependent Variable: intra balance |           |           |           |
|-----------------------------------|-----------|-----------|-----------|
|                                   | (1)       | (2)       | (3)       |
| Method                            | FGLS      | FGLS      | FGLS      |
| Constant                          | -5.13***  | -8.97***  | -11.03*** |
| Dummy EMU                         | -0.63     | -1.60*    | -2.65     |
| DKSEUK                            | 7.28***   | 7.45***   | 9.86***   |
| Dummy Non-EMU                     | -3.91***  | -4.64***  | -3.00     |
| GDP Per Capita                    | 0.39***   | 0.47***   | 0.478***  |
| GDP Per Capita * EMU              | -0.01     | -0.027    | -0.00     |
| GDP Per Capita * DKSEUK           | -0.31***  | -0.332*** | -0.181*** |
| GDP Per Capita * Non-EMU          | 0.16***   | 0.13**    | 0.182***  |
| Fiscal Balance                    | 0.06***   | 0.08***   | 0.08***   |
| Real Oil Price                    | -0.01***  | -0.00     | -0.00     |
| RULC                              | -0.014*** | -0.00     | 0.01      |
| RULC * EMU                        |           |           | 0.00      |
| RULC * DKSEUK                     |           |           | -0.06***  |
| RULC * Non-EMU                    |           |           | -0.03**   |
| Time Dummies                      | No        | Yes       | Yes       |

# Conclusions

- Without data for intra-euro area current accounts, policies addressing imbalances are likely to be misguided.
- But there may be political reasons for not constructing such data.

# Conclusions

- Intra-euro area capital flows promise to promote convergence.
- Where they have adverse macro economic effects, these should be addressed by improved financial market regulation.
- Competitiveness contributes little to explaining imbalances.
- Policies addressing competitiveness are not promising to reduce imbalances.