Economic Diversification in Low–Income Countries (LICs): Stylized Facts and Macroeconomic Implications

Chris Papageorgiou          Nikola Spatafora

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Motivation

• LICs have historically been heavily dependent on a narrow range of traditional primary products and on few export markets.

• While diversification has been a longstanding ambition for many LICs, we have limited experience of what aspects of diversification are important.

• Many developing economies have managed to diversify and transform their economies especially over the past two decades. But there remain significant differences across countries.

• What are the facts? What does diversification involve? How can it help countries sustain high growth and reduce volatility.

• Inform the policy debate on diversification and transformation.
Growth through Diversification

- Diversification associated with higher real GDP growth
Growth through Diversification

- Diversification episodes are associated with a sharp increase in growth, especially among non-fragile LICs.

GDP Growth Rate with Diversification Breaks, 1965-2010

Yield in Per Capita Growth Rate

- Non-Fragile LIC
- Fragile States LIC

Years before and after diversification breaks
Volatility and Diversification

- Diversification associated with lower output volatility

![Graph showing the relationship between real GDP per capita volatility and concentration index (Theil)]
Volatility and Diversification

- Output volatility diminishes after major diversification episodes

![Bar chart showing output volatility for pre-episode, episode, and post-episode phases.](chart.png)
Motivation

Diversification, growth and volatility
  • Cross-country growth relationship
  • Diversification episodes and volatility

Stylized Facts

Cross-country patterns: Link between diversification, and GDP or time
  • Trade diversification indices across products and partners
  • Quality upgrading
  • Country case studies

Ongoing Work & Preliminary Messages

  • Main takeaways
  • Working papers
Stylized Facts
Trade Diversification
Stylized Facts: Trade Diversification

Trade Diversification (across Products) vs. GDP

- Along the development path, diversification increases (until threshold)

Export Diversification and Concentration
Stylized Facts: Trade Diversification
Trade Diversification (across Products) vs. GDP

- Along the development path, diversification increases (until threshold)

Export Diversification and Concentration
Stylized Facts: Trade Diversification

Trade Diversification (across Products) vs. Time

- LICs and SSA have high concentration, but there is a break around 1990–5

By Income Group

By Region
Stylized Facts: Trade Diversification
Agricultural and Manufacturing Export Share over Time

- Changes in diversification are paralleled by shifts in the relative importance of agriculture... ... and manufacturing
Stylized Facts: Trade Diversification

Trade Diversification (across Partners) over Time

- After 1995, Asia and Africa greatly diversified across partners.
Stylized Facts: Partner Diversification
Trade Diversification (across Partners) vs. Time

- This is partly related to emergence of China and diminishing role of EU

Share of Exports to EU

Share of Exports to China
Stylized Facts
Quality Upgrading
Quality Upgrading

• Economic development is underpinned not just by new products and markets, but also by quality improvements to existing products.

• Ongoing work develops a toolkit to answer:
  – What is an economy’s export quality and how has it changed over time?
  – What is its present potential for quality upgrading?
  – How large is the need for diversification?

• Quality estimates improve on unit values, which can be imperfect quality proxies. Estimated quality measures smooth volatility and dispersion inherent in unit values.
The Toolkit

- Toolkit will be made publicly available and contains exporter country totals and 3 different breakdowns:
  - **SITC 4, 3, 2, 1 digit**
    - Over 1.5 million quality estimates available at the SITC 4-digit level (after aggregating over importers and units of measurement)
  - **BEC 3, 2, 1 digit**
    - BEC1: Useful breakdown into intermediate products, capital goods, and consumer goods
    - BEC2: Distinguishes, for instance, between (i) primary vs. processed varieties; and (ii) consumer durables vs. non-durables.
  - **3 broad custom categories**
    - Manufactures, Agriculture, and Non-Agricultural Commodities
Stylized Facts: Quality Upgrading

- Quality upgrading is a crucial component of development, particularly when trying to move to upper middle-income status.
There seems to be potential to also quality upgrade in agriculture, though it may be more constrained by soil and climate conditions.
Stylized Facts: Quality Upgrading

Asia: considerable cross-country heterogeneity

- Some countries have converged or are continuing to converge to the world frontier.
- In other countries, convergence seems to have slowed since the mid-1990s.
In Africa, some countries are taking off—or have taken off.

Other countries’ export quality has continued to stagnate.

Stylized Facts: Quality Upgrading
Africa: considerable cross-country heterogeneity
Quality demanded in destination markets is not an apparent constraint. Policy should focus instead on creating conditions broadly favorable to quality upgrading.
Case Studies

Tanzania

Bangladesh

Vietnam

Malaysia
Tanzania showcases successful LIC diversifier

- Exports grew rapidly
- Agriculture was ‘crowded out’ by gold and manufacturing

Trade geography also changed
- EU’s share declined, giving way to Switzerland and China (reflecting gold) and regional trade

### Exports of Goods and Services (percent of GDP)

- Other
- Tourism
- Manufacturing
- Minerals
- Traditional exports

### Geographic Distribution of Exports

- China
- EAC
- EU
- South Africa
- Switzerland
- Other

- Exports grew rapidly
- Agriculture was ‘crowded out’ by gold and manufacturing

- EU’s share declined, giving way to Switzerland and China (reflecting gold) and regional trade
Potential for Both Quality Upgrading and Horizontal Diversification

Tanzania

Given its concentration in agricultural products & crude materials, Tanzania has potential for horizontal diversification but also quality upgrading in agriculture.
Case Studies: Some Takeaways

• Successful diversification typically underpinned by reforms that are general in scope, rather than industry-focused and narrowly targeted.

• Necessary reforms come in “waves” of interrelated measures, and depend on political economy considerations and external conditions.
Conclusions

Diversification closely linked with structural transformation, and an important element of the development process in developing economies.

Development strategies must promote sustained resource reallocation, and encourage continued quality upgrading.

Key issues:
- What goods are produced and exported, and of what quality?
- What are the specific bottlenecks to structural transformation in given countries? Why are some countries much more successful?
- Are the policies needed to promote initial diversification different from those required to then sustain quality upgrading?
Economic Diversification in Low-Income Countries: Stylized Facts, C. Papageorgiou and N. Spatafora (February 2013)

Export Quality in Developing Countries, C. Henn, C. Papageorgiou, and N. Spatafora, (May 2013)

Economic Diversification: Recent Experiences and Policy Lessons from Five Case Studies, A. Pitt (forthcoming)

Diversification and Structural Transformation in Frontier Asian Economies, C. Papageorgiou, Nikola Spatafora and Ke Wang (forthcoming)

Diversified Structural Transformation (model)

Growth through Diversification

Diversifying exports and Macro Stability

Export Quality and Complexity
THANK YOU
Quality Upgrading: Method

- Quality estimates improve on unit values, which can be imperfect quality proxies if:
  - Significant cross-country differences in production costs
  - Selection bias in quality composition (“Shipping the good apples out” effect)
  - Estimated quality measures smooth volatility and dispersion inherent in unit values.
Diversification Episodes
Trade Data: Products

- Chile
- Malaysia
- Thailand
- Ghana
- Madagascar
- Mauritania
Countries experiencing faster quality convergence since 1995 also experienced faster growth in GDP per capita.
Drivers

Diversification and quality are driven by deep, underlying determinants, including:

- Institutions
- Labor and product market rigidities
- Public infrastructure, and investment efficiency
- Education (human capital)
- Financial development