Stages of Diversification

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Patterns of Diversification

- Can we identify common patterns in the structural change experienced by countries along the development path?
- Diversification of labor use, value creation and exports seems to be a main feature of the development process.
- At late stages of development, a phenomenon of reconcentration takes place.
- What are the causes and implications of these facts?
Structural Change

• There has been recent renewed interest in the determinants and consequences of structural change:
  – Koren and Tenreyro (2007)
  – Klinger and Lederman (2006)

• These questions are directly policy-relevant:
  – There is much concern with excessive sectoral concentration in LDCs.
    • Effects on volatility due to sector specific supply and price shocks.
    • Effects on income distribution and ultimately the political system.
Goals

• Characterize empirically the evolution of sectoral concentration with development
• Propose possible explanations for its pattern
• Some forces for diversification:
  – Insurance against sector specific shocks
  – Taste for diversity in the presence of indivisibilities
  – Growing productivity allowing "resource spreading"
• Forces for concentration:
  – Trade-induced specialization
  – Geographic agglomeration
  – Sector-biased productivity change
• Which forces dominate? when? and why?
Outline

1. The stages of diversification in the data
2. Possible explanations
3. Possible implications
Overview of the Data

- 3 sources: Sectoral employment shares from:
  - OECD 2-digit, all economic activities, only 14 industrial countries, 1960-1997.
  - UNIDO 3-digit data: only manufacturing, 1963 to 1996.
  - Value added data is available for the UNIDO and OECD samples.

- Various measures of concentration:
  - We will focus on the Gini coefficient for the inequality of sector shares.
  - The same results are obtained with alternative measures (Herfindahl index, share of the largest sector).
1

Stages in ILO 1-Digit Employment Data

Stages in UNIDO 3-Digit Value Added Data

Stages in OECD 2-Digit Employment Data

Stages in OECD 2-Digit Value Added Data

Stages in Export Shares Data

Adapted from Klinger and Lederman, 2006. GDP per capita is in 1995 base year.
Specific Country Experiences

Spain

GDP per capita

UNIDO Data, 1969-1992

UNIDO Data, 1970-1989
2 Possible explanations

1. The trade story [Imbs-Wacziarg, 2003]
   – Forces of technological convergence dominate early in the growth process, resulting in a broadening set of goods produced domestically.
   – Increased trade openness (via policy changes or reduced trade costs) later in development leads to a narrower set of goods produced domestically as the forces of specialization dominate.

2. The finance story [Saint-Paul, 1992]
   – In the absence of access to world financial markets, the only way sectoral shocks can be mitigated is by diversifying sectorally.
   – Once a country gains access to world financial markets, sectoral diversification is no longer required and the country can take advantage of the gains from specialization.

3. The discovery story [Hausman and Rodrik, 2003]
   – Countries need to experiment to find out what they have a comparative advantage in.
   – This process of experimentation entails opening “too many” sectors initially.

There is at least anecdotal evidence for stories 1 and 2. Story 3 is hard to test.
Stages in a Ricardian Model
3 Implications

• On a conceptual level, different theories may be at work at different points in the growth process.
  – Incentives to diversify dominate early, incentives to specialize only take-over late.
  – Models of development generally do not (but should) display this feature.

• Development is characterized mostly by a process of diversification:
  – Volatility reducing.
  – Stabilizing in other respects: economic pluralism leads to political pluralism and is likely an important component of democratic consolidation.