Policies for Economic Diversification

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Key ideas

• What you produce matters

• Economic fundamentals and comparative advantage do not pin down production structure

• Public intervention has played significant role in almost all successful industries
  – Need to complement macro stability with “productivist” economic strategy focused on the needs of real sector

• Institutional design for industrial policy must balance
  – carrot and stick
  – insulation and embeddedness
Development entails diversification, not specialization

Figure 2. Estimated Curve (Nonparametric)—Gini Index—UNIDO 3-Digit Employment Data

Figure 3. Estimated Curve (Nonparametric)—Gini Index—UNIDO 3-Digit Value-Added Data

Measuring the income level of a country’s trade

PRODY(j) = average income level of countries with revealed comparative advantage in good $j$ (computed at the HS 6-digit level).

EXPY = weighted average of $PRODY(j)$ for a country’s export basket.

Hence $EXPY$ measures the income level associated with a country’s export basket.
Rich countries produce “rich country goods”

… but with important variation around the regression line.

This chart shows a scatter plot of “income content of exports” ($EXPY$) against per-capita GDP.
The East Asian “advantage”

Note: “income content of exports” (EXPY) represents the income level of the typical country with your export basket.
What you produce helps determine how much you grow

This chart shows growth in per-capita GDP over 1992-2003 as a function of the 1992 level of $EXPY$ (controlling for initial income and human capital)
What you produce is determined by a lot more than “fundamentals” (I)

Partial associations between $EXPY$ and human capital (left panel) and institutional quality (right panel)
What you produce is determined by a lot more than “fundamentals” (II)

Paired comparisons of export structure
Look at top 25 exports to U.S. at the HS 6-digit level:

• Bangladesh versus Pakistan
  only 6 products in common

• Honduras versus Dominican Republic
  9 products in common

• South Korea versus Taiwan
  10 products in common
What you produce is determined by a lot more than “fundamentals” (III)

Why markets undersupply investments in non-traditional activities

• Coordination externalities
  – Lumpy investments along vertical or horizontal production chains
• Information externalities
  – Investments in new activities reveal information about profitability

Therefore, structural change is an idiosyncratic process where policy can make an important and lasting difference.
Policy matters (I): exchange rate policies

The diagram represents the relationship between the "overvaluation" of the real exchange rate during 1994-2003 and the level of EXPY in 2003, controlling for the 1994 level of EXPY (low and middle-income countries).
Policy matters (II): industrial and preferential policies

Latin American examples:

Brazil: steel, aircraft, and (to an important extent) shoe industries are all the creation of ISI, state ownership (aircraft) and subsidized credit.

Chile: salmon the creation of Fundacion Chile; grapes a result of public R&D in 1960s, forestry was beneficiary of subsidies

Mexico: motor vehicles and computer industries are the creation of ISI policies (initially) followed by preferential tariff policies under NAFTA.

Scratch the surface of nontraditional export success stories, and you will often find industrial policies, public R&D, sectoral support, export subsidies, and preferential tariff arrangements lurking beneath the surface.

| Table 1: Top 5 export items (HS4) to the U.S. (in 2000) |
|-----------------|---------------|
| **Country**     | **Item**      | **Value ($ mil)** |
| Brazil          | aircraft      | 1,435            |
|                 | shoes         | 1,069            |
|                 | non-crude petroleum | 689      |
|                 | steel         | 485              |
|                 | chemical woodpulp | 465        |
| Chile           | copper        | 457              |
|                 | grapes        | 396              |
|                 | fish          | 377              |
|                 | lumber        | 144              |
|                 | wood          | 142              |
| Mexico          | motor vehicles| 15,771           |
|                 | crude oil     | 11,977           |
|                 | computers & peripherals | 6,411   |
|                 | ignition wiring sets | 5,576   |
|                 | trucks        | 4,853            |
Policy matters (III): FDI policies

Major consumer electronics firms in China, by ownership type

<table>
<thead>
<tr>
<th>Market segment</th>
<th>Foreign owned</th>
<th>Joint venture</th>
<th>Non-FDI</th>
</tr>
</thead>
</table>
| Mobile phone   | •Motorola     | •Motorola/Eastcom  
•Nokia/Capitel, Southern  
•Siemens/MII subsidiaries  
•Samsung/Kejian  
•SAGEM/Bird | •TCL |
| PCs            | •HP  
•Dell | •IBM/Great Wall  
•Toshiba/Toshiba Computer  
(Shanghai)  
•Epson/Start  
•Taiwan GVC/TCL | •Lenovo (previously Legend)  
•Founder  
•Tongfang |
| “Brown” goods  |               | •Sony/SVA  
•Philips/Suzhou CTV  
•Toshiba/Dalian Daxian  
•Great Wall Electronics/TCL | •Changhong  
•Konka  
•Hisense  
•Skyworth  
•Haier  
•Panda  
•Xoceco |
| “White” goods  | •Siemens     | •Samsung/Suzhou Xiangxuehai  
•Electrolux/Changsha Zhongyi  
•LG/Chunlan  
•Mitsubishi/Haier  
•Sanyo/Kelon, Rongshida  
•Sigma/Meiling  
•Hong Leong (SG)/Xinfei  
•Toshiba Carrier/Midea | •Changling  
•Gree |
Institutional arrangements for industrial promotion (I)

The need for both carrot and stick

- Without rents for entrepreneurs, there is no investment in self-discovery
- But open-ended rents bottle up resources in unproductive activities
- Hence a two-pronged strategy:
  - encourage investments in non-traditional areas (carrot);
  - weed out projects/investments that fail (stick)
- Empirical background:
  - East Asia 1960-90: both incentives and discipline
  - Latin America under ISI (1950-1980): lots of incentives, but too little discipline
  - Latin America in the 1990s: lots of discipline, but too little incentives
Institutional arrangements for industrial promotion (II)

The need for both bureaucratic insulation and embeddedness

• Top-down model wrong because it gives bureaucrats autonomy, but does not supply them with enough information
• “Capture” model also obviously wrong, since it leaves bureaucrats in the pockets of business.
• Right model lies in between the two extremes:
  – strategic collaboration and coordination between the private sector and the government with the aim of uncovering where the most significant bottlenecks are
  – a process of discovery about opportunities and appropriate instruments
Some implications

1. Concentrate not on policy outcomes but on policy processes
   • focus on productive collaboration between government and business and not on whether you use tax incentives, R&D subsidies, so on
   • getting the institutional setting for this collaboration right is key
   • “first-best” policy in the wrong institutional setting does more harm than a “second-best” policy in the appropriate setting
   • do not obsess ex ante about which policy instrument to use
Some implications

2. Do not select sectors ex ante, but let them emerge from the collaborative process
   • unlikely that governments have enough information to make the right selections
   • eliciting information on private sector’s willingness to invest subject to the removal of obstacles (or provision of incentives) is an essential part of choosing sectoral priorities
     – example: deliberation councils
     – example: hold contests for projects to be financed by public venture fund
Some implications

3. Success is determined not by “picking winners” but by letting losers go”
   • given uncertainty, optimal policy outcomes will necessarily lead to mistakes
   • trick is not to avoid mistakes altogether, but to ensure that
     – mistakes are recognized as such
     – and entail phasing out of support
   • a weaker requirement than “omniscience”
Ten design principles for Economic Diversification Policies

1. Provide incentives and subsidies only to “new” activities.
2. Enunciate clear benchmarks and criteria for success and failure of subsidized projects.
4. Target economic activities (technology transfer or adoption, training, and so on), not industrial sectors.
5. Subsidize only activities that have the clear potential of providing spillovers and demonstration effects.
6. Vest the authority for carrying out industrial policies in agencies with demonstrated competence.
7. Make sure agencies are monitored closely by a “principal” with a clear stake in the outcomes and who has political authority at the highest level.
8. Make sure implementing agencies maintain channels of communication with the private sector.
9. Understand that under “optimal” industrial policies sometimes “picking the losers” will occur.
10. Endow promotion activities with the capacity to renew themselves, so that the cycle of discovery can become an ongoing one.
Bottom line: how does this approach relate to the emergent consensus?

- Macro stability necessary, but often not sufficient for growth
- High quality regulatory framework ("good institutions") critical in the long run
  - But takes time to build
  - And often not required for igniting growth
- An explicit growth strategy focused on promoting restructuring and new industrial activities useful (necessary?) during the early stages
- Productivist strategy as “a frame of mind”