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OFFSHORING, RELOCATION AND THE SPEED OF CONVERGENCE IN THE ENLARGED EUROPEAN UNION

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Background

- Convergence is a key target of the enlarged EU:
  - In terms of real income
  - In terms of nominal convergence
- Fears of relocation in the EU-15: Are they justified?
- Convergence can change many aspects of the European and global economy over time: a dynamic analysis is called for.

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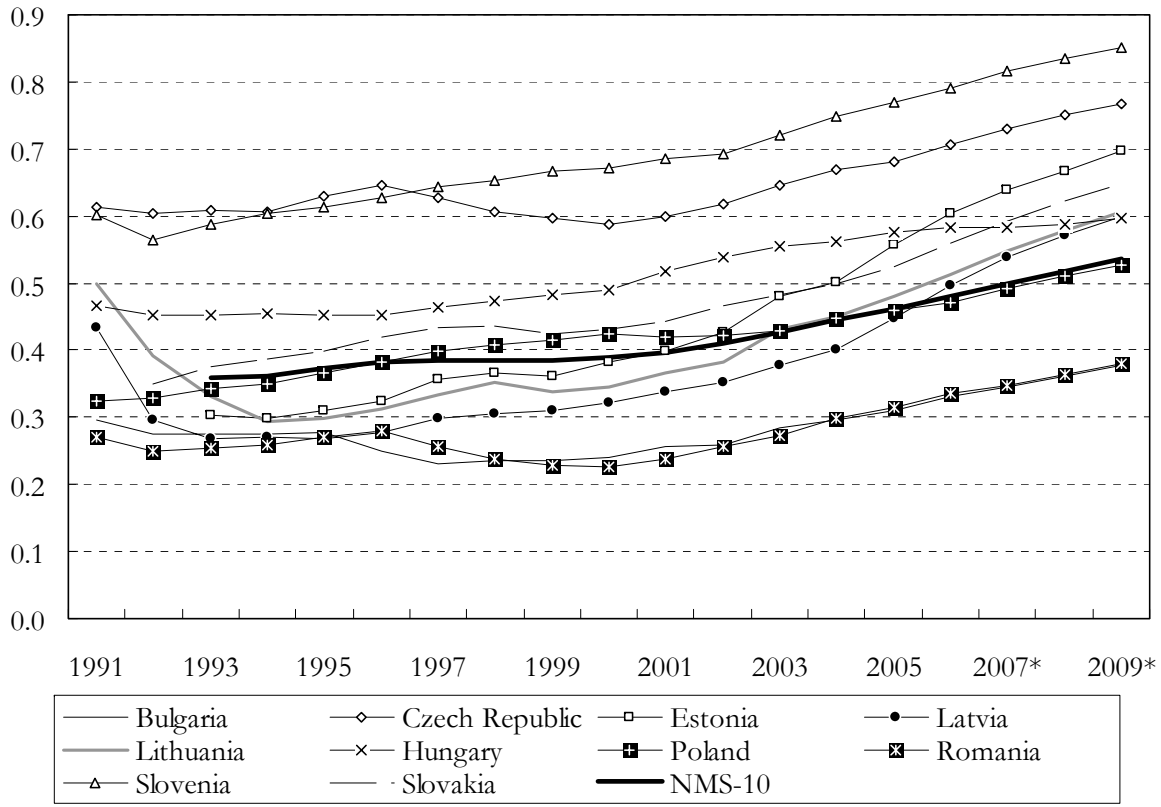
Figure 1. Real convergence: GDP per capita (at PPP) in the NMS, EU-15 = 1



Source: European Commission.

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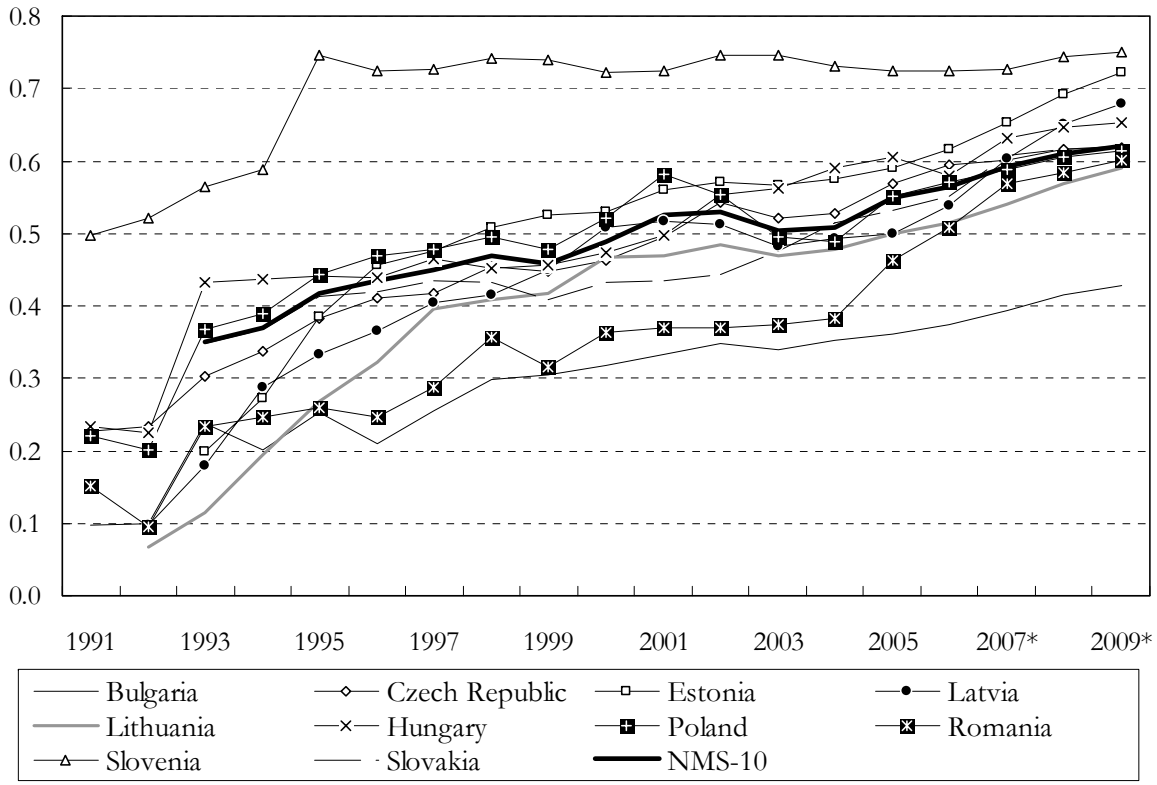
Figure 2. Nominal convergence: Price level (ratio of current exchange rate to PPP exchange rate) in the NMS, EU-15 = 1



Sources: OECD; International Monetary Fund, World Economic Outlook Database.

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Aims of the paper

- To model European real and nominal convergence in a dynamic two-region (NMS & EU-15) CGE framework
- To analyse the basic effects of offshoring in numerical terms, and
- To add some further aspects to this analysis compared to the earlier ones.

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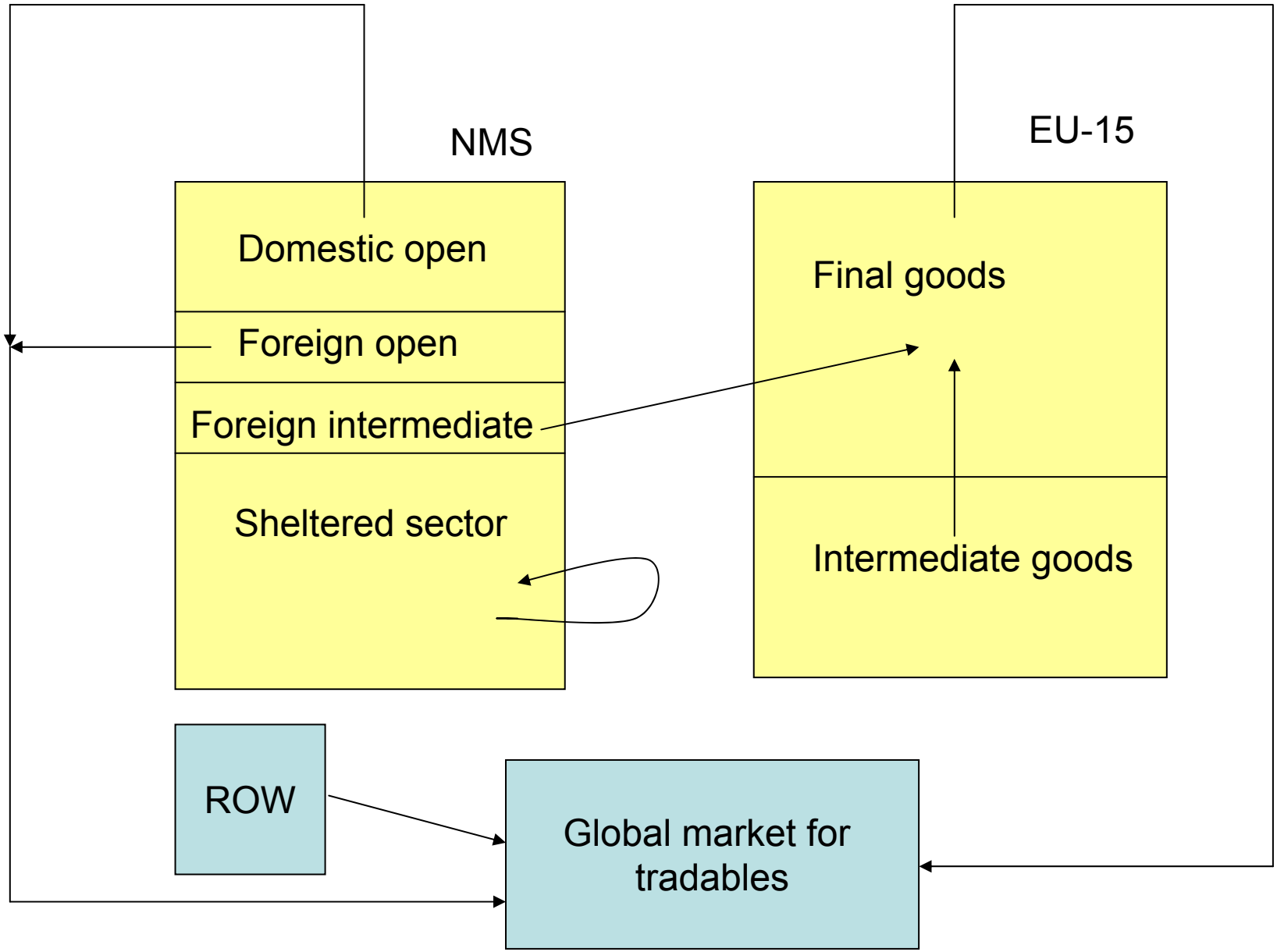
Fig. 3. Production structure of the model



The model for the NMS

- An enlargement of the seminal Balassa-Samuelson two-sector (open, sheltered) model under perfect competition, by
- adding to it endogenous investment decisions, consumption decisions, labour mobility with forward-looking behaviour and β-convergence, and
- By adding an element of endogenous growth so that FDI inflow boosts TFP growth in the NMS.

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The model for the EU-15

- The final goods firms invest at home and carry out offshoring through horizontal and vertical FDI in the NMS
- The intermediate goods firms in the EU-15 produce as based on orders by the final goods firms
- The productivity of the intermediate goods firms is less than that of the final goods firms
- There are transactions costs related to both types of FDI.

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The effects of offshoring

- As identified by Grossman and Rossi-Hansberg and Baldwin:
  - Productivity,
  - Job and
  - Price (terms of trade) effects.
- We now add some more and endogenise the offshoring decisions:
  - Competitiveness
  - Effect on national income
  - Effects through labour mobility
- and consider them in a numerical general equilibrium setting, including the balance in the global market for tradables.

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The offshoring decisions

- Horizontal FDI: a part of final goods production by the EU-15 firms is offshored to the NMS
- Vertical FDI: a part of intermediate goods demanded by the EU-15 firms in the final goods sector are offshored to take place in the NMS
- Both types of offshoring are modelled as optimal forward-looking investment decisions being influenced by costs related to offshoring.

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Calibration

- The model is calibrated as the year 2005 being the base year of equilibrium
- Parameters are primarily sought from the literature, but, true, some of them have been fixed more on an ad hoc basis.

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The basic results

- Baseline scenario: The model as based on the optimal behaviour involved in the model for the two regions (more integration in the form of offshoring). Inward FDI stock in the NMS will grow 3.5 times as compared to the initial.

- Alternative scenario: The FDI stocks by the EU-15 firms in the NMS are kept fixed at the initial level of 2005.

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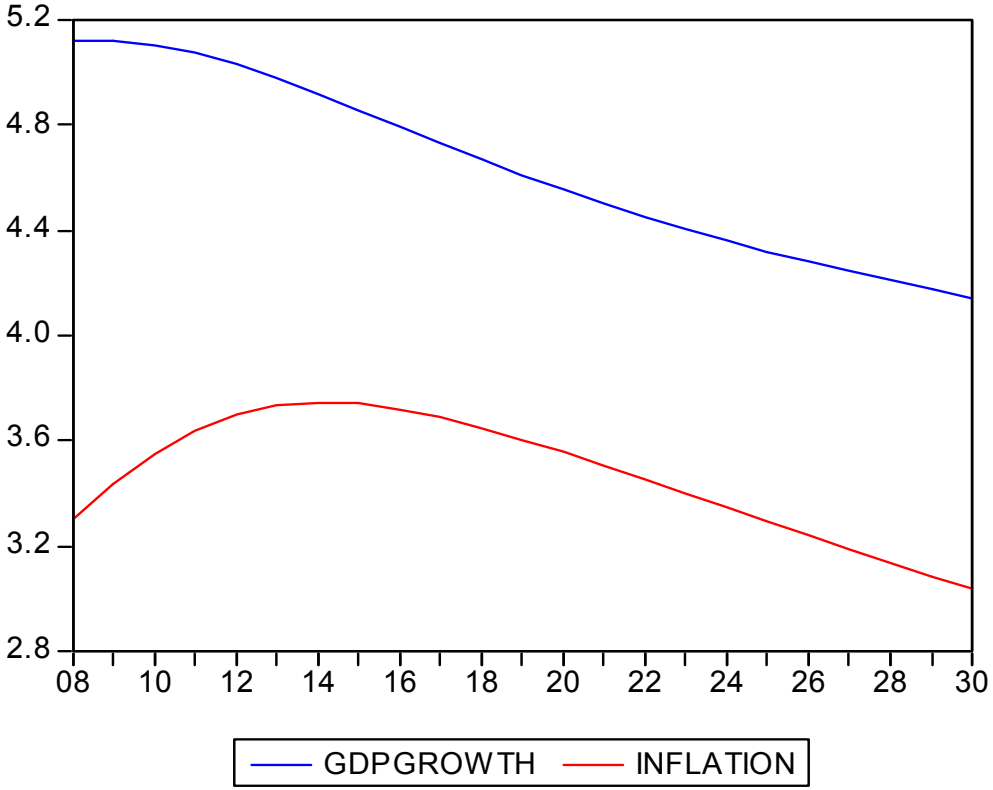
Figure 4. Trend of real GDP growth rate and inflation in the NMS in the baseline scenario, % *



* Trend of H-P filter.

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Figure 5. Real and nominal convergence of the NMS in the baseline scenario, RelQ = income (PPP), RelP = price and RelW = wage, EU-15 = 100

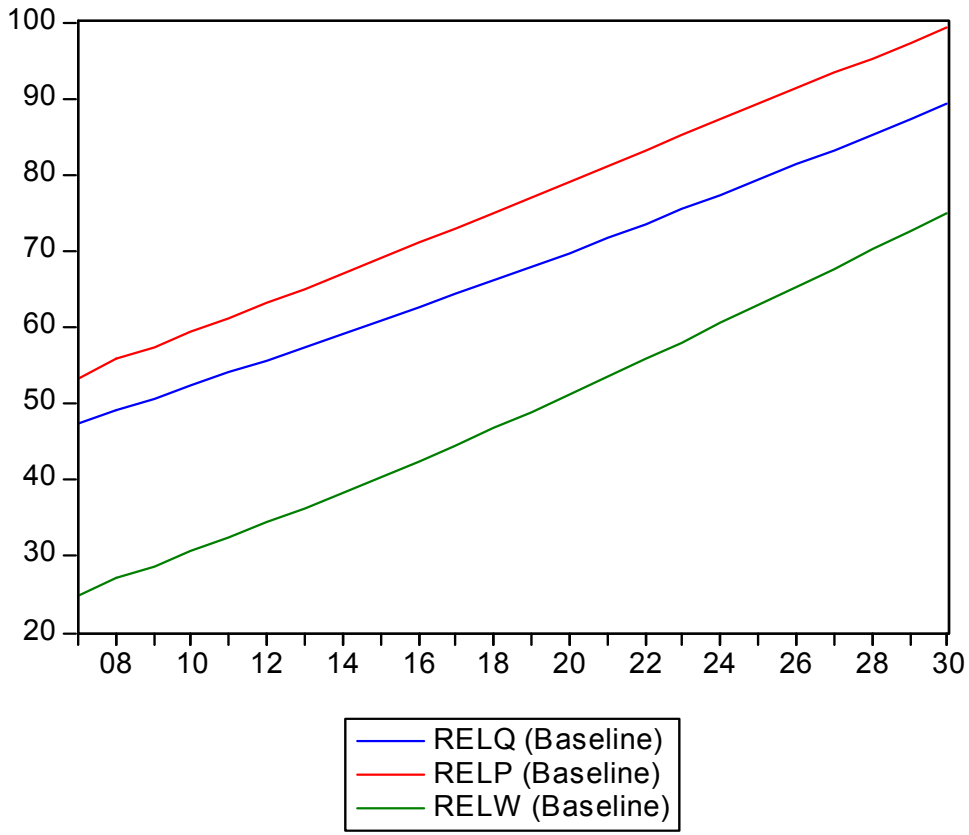

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Figure 6. The effect of more intensified integration on GDP volume (baseline in relation to the alternative scenario) in the NMS and the EU-15, per cent

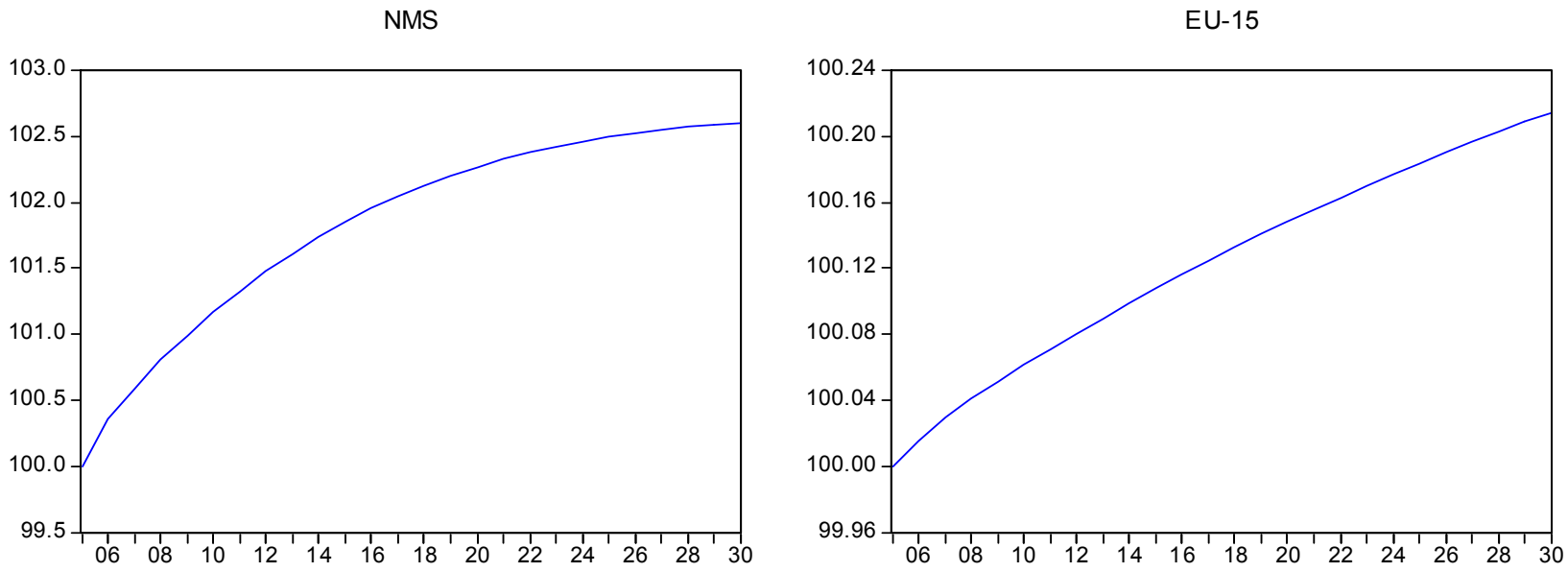

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Figure 7. The impact of more intensified integration on the EU-15 (baseline in relation to the alternative scenario), as to the levels of productivity, wage and GDP price, per cent

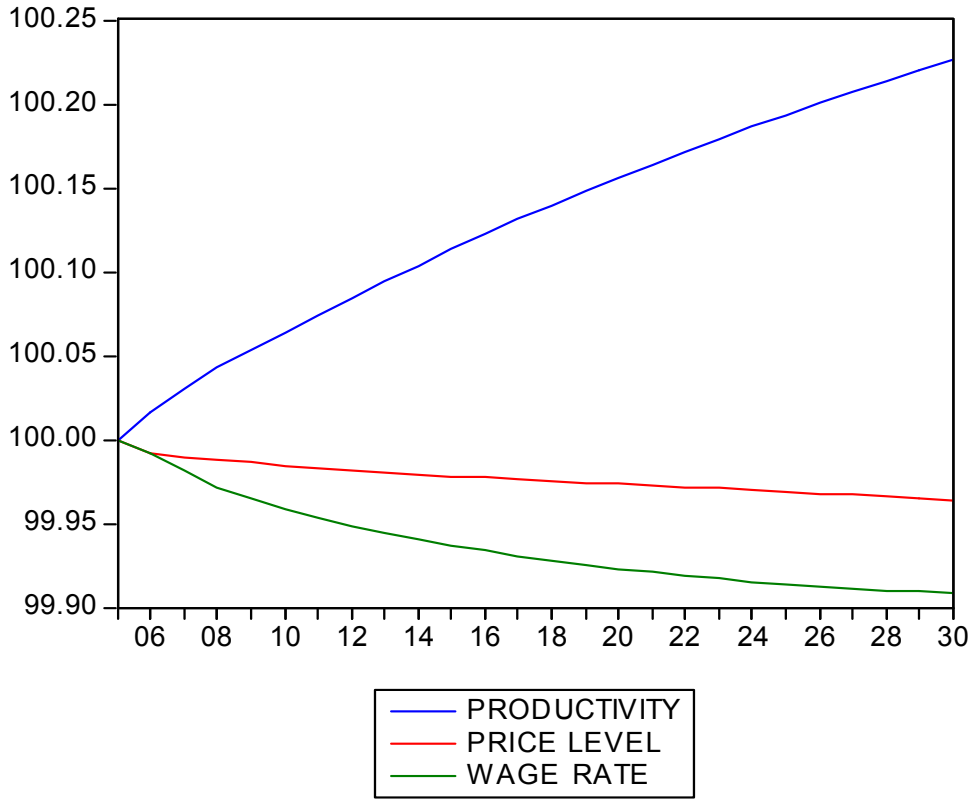

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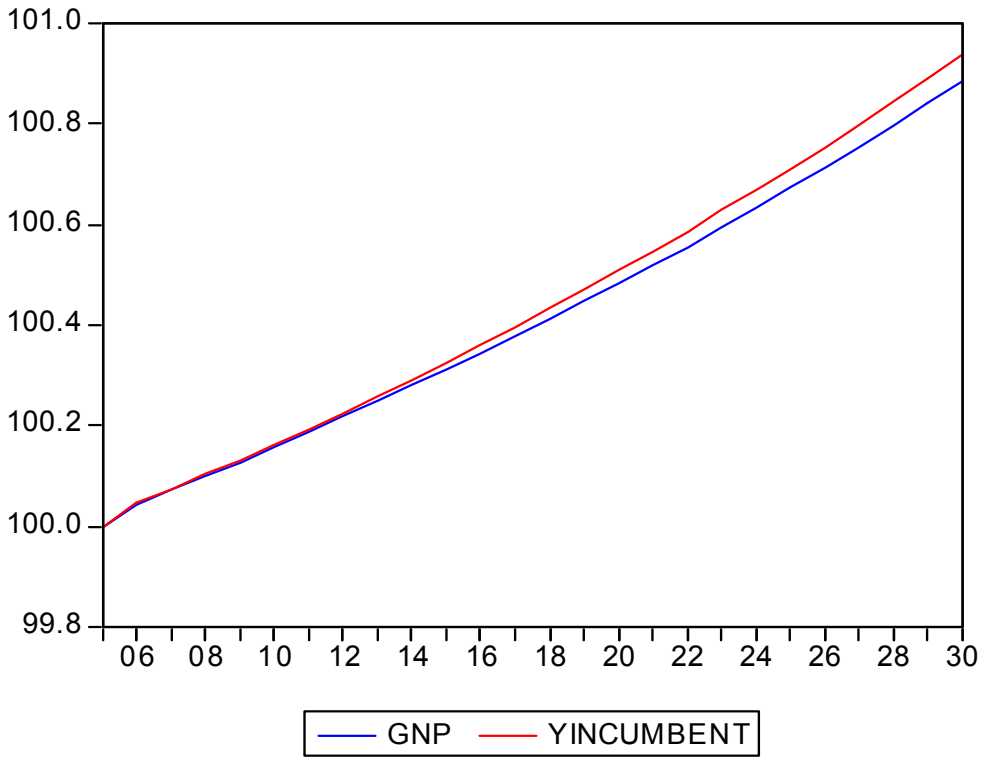
Figure 8. The impact of more intensified integration on the EU-15 (baseline in relation to the alternative scenario), as to the level of real gross national income (gnp) and the real income of the incumbent EU-15 population (yincumbent), per cent



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Some conclusions

- Admittedly, the simulations quite sensitively depend on some of the assumptions made.
- Deeper integration through more widespread offshoring between the NMS and EU-15 is a win-win case. However, it can lead to polarisation in factor shares in the EU-15.
- Fears of further relocation are not well founded. The interaction between the EU-15 and the NMS is limited through this channel as initially only 1.8% of EU-15 GDP is invested in the NMS in the form of FDI.

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