Industrial policy & its financing

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“Industrial policy” (IP) = forbidden phrase from 1980 till recently

- As recently as 2019, IMF **Working Paper** referred to IP as “the policy that shall not be named”.
- R. Cherif & F. Hasanov, 2019, “**The return of the policy that shall not be named: principles of industrial policy”,** March 26

- When I worked as economist in World Bank in 1980s and 1990s the phrase was more or less forbidden.
- Gary Becker (Nobel Prize), 1985: “**The best industrial policy is none at all”**

State must take “back seat” role in ecocomy

- Standard growth model for ALL countries: World Economic Forum, Davos, 2002: Consensus:
- “A nation that **opens its economy** and **keeps government’s role to a minimum** invariability experiences more rapid economic growth & rising incomes” (New York Times journalist Louis Uchitelle)
- State has little or no role in nurturing new sectors (**“directional thrust”**).

Return of IP in West: US, driven by fear of China's military & economic challenge

- US's explicit embrace of IP under Biden has been led not by Treasury or Commerce or USTR but by National Security complex.
- US National Security Advisor Jake Sullivan, 27 April 2023: He claimed to articulate "the new Washington Consensus".

“The new Washington Consensus”

- “A modern American industrial strategy identifies **specific sectors that are foundational to economic growth, strategic from a national security perspective, and where private industry on its own isn’t poised to make the investments** needed to secure our national ambitions. It deploys **targeted public investments** in these areas that unlock the power and ingenuity of private markets, capitalism, and competition to lay a foundation for long-term growth” (2023)

Worried western comments on US IP

- "It is going to be **hard to persuade China that this is not the beginning of an economic war upon it**" (Wolf 2023)
- "**It's like a declaration of war [by the US on Europe**]" (Robert Habeck, Germany's vice-chancellor and economics minister, complaining about the raft of subsidies and tax breaks available for manufacturers in the US, Germany's most important ally, Financial Times 2023)

Return of IP in West: why the change?

- (1) **US fear of China**: over 2010s, bipartisan agreement emerged in US of China posing acute national security threat (eg 2015 publication of *Made in China 2025*). Agreement on need to have "China-free" supply chains in several strategic industries.

In contrast, **from 1945 till 2017** (**bipolar** world order, Cold War, 1945 – 1990, & **unipolar** world order, US hegemony, 1990 – 2017), "geopolitics" and "economy" were separate spheres. **Now, geopolitics & economy in bed with each other: geopolitics shapes economic policy.**

US has moved from support for open, rules-based multilateral system towards **"techno-nationalist" system in high-tech sectors.**

Even prominent Republicans, hostile to Biden, support IP

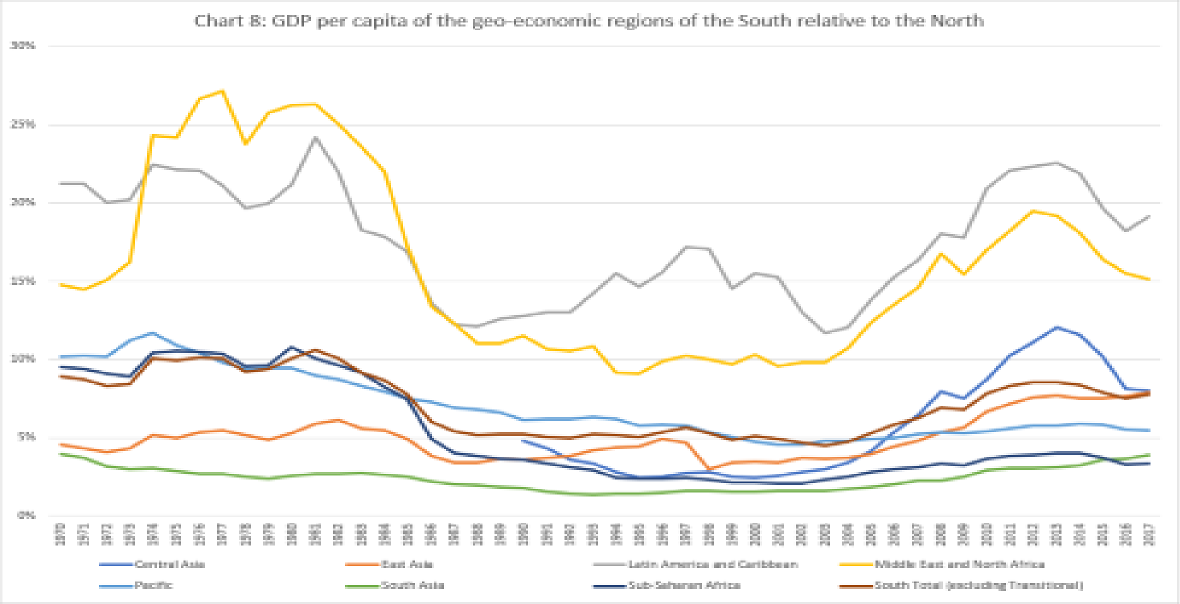
- “I believe our country needs industrial policy to rebuild our manufacturing sector, which has suffered decades of neglect & unfair competition” (Senator Marco Rubio, Republican, 2024,

Return of IP: why the change (ctd)

- (2) **Great uncertainty about appropriate development strategy** (faith in "Davos Consensus", Washington Consensus, Structural Adjustment, has eroded). **Doubts that industrialization can create game-changing benefits as it did in the past.** Manufacturing's share of world output is falling. Automation replaces unskilled & basically skilled workers. What do they do?
- Some economists (eg Rodrik) say: DCs shd focus on **sophisticated services.** But half of India's graduates don't have skills for tech & finance & other sophisticated. Other economists (eg Baldwin) say: DCs shd focus on **growing cities** rather than specific sectors.

Why the change ? (3) Failure of "catch up": GDPPC of the geo-economic **regions** of the South as % of North (NA, WE, Jpn), China excluded, 1970 - 2017

(nominal GDP)



Consensus is loosely forming in favor of "industrial policy"

- Govts and businesses must think about **structure of production more strategically**, more weight to "**resilience**" & less to "**cost saving"/ efficiency**; more weight to "on-shoring" & "friend-shoring", less to "off-shoring"
- Govt should impart **"directional thrust"** to economy's growth – selecting **sectors**, and selecting **clusters of technologies**
- Even Marco Rubio (conservative Republican) !
- Even European govts normally hostile to IP are formulating their own IP to compete with US IP, also with China IP !

IP strategy: the state plays an **entrepreneurial** role. What are key elements?

- (1) state shapes industrial structure and growth through industrial development zones, subsidies, protection of domestic market, price controls, control of international flows of finance ("capital controls"), direct state investment, R&D subsidies
- State may (1) **"follow the market"** (put bets on some of the initiatives private firms already starting); (2) **"lead the market"** (encourage firms to undertake investments they would not otherwise undertake), **riskier than (1)**

(2) **Key Q: what should be produced?**

- State gives priority to encouraging investment in “sophisticated” sectors.
- **“Sophisticated”** means: production conducive to
- (a) **high productivity gains**,
- (b) **spillovers to tradable sectors** – both forward linkages & backwards linkages.
- Especially tradable investment goods like machinery & equipment & chemicals shd get high priority

“Sophisticated” goods & services

- Measure of sophistication can be: (1) R&D intensity (R&D / net sales), (2) patents issued
- **Sectors with high R&D intensity**: electronic / optical products, electrical equipment, transport equipment and cars, pharma, machinery, chemicals, IT services, scientific services.
- Sectors with low R&D intensity: metals, furniture, textiles, publishing, finance / real estate
- But, some economists & IMF say: manufacturing cannot be the leading growth sector in DCs; they should leapfrog towards **services**. But manufacturing still key for EXPORT growth. Few services are “sophisticated”

Eg South Korea: state as entrepreneur in HCI

- **SK Heavy & Chemical Industry drive in 1970s**: steel, metals, machinery, petrochemicals, electronics, shipbuilding.
- Most neoclassical economists have dismissed SK HCI as a waste of resources
- Lane 2017, empirical analysis. The targeted industries
- (1) grew much more than non-targeted ones
- (2) gave strong positive spillovers to downstream industries, which grew faster, invested more
- (3) these effects persisted for long after state support to targeted industries was reduced or ended.

Other key elements: Exports & accountability

- (3) **export performance** shd be priority. This may entail a degree of import protection for targeted sectors in early stages, so that “super-normal” profits on domestic market sales can be used to subsidize export sales.
- (4) firms must be **made accountable for state support received**, to ensure they focus on becoming internationally competitive

Financing IP: Cherif & Hasanov say …

- … there is little literature on financing of IP. In all their writing about IP, they hardly touch the financing.
- They say that a reasonably good source on financing is Joe Studwell, *How Asia Works: Success and Failure in the World's Most Dynamic Region*, 2013

What type of financial system is conducive to faster/more sustained economic growth?

- The "East Asian" system (during the high growth decades), in contrast to the "Anglo" system
- Households save high % of income; put savings mostly into (low-risk) banks rather than (higher-risk) equities.
- Firms depend on borrowing from banks to finance investments.
- Debt / equity ratios very high
- Corporate investment very high
- Growth very high

Offsetting the dangers of high debt / equity ratios

- Debt financing more dangerous than equity financing , b/c debt must be repaid regardless of “ability to repay”
- High corporate debt / equity ratios must be buffered by **LONG-TERM** financial relations b/w firms & banks & govt.
- Govt must stand ready to support banks & firms in event of shocks that affect large parts of economy at once (eg sharp rises in interest rates, sharp falls in demand); & support banks & firms in line with national strategy.
- See Robert Wade & Frank Veneroso, 1998, “The resources lie within”, Economist, November 7

Financial fragility & financial instability

- This system of LONG-RUN relations b/w banks, firms & govt ensures that:
- high financial FRAGILITY does not tip into financial INSTABILITY **(Hyman Minsky)**
- BUT in 1990s East Asian govts followed advice of neoclassical economists & IMF & World Bank, & opened the capital account → East Asian crisis of 1997-98

Comparison with “Anglo” system of finance

- In Anglo system, relations b/w banks & firms & govt are **SHORT-TERM.** In event of shocks, creditors more likely to call their loans & liquidate firms. Where debts are large, failure of some firms induces failure of others → financial instability / crisis.
- Hence **“Anglo” prudential standards require much lower debt / equity ratios** than in “East Asian” system, and **corporate investment relative to GDP is much lower.**

East Asian national industrial strategy

- To avoid “East Asian” financial system inviting corruption & insider dealing the state must have – East Asian govts did have – a **powerful “pilot agency”**, which formulates & oversees implementation of **serious national industrial strategy.**
- The govts nurtured (1) incipient **sectors**, (2) new **technologies** (eg TSMC started in 1985)
- Eg Taiwan: sizable tax incentives available to firms according to their production of products on economy’s technological frontier: eg electrical transformers

Taiwan & S Korea also had "nudging" agencies operating across all sectors (not "selective")

- Eg Taiwan's Industrial Devt Bureau
- See my *Governing the Market*, 1990 / 2004

Success of IP depends on broader measures of **"state capacity"**

- **"fiscal capacity"**: broad-based tax revenue/GDP
- **"legal capacity"**: judicial system independent of executive & legislature
- "**collective goods capacity"**: measured by education; life expectancy
- Eg Besley & Persson Pillars of Prosperity 2010

“Who governs the market?”

- Title of paper by Robyn Vidra-Klinger (KCL) and R Wade (LSE), under review at World Development for past 7 months !
- Sample of 1,200 people who were head or deputy head of the main innovation agency, in Jpn, SK, Taiwan, China, going back as far as 1950s

Exchange rate ?

- Luis Carlos Bresser Pereira, 2024, *New Developmentalism,* chapter 10, “Determining the exchange rate” :
- “New developmentalism (ND) places the exchange rate at the centre of its macroeconomics. It argues that the ER determines the rate of investment and therefore determines economic growth (p.104)

From “industrial policy” to “green industrial policy”:
Brazil’s clashing climate and growth goals

- On one hand, Petrobras planning such fast increase in oil production that it cld make Petrobras number 3 oil producer in world by 2030 – after the national oil companies of Saudi Arabia and Iran.
- On other, Brazil positions itself as leader in global fight against climate change. Lula presents himelf as the world’s pre-eminent leader against climate change, not least b/c has become convinced that CC is major cause of poverty & inequality and he has spent his whole political career fighting to reduce poverty & inequality.
- Since Lula’s re-election in 2022, deforestation in Amazon has (apparently) fallen drastically, and the build-on of renewable energy has been sizable.
- But Brazil and other DCs push into renewables and scaling back on fossil fuels is curbed by the conviction that the AC s which put most of the GHG into atmosphere as they got rich are still emitting huge amounts of GHG. They are, the US is, the world’s biggest per person producer and consumer of fossil fuels.
- Brazilians and others ask: if AC s – also Russia, Saudi, etc -- won’t seriously cut their use of fossil fuels, why shd we?

Brazil’s clashing climate & growth goals (ctd)

- Petrobras plans to spend $7 bn over next 5 yrs exploring for offshore oil. It & many other oil companies operate on assumption demand for oil will remain high for years ahead. They operate on different assumptions than International Energy Agency, who says that demand for oil is close to peaking or has already done so. Even when global demand peaks Petrobras has advantages. Cost of its offshore oil is only $35 /barrel, against international benchmark of $90.
- Oliver Stuenkel, School of International Relations, FGV Foundation, “Having it both ways is very muchpart of B’s policy DNA.
- As B has cut Amazon deforestation, land clearing has accelerated in Cerrado, the vast savannah that covers much of central Brazil.
- The polarized electorate does not give high priority to fighting climate change. Half the population still does not have access to treated sewage.
- Host of UN Climate summit 2024 is Azerbaijan; next year Brazil, in Belem city on edge of Amazon.
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Financing IP ?

- Question: how does US govt raise the many hundreds of billions of $$ it has approved for IP & related investments?
- Eg 2021, Infrastructure Investment and Jobs Act, $550 bn.
- 2022, CHIPS and Science Act, $ 280 bn.
- 2022, Inflation Reduction Act, $ 300 bn