

Discussion of

DRIFT AND BREAKS IN LABOR PRODUCTIVITY

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Contributions

- dynamics in productivity growth ~ key issue for public policy
- international data ~ Australia (market sector, all industries), Euro-zone, Japan, UK (linked, post 1971 sample) and US (business, non-farm business, manufacturing)
- *great* competence and care in measurement and estimation
- confidence intervals via spectral bootstrapping for variance ratio statistic

Results

- mixed evidence on possible trend breaks in productivity growth (Euro-zone, UK linked series, US business sector)
- evidence for random walk time-variation (Australia, Euro-zone, US manufacturing; weakly in UK linked series, US non-farm business)
- estimated time-varying trend ~ matching some of narrative, trend break evidence
- 2-4% of variability in productivity growth due to permanent component

Approach

- simple way to capture time variation ~ trend breaks
 - Perron&Bai 2003 procedure of sequential estimation of multiple dates
 - Wald-tests, bootstrap critical values
 - low power in random walk process (Cogley&Sargent 2005)
- more flexible way to capture time variation ~ time-varying parameters
 - AR(1) model of productivity growth, with possibly non-constant volatility ($\lambda > 0$) in coefficients
 - Stock&Watson 1996, 1998: build up distribution of Wald-statistics in tests for joint break in slope and intercept in simulated model, conditional on grid of values of λ

- pick λ_{MUB} as median of its simulated Wald-statistics distribution closest to Wald-statistic in constant coefficient model
 - based on density of λ and estimated breaks in coefficient volatility, compute time-varying mean growth rates, along with confidence intervals
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- permanent part of productivity growth
 - Cochrane 1988: variance ratio statistic
 - confidence intervals via spectral bootstrapping, supporting Monte Carlo evidence for good coverage

Quibbles & Suggestions

1. what do we really gain from TVP-MUB? ~ in what sense is this approach superior to other, more naive ones in measuring time-varying trend (cf. HP graph of Euro-zone and UK in presentation)?
 - depends on specific economic question asked... but then, what is this question?

2. current paper: univariate, unconditional, in-sample analysis
 - direct interest for policy: what determines productivity growth?
 - extension 1: out-of-sample forecast of time-varying productivity growth
 - extension 2: search for explanatory (preferably model based) variables for time-varying productivity growth

3. 'equilibrium productivity growth'

- what *equilibrium*? ~ without model, term *trend* might be more appropriate

4. how to think of (mixed) results in different countries

- tell story for evolution of productivity, especially in Japan and Australia

5. are estimated λ s in Table 2 and PDFs of λ in Figure 2 consistent?

6. different sample periods in countries

- does UK sample end in 1996:4 or 2005:3?
- for int'l comparison, further evidence on intersection of periods