Productivity, Employment and Economic Fluctuations

Dr. Michael Alba and Dr. Lawrence Dacuyucy
De La Salle University

Questions of interest

• Do good things really come out after recessions such as retooling or reorganizations that will contribute towards significant improvements in productivity?

• How do we statistically measure the impact of recessions or negative economic shocks on productivity?

• Do technological improvements result in positive changes in employment or are they biased against labor?
**General methodology**

- Extract cyclical components of macroeconomic time series
- Measure degree of correlation for each series’ cyclical component and the aggregate cycle
- Utilize the Structural Vector Autoregression Framework (SVAR)

---

**Findings: macroeconomic instability, fluctuations and investments**

- Within an unstable macroeconomic environment, trade and capital account reforms were drastically introduced which opened up the economy to competition. During times of macroeconomic instability, economic buffers are rendered limited by prolonged fiscal stress and coupled with heightened competition, firms’ willingness to invest will be adversely affected.
- Fluctuations in investments have been accentuated by fluctuations in output especially during the 90s. Fluctuations in investments are more pronounced during the period of liberalization and are procyclical relative to output fluctuations.
- Episodes of disinvestments are evidently significant during the 90s. Wide amplitude in investments indicate tremendous uncertainties compared to the relatively protected period prior to the 80s.
Findings: employment

- Industrial employment comoves negatively relative to services and agriculture.
- Services continue to act as the principal labor absorber.

Figure 4: Cyclical components of Output, Employment and Industry Employment
The nature of the TFP – Business cycle interaction

- Evidence: in the short run, total factor productivity is procyclical.
- Accounting for business cycle effects radically changes the behavior of aggregate productivity, indicating that channels through which business cycle fluctuations affect productivity exist.
- How does the economy react to temporary downturns?
  - Retooling (organizational capital) known as opportunity cost explanation
  - Learning by doing (lack of demand provides a case for implementing retrenchment)
- In the long run, simulation evidence point to the occurrence of organizational changes during recessions. This may partly explain why absorption into the industrial sector is sluggish. However, without the necessary upgrades brought about by significant investment expenditures, productivity growth will not be sustained.

Figure 3: Business cycles and Total Factor Productivity
Policy implications

• Addressing macroeconomic instability is important to spur investment growth given competitive pressures emanating from the external environment and uncertainties spawned by recessionary episodes.

• Upgrades in organizational capital are essential but have to be amply supported by sustained investments.