

The Industrialisation Imperative: Why does Africa (still) have to industrialise?’

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Country A

- The country is dependent on what nature has given to it.
- It has a lot of land and earns most of its foreign exchange by exporting agricultural products.
- There is also a lot of potential for mining, but due to poor infrastructure, it is not well developed.
- The country has high wages, compared to those manufacturing countries in the East, so it is difficult to develop manufacturing.
- Indeed, one of the country's founding fathers had even advocated using protectionism against those countries to protect local wages.

Country A (continued)

- Given this situation, a lot of people are worried that the new finance minister has just produced a major policy document advocating a typical import substitution industrialisation (ISI) strategy, based on high tariff protection, subsidies, and government investments in infrastructural projects.
- His critics naturally love to cite a world-famous British economist who, about 15 years ago, explicitly warned the country that any attempt to artificially develop manufacturing will “retard instead of accelerating” the country’s economic growth and “obstruct instead of promoting the progress of [the] country towards real wealth”.

Country B

- Like Country A, the country is dependent on natural resources too – around 80% of its exports are in natural resources, like tungsten ore and fish.
- Unfortunately, unlike Country A, it is not very well endowed with natural resources, so it is one of the poorest country in the world, with a per capita income less than half that of Ghana's.
- With a literacy ratio just over 70% and cultural aversion to professions like engineering and business, its prospect for diversifying out of natural resources through industrialisation is considered very low.

Country B (continued)

- Moreover, having emerged from a bloody fratricidal war barely a decade ago, the country is famous for political divisions, corruption, and administrative incompetence.
- No wonder that an internal memo of the USAID several years back had described the country as a “bottomless pit”.
- Given the circumstances, the recent government announcement that it is going to set up a huge state-owned steel plant, in a country that does not even produce iron ore, has been duly received with widespread scepticism inside and outside the country.

Country A = The USA in 1791

- The country is dependent on what nature has given to it.
- It has a lot of land and earns most of its foreign exchange by exporting agricultural products, **like cotton and tobacco.**
- There is also a lot of potential for mining, but due to poor infrastructure, it is not well developed.
- The country has high wages, compared to those manufacturing nations in the East, **i.e., the European countries**, so it is difficult to develop manufacturing.
- Indeed, **Benjamin Franklin**, one of the country's founding fathers, had famously advocated using protectionism against those countries to protect local wages.

The USA in 1791 (continued)

- Given this situation, a lot of people are worried that the new **Treasury Secretary, Alexander Hamilton**, has just produced a major policy document, titled, *The Treasury Secretary's Report on the Subject of Manufactures*, advocating a typical ISI strategy, based on high tariff protection, subsidies, and government investments in infrastructural projects, **like roads and canals**.

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THE UNITED STATES OF AMERICA

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THIS NOTE IS LEGAL TENDER FOR ALL DEBTS, PUBLIC AND PRIVATE

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Anna Escobedo Cabral
Treasurer of the United States

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We the People

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John W. Snow
Secretary of the Treasury

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The USA in 1791 (continued)

- His critics naturally love to quote **Adam Smith**, a world-famous British economist, who, **in his book, *The Wealth of Nations*, published in 1776**, explicitly warned the country that any attempt to artificially develop manufacturing will “retard instead of accelerating” economic growth and “obstruct instead of promoting the progress of [the] country towards real wealth”.

“Were the Americans, either by combination or by any other sort of violence, to stop the importation of European manufactures, and, by thus giving a monopoly to such of their own countrymen as could manufacture the like goods, divert any considerable part of their capital into this employment, they would retard instead of accelerating the further increase in the value of their annual produce, and would obstruct instead of promoting the progress of their country towards real wealth and greatness.”

(Adam Smith, *The Wealth of Nations*, 1776, the 1937 Random House edition, pp. 347-8).

Country B = South Korea in 1965

- Like the US, South Korea at this low stage of **development** is dependent on natural resources – over 80% of its exports are in natural resources, like tungsten ore and fish.
- Unfortunately, unlike **the US**, it is not very well endowed with natural resources, so it is one of the poorest countries in the world, with a per capita income less than half that of Ghana's (**in 1961, Korea \$82, Ghana \$179**).
- With a literacy ratio just over 70% (**71% in 1960**) and cultural aversion to professions like engineering and business (**owing to the disdain for artisans and merchants in Confucian culture**), its prospect for diversifying out of natural resources through industrialisation is considered very low.

South Korea in 1965 (continued)

- Having emerged from a bloody fratricidal war barely a decade ago (**the Korean War, with North Korea, 1950-53**), the country is famous for political divisions, corruption, and administrative incompetence.
- No wonder that an internal memo of the USAID several years back had described the country as a “bottomless pit”.
- Given the circumstances, the recent government announcement that it is going to set up a huge state-owned steel plant, **POSCO**, in a country that does not even produce iron ore, has been duly received with widespread scepticism inside and outside the country, **including the refusal by the World Bank to endorse the project, when the Korean government was seeking foreign loans for it**

Problems with commodity dependence

- The long-term decline in the terms of trade (TOT) for primary commodities against manufactured products (Raul Prebisch, Hans Singer).
- High price volatility makes the managements of the balance of payments, government budget, and long-term national and corporate planning very difficult.
- Countries that rely on primary commodities are also vulnerable to technological shocks due to innovation in more advanced economies.
 - When the British and the Germans invented organic chemistry, they wiped out the economic bases of many developing countries – bird guano (as fertiliser) and saltpetre (for gunpowder) in Chile and Peru and cochineal (the dye) in Guatemala.

Special characteristics of manufacturing I

- First of all, raising productivity is much easier in manufacturing than in other economic activities, like agriculture and services.
 - Manufacturing activities are much less bound by nature.
 - They lend themselves much more easily to mechanisation and chemical processing.
- Second, the manufacturing sector is the ‘learning centre’ of the economy.
 - By supplying capital goods (e.g., machines, transport equipment) and intermediate goods (e.g., chemical fertiliser), it spreads technological progress to the rest of the economy.

Special characteristics of manufacturing II

- Third, the manufacturing sector has also been a source of organisational innovations, which have been transferred to the other sectors, especially to the service sector, and raised productivity there.
 - Modern inventory management techniques in the retail sector
 - The ‘assembly’ technique used in McDonald’s and other fast-food restaurants
 - The ‘conveyer belt’ sushi restaurants
 - Computer-controlled, timed feeding in advanced agriculture

Justifications for 'artificial' industrialisation

- Infant industry (Hamilton, List)
- Forced accumulation (Fel'dman-Preobrazhensky-Mahalanobis)
- Capital market failure (Hicks' 'myopia')
- Externalities (R&D, training) (Stiglitz)
- Learning-by-doing (Arrow)
- Interdependence ('linkages') (Rosentein-Rodan, Hirschman)
- Asset specificity (Williamson)
- Tacit knowledge (Hayek)

'Probably the world's most
effective critic of globalization'
MARTIN WOLF, *FINANCIAL TIMES*

'Lucid, deeply informed'
NOAM CHOMSKY



BAD SAMARITANS

THE GUILTY SECRETS
OF RICH NATIONS
& THE THREAT TO
GLOBAL PROSPERITY

HA-JOON CHANG

KICKING AWAY THE LADDER

DEVELOPMENT STRATEGY
IN HISTORICAL PERSPECTIVE

Ha-Joon Chang

Winner of the 2003 Myrdal
Prize, European Association
of Evolutionary Political
Economy



“It is a very common clever device that when anyone has attained the summit of greatness, he *kicks away the ladder* by which he has climbed up, in order to deprive others of the means of climbing up after him. In this lies the secret of the cosmopolitical doctrine of Adam Smith, and of the cosmopolitical tendencies of his great contemporary William Pitt, and of all his successors in the British Government administrations.

Any nation which by means of protective duties and restrictions on navigation has raised her manufacturing power and her navigation to such a degree of development that no other nation can sustain free competition with her, can do nothing wiser than *to throw away these ladders* of her greatness, to preach to other nations the benefits of free trade, and to declare in penitent tones that she has hitherto wandered in the paths of error, and has now for the first time succeeded in discovering the truth [italics added]”

(Friedrich List, *The National Systems of Political Economy*, 1841 [1885 translation], pp. 295-6)

Lack of investments in productivity growth

- Infant industry protection creates the ‘space’ for improvement in productive capabilities, but does not automatically lead to productivity increase.
- For this to happen to the full extent, there should also be government policies to ensure that accompanying investments are made in raising productive capabilities – such as investments in machines, R&D, and skills.

Neglect of export

- There was an insufficient emphasis on export.
- Economic development requires export success, as it requires importation of advanced technologies, which need to be paid for with foreign currencies, acquired mainly through export.
- Now, saying that export is the key to economic development is *not* to support free trade.
- It just means that they need to promote export while promoting infant industries, which is exactly what countries like Japan and Korea did very successfully.

Anti-agriculture bias

- Many people have criticised the African countries during the ISI period for having an anti-agriculture bias.
- Most of them argue that the African countries should have given priority to agriculture and forgotten about ‘artificial’ industrialisation.
- However, there was a middle way.
 - A country can initially extract investible surplus and surplus labour from the agricultural sector but, once its industrialisation gets going, invest back in agriculture (in the form of rural infrastructure, research, and extension) to raise productivity.
 - With increased productivity and thus income, the agricultural sector can then help the infant industries by providing them with bigger markets.
 - Indeed, this is a strategy that countries like Germany, Japan, Korea, and Taiwan pursued.

Political and institutional factors

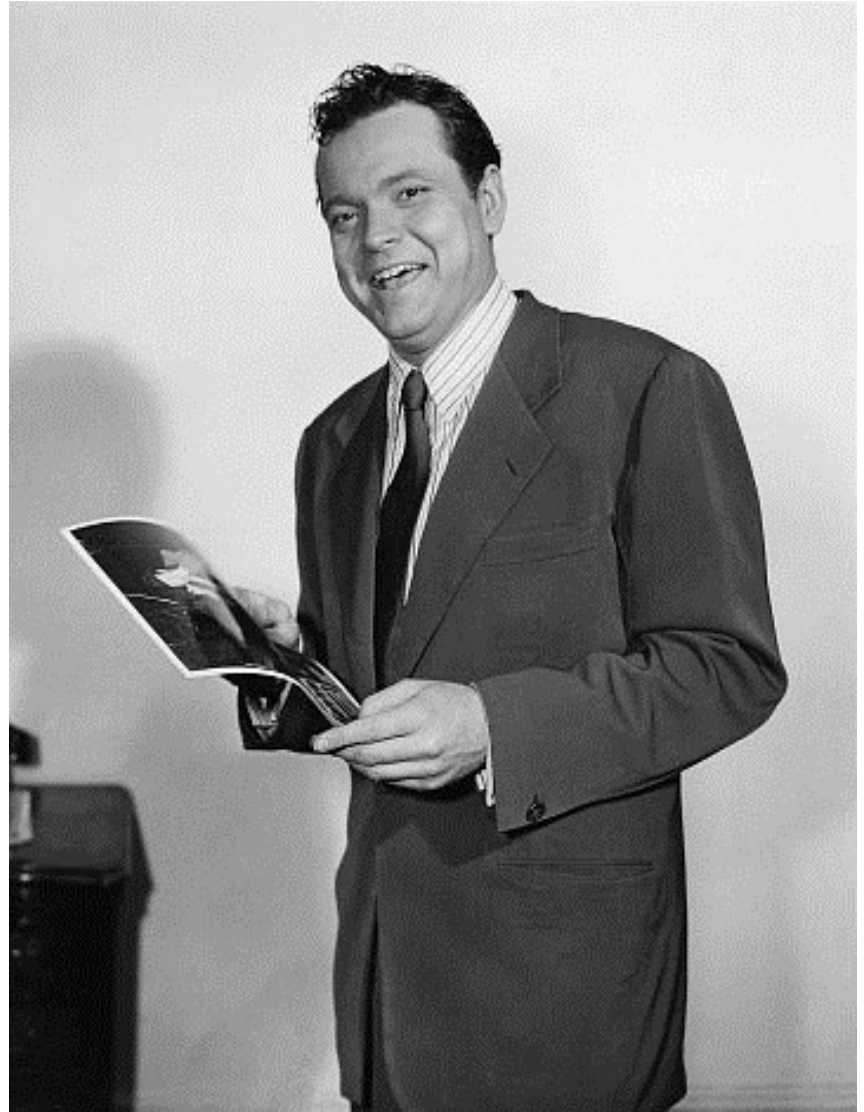
- relative power balance between different classes
 - e.g., Can the industrialist capitalist class, possibly in alliance with some other classes (like peasants or workers) fend off the anti-industrialisation pressures of the landlord class or the financial capitalist class?
- the relationship between the state and the industrial capitalist class
 - e.g., How effectively do they exchange information, negotiate, and implement agreements?
- the quality of public administration
 - but **not** measured by simple things like ‘number of officials with advanced degrees in economics’ (the East Asian economies during their ‘miracle’ days were run by non-economists)
- the extent and the types of corruption
 - money being kept inside vs. being shipped out
 - confined to sectors like military and construction vs. affecting manufacturing

Shrinking Policy Space

- There has been a shrinkage in policy space due to the establishment of the WTO and the proliferation of bilateral and regional agreements on trade and investment, but this has NOT made industrial policy impossible to use.
 - There are many industrial policy measures that can still be used legally within the WTO framework
 - tariffs, including ‘emergency’ tariffs in the face of BOP problems
 - Subsidies for agriculture, R&D, regional equalisation, environment (and export subsidies for the LDCs)
 - Many FDI regulations, including joint venture or technology transfer
 - non-trade-related policies (e.g., public investments in infrastructure, skills, and R&D; government procurement; investment subsidies)
 - However, bilateral and regional agreements are much more binding.

The Expansion of Global Value Chains

- There is an increasingly popular view that the rise of the so-called global value chain (GVCs) has made it impossible for developing country firms to enter manufacturing industries, except as sub-contractors to transnational corporations (TNCs).
- However, if they are to reach high levels of economic development, countries need to constantly upgrade within GVCs and eventually create their own GVCs, both of which require effective industrial policy.
- Indeed, this is exactly what the East Asian countries (not just less FDI-dependent Korea and Taiwan, but also more FDI-dependent China and Singapore).



“In Italy for thirty years under the Borgias, they had warfare, terror, murder, bloodshed, but they produced Michelangelo, Leonardo da Vinci and the Renaissance. In Switzerland, they had brotherly love - they had five hundred years of democracy and peace, and what did that produce? The cuckoo clock.”

**(Orson Welles as Harry Lime,
The Third Man)**

Wrong, wrong, wrong, wrong, wrong!

- Five hundred years of democracy?
 - Women were given votes only in 1971.
 - Two rogue cantons refused to give women votes until 1989 and 1991.
- Five hundred years of peace?
 - Wars with Swabia (1499) and France (1515 and 1798)
- Five hundred years of brotherly love?
 - Civil wars in 1653, 1656, 1712, and 1847
- The cuckoo clock was *not* invented in Switzerland.
 - It was invented in Germany.
- Switzerland is *not* an economy living off the black money deposited by Third World dictators and selling cuckoo clocks and cow bells to American and Japanese tourists (or, if you want to be nice to it, a post-industrial economy relying on services like banking and tourism).
- It is one of the most industrialised economies in the world.

Manufacturing Value Added Per Capita, 2013

(in constant 2005 US dollars; index USA=100)

- **Switzerland:** \$10,147 186 (world ranking: 1)
- **Singapore:** \$9,700 177 (2)
- Japan: \$7,821 143 (3)
- Austria: \$7,681 141 (4)
- Germany: \$7,656 140 (5)
- Korea: \$7,181 131 (6)
- USA: \$5,465 100
- UK: \$3,671 67
- China: \$1,143 21
- **Mauritius:** \$1,066 20
- **South Africa:** \$894 16
- **Morocco:** \$323 6
- India: \$162 3
- **Kenya:** \$61 1
- **Ethiopia:** \$13 0.2

Source: UNIDO, *Industrial Development Report, 2016*

How about India?

- India's service trade success story is exaggerated.
 - between 2004 (until then India had deficit in service trade) and 2011, India recorded service trade surplus equivalent to 0.9% of GDP, which covered only 17% of its merchandise trade deficit (5.1% of GDP).
- This means that, unless it increases its service trade surplus by 6 times (an implausible scenario, given that its service trade surplus has *not* even been on a firm rising trend since 2004), India can not maintain its current pace of economic development without a serious balance of payments problem.

‘Post-industrial Knowledge Economy’? I

- We have always lived in a knowledge economy.
 - It has never been the act of making things but the control over superior productive knowledge that is the key to economic prosperity.
- Many knowledge-intensive services (e.g., research, engineering, design) that are supposed to be new have always been there.
 - Most of them used to be conducted by manufacturing firms themselves and have become more ‘visible’ recently mainly because they have been ‘spun off’ or ‘outsourced’.

‘Post-industrial Knowledge Economy’? II

- The manufacturing sector has been the main source of new productive knowledge.
 - It is a sector that is most open to the use of machines and chemical processes that raise productivity.
 - It is also where most R&D (research and development) happens.
 - Moreover, it is a sector that produces inputs that raise productivity in other sectors.
 - For example, the recent rise in productivity in the service sector has happened mainly because they are using more advanced inputs produced by the manufacturing sector – computers, optic fibres, routers, GPS machines, more fuel efficient cars, mechanised warehouses, and so on.

‘Post-industrial Knowledge Economy’? III

- All those supposedly knowledge- intensive services, such as finance, design, and engineering, sell mostly to manufacturing firms, so their success depends on manufacturing success.
- Countries can specialise in and export these services, but over time they are likely to lose their competitiveness in these services because they need close interaction with the customers in the manufacturing sector in order to improve their quality and productivity.