

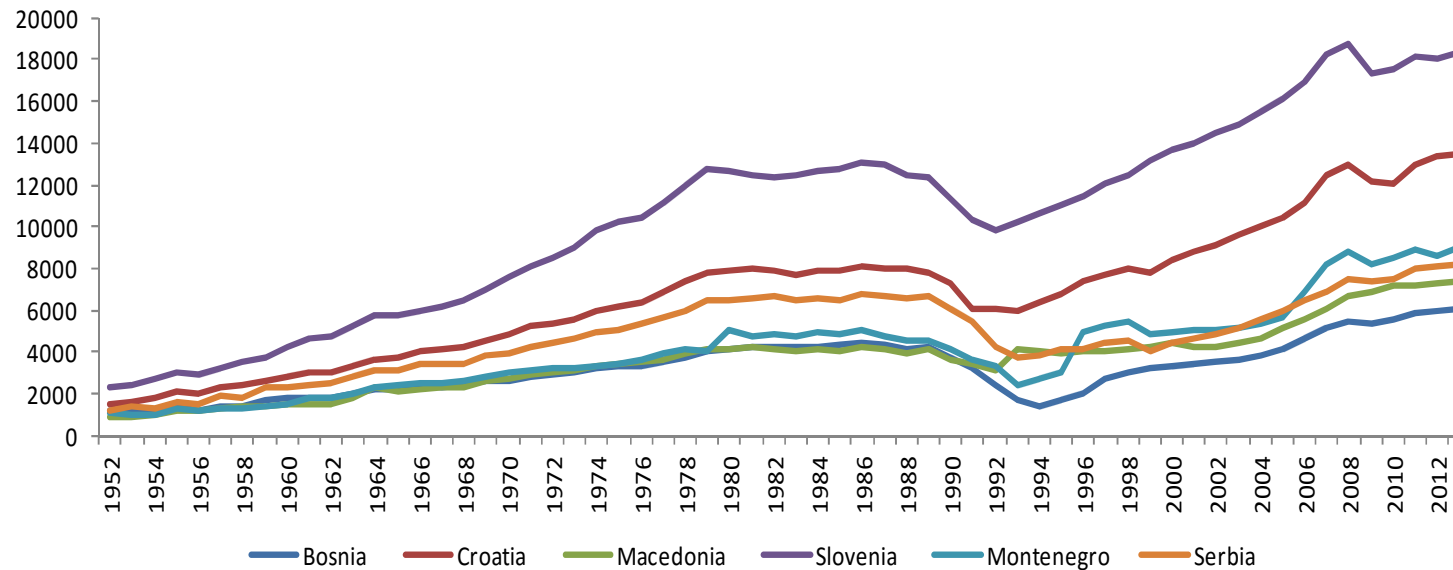
# NARRATIVE EXPLANATION OF BREAK POINTS AND CONVERGENCE PATTERNS IN YUGOSLAVIA AND ITS SUCCESSOR STATES 1952-2015

*Working Paper written for WIIWGDN Project*  
'Falling Behind and Catching Up in Southeast Europe

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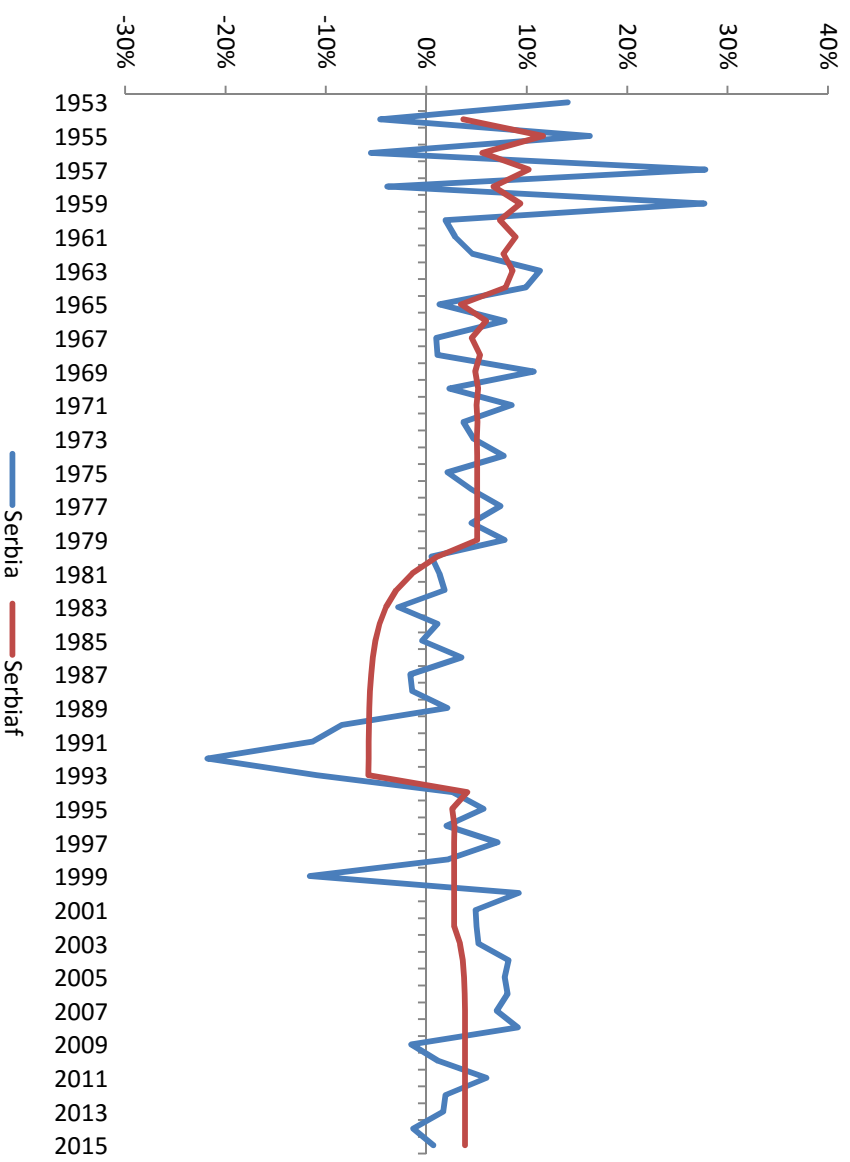
## Four aspects of the time series: GDP p/c 1952-2015

1. Break points in time series of individual successor states (Bai-Perron test)
2. Convergence of successor states ( $\sigma$ -convergence and  $\beta$ -convergence)
3. Pair convergence of successor states and benchmarks (Barnard-Durlauf)
4. Relationship of break point tests, convergence and narrative

# Bai-Perron test break points of time series of individual successor states

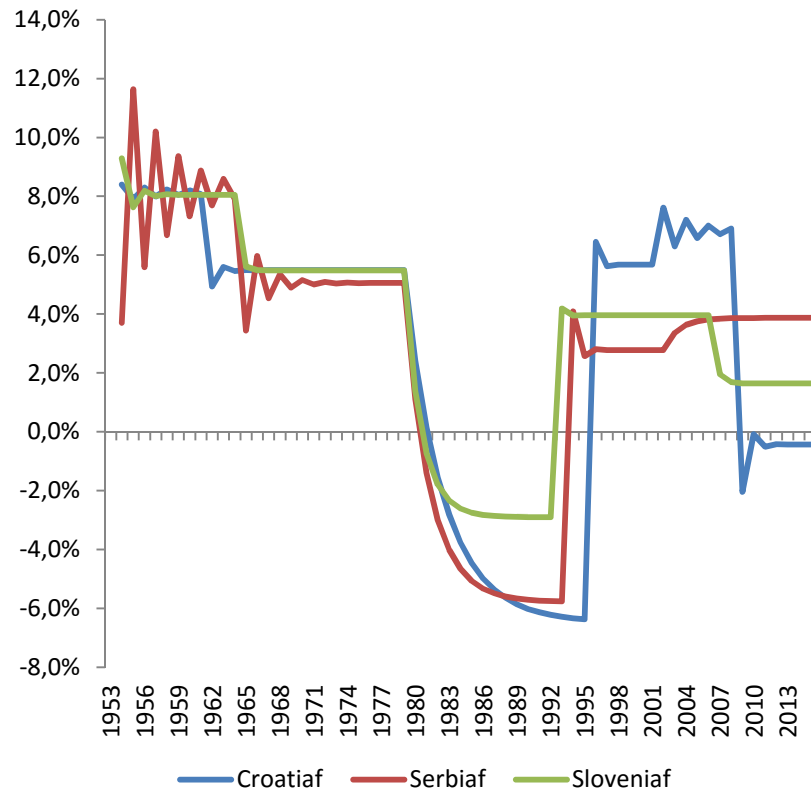
| Table 5.1 Structural break dates (Bai-Perron test) for the successor states using the whole sample, period 1952-2015 |           |           |           |           |           |
|--|-----------|-----------|-----------|-----------|-----------|
| .  | 1960-1969 | 1970-1979 | 1980-1989 | 1990-1999 | 2000-2015 |
| Bos. & Her   | 1967      | 1978      |           | 1995      | 2004      |
| Croatia  | 1965      |           | 1981      | 1992      | 2007      |
| Macedonia  | 1965      |           | 1980      | 1993      | 2002      |
| Montenegro   | 1965      |           | 1985      | 1994      | 2007      |
| Serbia   | 1965      |           | 1980      | 1994      | 2003      |
| Slovenia   | 1965      |           | 1980      | 1993      | 2007      |
| Source: authors' calculations  |           |           |           |           |           |

# The Bai-Perron test: example of Serbia

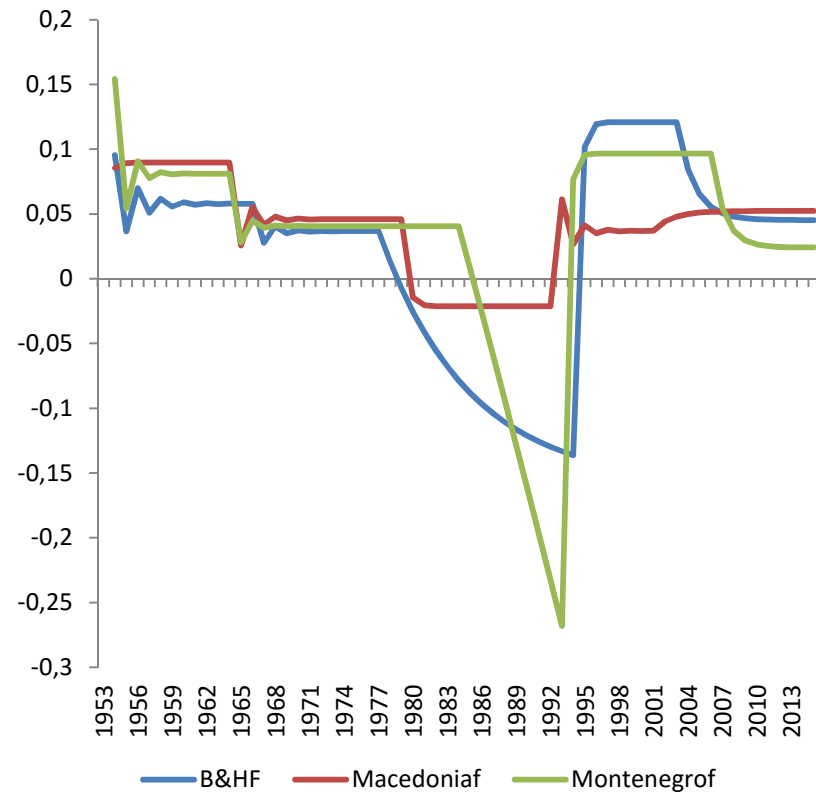


# Bai-Perron test

## Developed successor states (above Yu average)

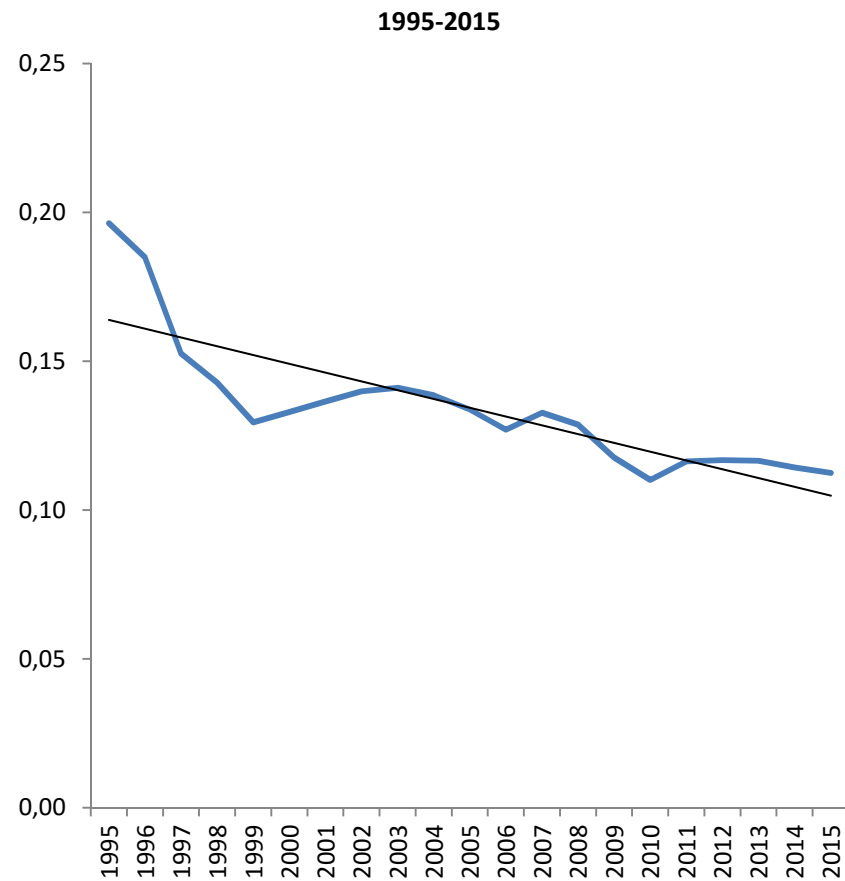
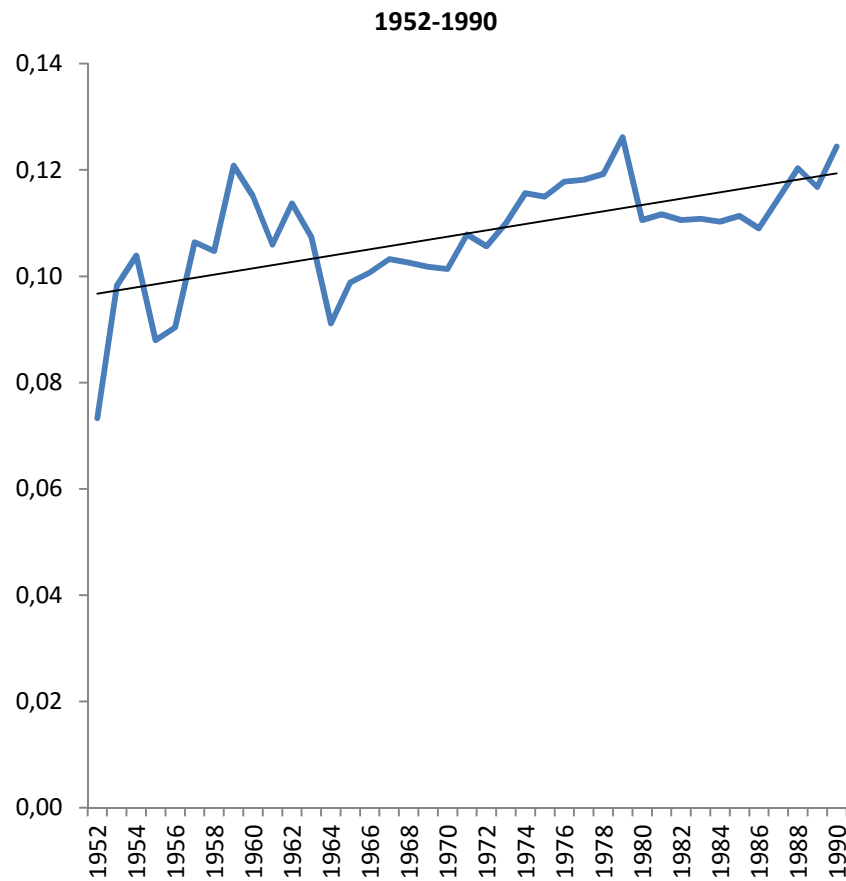


## Less developed successor states (below Yu average)

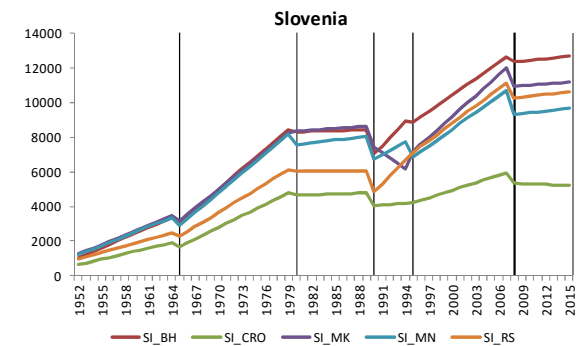
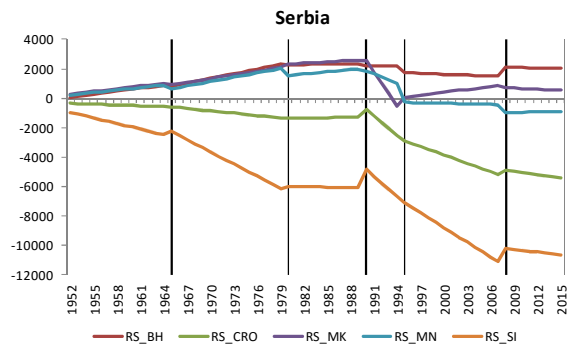
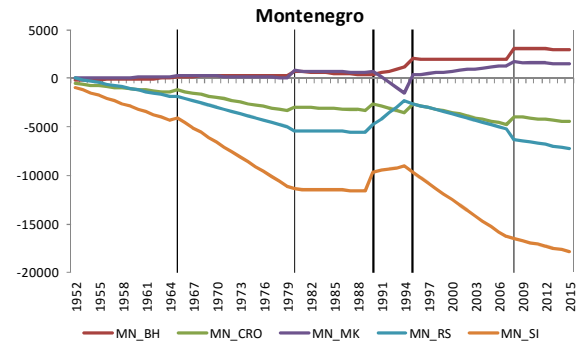
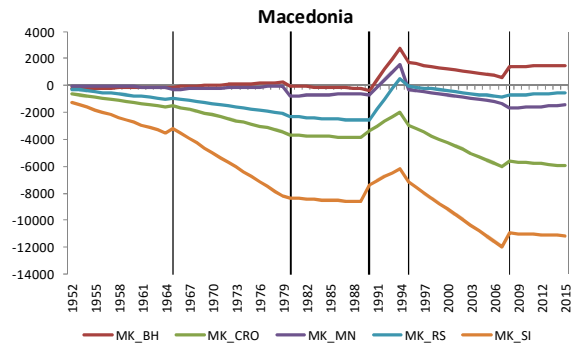
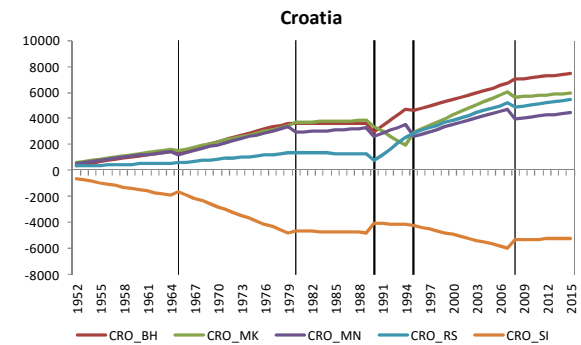
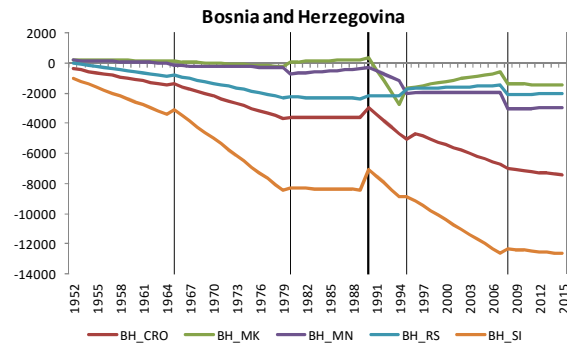


# $\sigma$ -convergence and $\beta$ -convergence gives among successor states

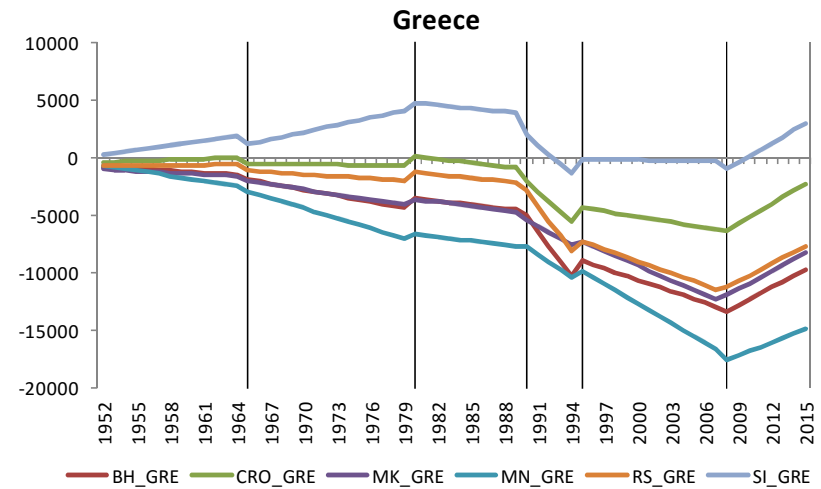
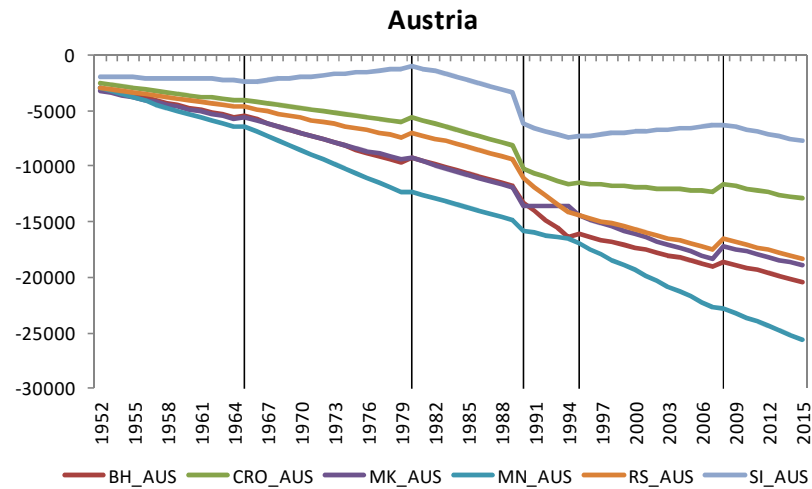
same result: socialist/Yugoslav divergence and capitalist/independent convergence



# Pair convergence: successor states: no change in pattern



# Successor state's pair convergence with benchamrks divergence

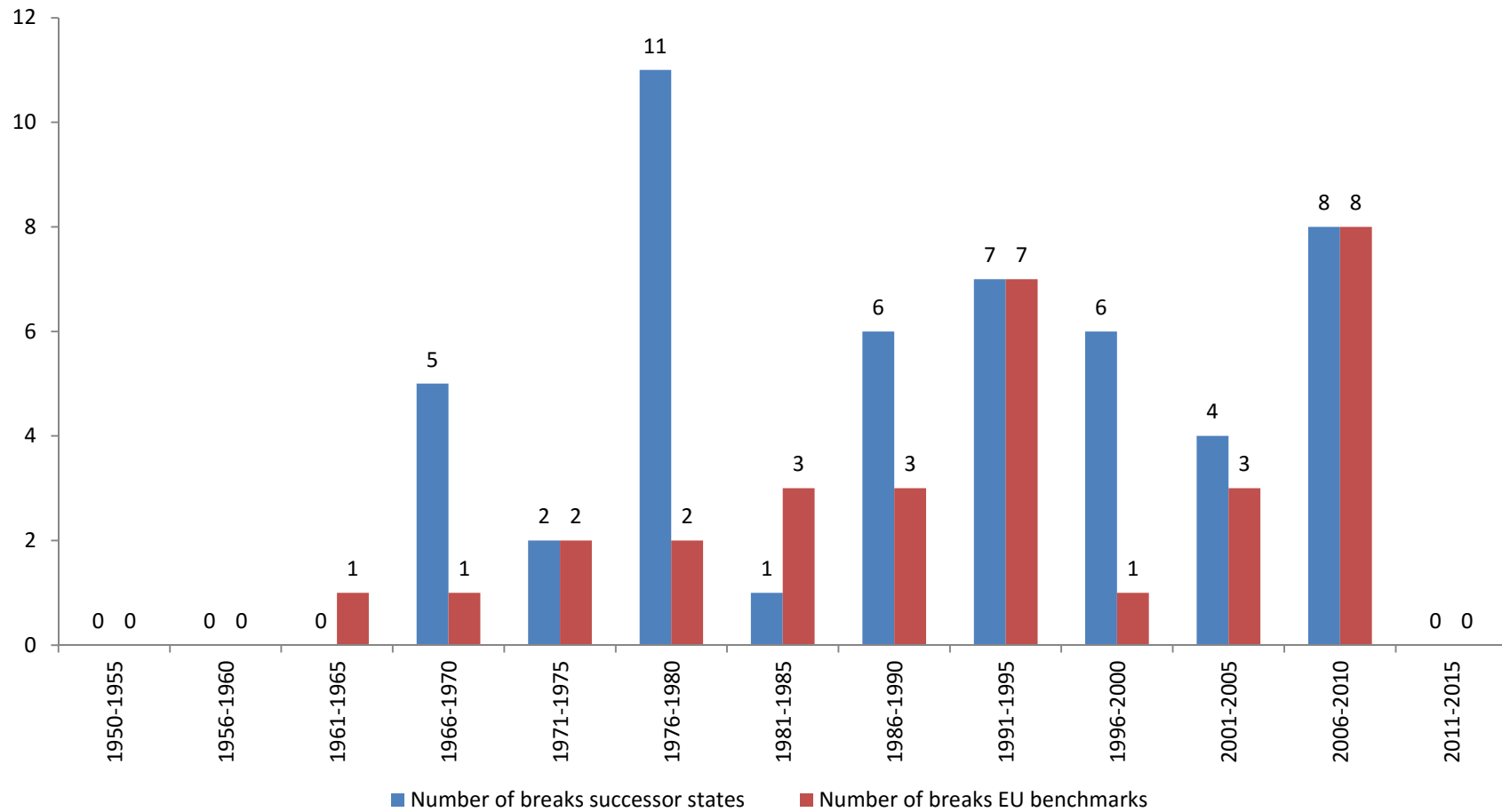




# The lag in perspective: the Croatian case

|                          | <b>Slovenija<br/>(3% growth rate)</b> | <b>Austrija<br/>(1,5% growth rate)</b> | <b>EU prosjek<br/>(2% growth rate)</b> |
|--------------------------|---------------------------------------|--|--|
| Initial value (ppu Euro) | 18 093                                | 38 541                                 | 27 394                                 |
| Croatian growth rate 2%  | Increasing lag                        | 170 years                              | Never, parallel growth                 |
| Croatian growth rate 3%  | Never, parallel growth                | 57 years                               | 53 years                               |
| Croatian growth rate 5%  | 25 years                              | 25 years                               | 18 years                               |

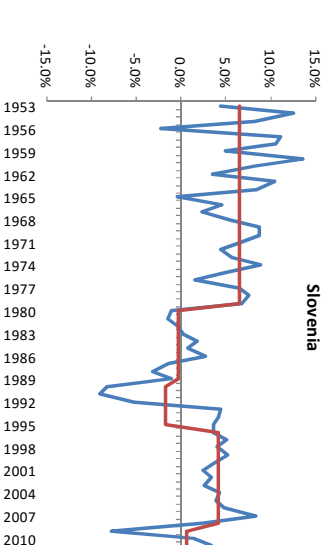
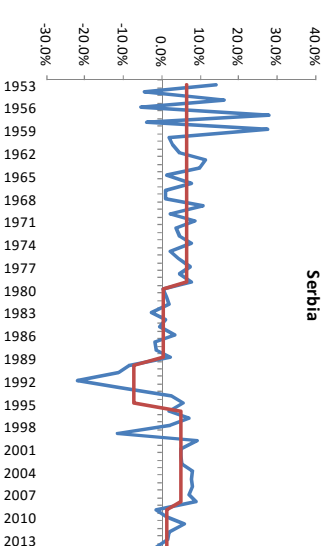
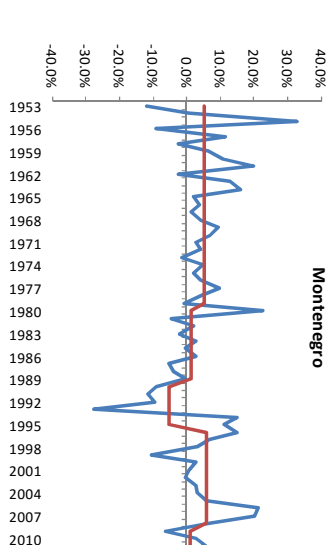
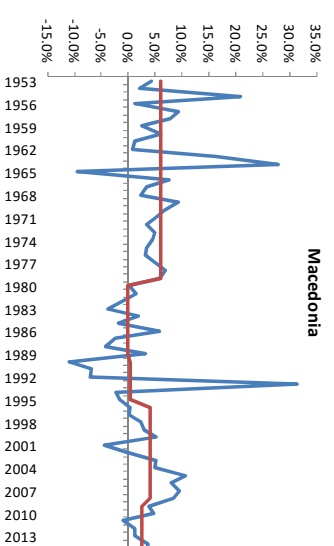
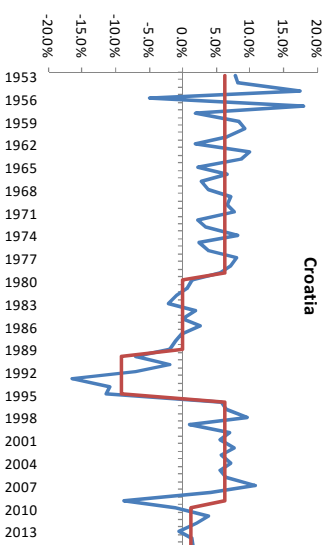
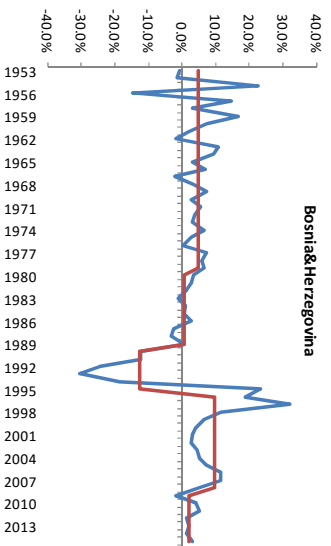
# Pair convergence break points: successor states and benchmark



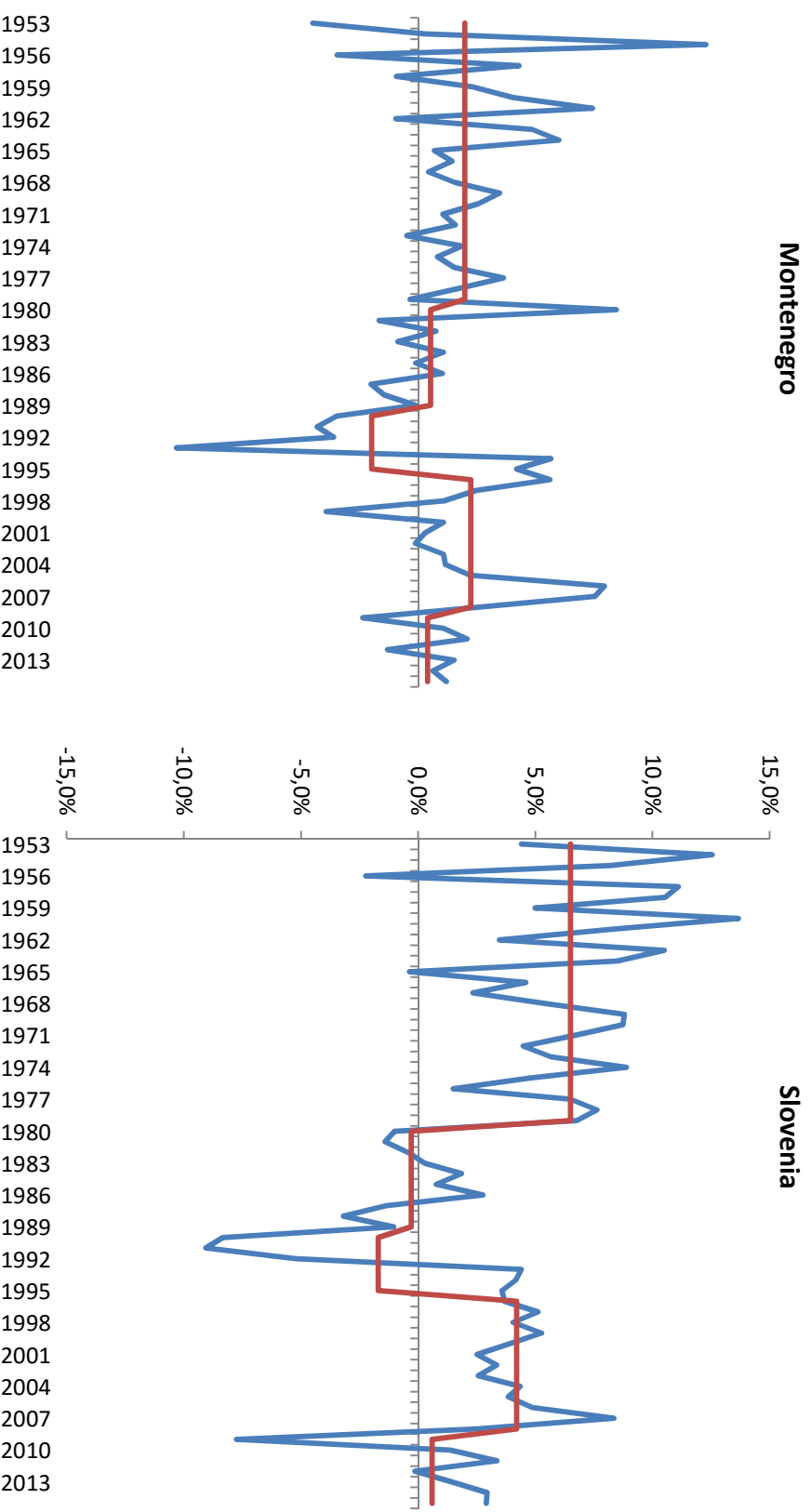
# Average growth rates for narrative periods

| Table 5.2: Average growth rates for narrative periods |           |           |         |          |              |        |          |
|---|-----------|-----------|---------|----------|--------------|--------|----------|
|   |           | B. and H. | Croatia | Macedon. | Montene<br>g | Serbia | Slovenia |
| Whole period  | 1952-2015 | 1.94      | 2.88    | 2.77     | 2.95         | 2.15   | 2.84     |
| 'SOCIALIST' PERIOD                                    |           |           |         |          |              |        |          |
| Succesf. socialism                                    | 1952-1979 | 4.8       | 6.4     | 6.0      | 5.5          | 6.5    | 6.5      |
| Socialist stagnati                                    | 1980-1989 | 0.5       | 0.0     | -0.1     | 1.4          | 0.4    | -0.3     |
| 'CAPITALIAST' PERIOD                                  |           |           |         |          |              |        |          |
| Wartime capital.                                      | 1990-1994 | -9.6      | -8.7    | 0.8      | -8.6         | -10.0  | -2.8     |
| Succesf. Capital.                                     | 1995-2008 | 9.1       | 5.1     | 3.7      | 6.3          | 5.0    | 4.1      |
| Capital. Stagnat                                      | 2009-2015 | 2.2       | -0.2    | 2.5      | 1.1          | 1.2    | 0.6      |
| Peaceti. capitalis                                    | 1995-2015 | 6.8       | 3.3     | 3.3      | 4.6          | 3.7    | 3.0      |
| Source: authors' calculations                         |           |           |         |          |              |        |          |

# Narrative break points



# Narrative periods: exceptions:



# Some commonalities

- No successor state ever experienced Modern economic growth in either regime
- In terms of growth patterns no change with regime replacement (a spurt and a stangation)
- All growth accelerations were temporary spurts
- Independence and transformation did not lead to acceleration or convergence (no change on development gradient)
- The lag behind the European core is increasing
- Vulnerability to external shock, inability to adapt to shocks which lead to stangation
- Spurts linked to external debt, importing savings
- Unchanged gradient among successor states

## Four useful spectacles:

- Time series of successor states GDP p/c 1952-2015
- - Simon Kuznets *Modern Economic Growth*
- - Alexander Gerschenkron *Spurts that fail*
- - Vladimir Pertot *Reflexive interventionism*
- - Branko Horvat *It's the political economy, stupid*

# What is needed for convergence?

- Growth, but not any growth

## **Modern Economic Growth**

- Simon Kuznets (1966):  
Persistently high growth rates over a long period with restructuring in an acceptable social environment
- Elements of definition
  - High growth rates (above 5%, doubles income every 16 years)
  - Over a long period (30 years or longer, a couple of cycles)
  - Restructuring (ease of resource mobility)
  - Acceptable social environment (democracy and accountability)



# 10 possible reasons for MEG

- 1: EFFICIENCY DIVIDEND
- 2: CYLES I POST-RECESSION BOOM
- 3: BETA CONDITIONAL CONVERGENCE IN EU
- 4: EU CONVERGENCE MACHINE
- 5: POSITIVE MEMBERSHIP SHOCK
- 6: REDUCING INTERNAL GROWTH BARRIERS
- 7: ADVANTAGES OF BACKWARDNESS
- 8: WORLD POST RECESSION BOOM
- 9: NATURAL MONIOPOLY (POSITION, RESOURCES)
- 10 LUCK