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The “price-specie-flow” theory (David Hume, 1754)

- A model born in the bygone era of gold standard, but still highly relevant to today’s world as a global growth/prosperity model.
- Gold output (or inflow in the wake of trade surplus) -> Money S up -> PQ up (first Q then P) -> Trade deficit -> Gold outflow. The inverse sequence of events as mirror opposites. Gold-parity-determined exchange rates: profit-seeking gold arbitragers stabilize the rates. A free-market approach. A model of global growth and prosperity diffusion via flows of gold and trade.
- The futility of mercantilism = gold possession as the source of national wealth and protection-built trade surpluses (Adam Smith: productivity growth, the result of a division of labor, as the wealth of nations). Yet gold was a powerful vehicle of growth dissemination under the gold standard.
- No country-specific evidence, but a logical beauty. (i) Hume’s interest in the processes set in train by a significant economic event (Dow, 2009)—i.e., a process or evolutionary analysis. (ii) His interest in differences in economic performance between “poor” (Scottish) and “rich” (English) economies.
- A short-term or a long-term phenomenon? The former at full employment (P alone increases), but a prolonged sequence if the economy is at under-capacity or with untapped Q.
- How a country can participate in this wealth-spreading regime? Through free trade: The more trade-oriented, the greater the benefits of gold flows.
The “price-knowledge-flow” model a la David Hume

• The PSF theory is still relevant to modern economics: monetarism, especially global monetarism. How about its application to the real-sector global economy?

• What flows most freely across the world today—in the place of gold?

• Knowledge creation and diffusion in the age of globalization (esp., now IT-driven). K-creation = gold output, K-diffusion = gold flows.

• Any evidence? A history of industrialization is nothing but a series of knowledge creation and cross-border diffusion: The Industrial Revolution (U.K.) -> Continental Europe -> the New World (U.S., Latin America) (Landes, 1969); More recently, U.S. -> Japan -> the NIEs -> the ASEAN-4 -> China & India -> Vietnam/Cambodia -- and possibly -> Sub-Saharan Africa by China? (Ozawa & Bellak, 2010)

• Knowledge spreading is more powerful than gold diffusion in sparking economic growth across the world. Gold output subject to the law of diminishing returns, but knowledge subject to the law of increasing returns (Marshall 1920). Knowledge is a public good (non-rival).
The modern process of national industry development

• More specifically, “industrial recycling” among countries (Fig. 1), via transmigration of labor-intensive industries, ameliorating poverty (Ozawa, 2009).

• Who are the major innovators and the disseminators/carriers of knowledge? Multinational corporations (MNCs).

• From “gradual industry development via protection” (i.e., “infant industry” protection; an old-fashioned process of $M \rightarrow P \rightarrow X$; M as an initiator of local demand) to “instantaneous industry development via MNCs/FDI”($FDI \rightarrow P \rightarrow X$: FDI as an initiator of local demand). (Ozawa, 2011, forthcoming).

• The FG theory of tandem growth and regional agglomeration (Ozawa, 2009).

• What propels knowledge flows from one country to another? (i) under the gold standard, opposite changes in price levels affect trade competitiveness between countries, (ii) an expansion of trade-competitive industries $\rightarrow$ wages/prices/currency appreciation.
The Paradigm of Industrial Development (the Ladder of Economic Development)

- The growth curve—and stages—is associated with the hitherto undefined notion of “the ladder of economic development.”
- An *S-shaped growth curve* with an inflection point (i.e., the highest rate of growth). Development process starts to accelerate up to the inflection point and then to slow down. The **basic** evolution law of “a growth speed-up early on but eventually a growth slow-down at mature stages.” The law of diminishing returns at the macro-aggregate level.
- Newly defined in terms of a “leading-sector stages model” a la Schumpeter, in which *a sequence of growth is punctuated by stages and in each stage a certain innovation-initiated industrial sector can be identified as the main engine of structural transformation* (Ozawa, 2005). Fig. 2. (*inter-industry progression*)
  - (i) Endowment-driven (labor or resources)->(ii) Scale-driven->(iii) Assembly-driven->(iv) R&D-driven->(v) IT-driven-> (vi) GT-driven (emerging).
- *Intra-industry vertical fragmentation and off-shoring:* Fig. 3
- How to kick-start growth; drastic reforms (China’s open-door policy, communism demise in Central Europe, the Meiji Restoration & a war defeat in Japan, etc.)
Why slow-downs in mature economies?


- Why slow-down in mature economies? (a) lower productivity in the tertiary sector (wages in U.S. manufacturing are three times those in its service sector). (b) demography factors: an aging society and less vigorous consumers. (c) Leading-sector-specific productivity growth is high in lower-tier (i, ii, and iii) industries, reaching the highest in iv, but decline in newest (v), though innovation in v lift all the boats in the economy. (d) Knowledge creation is done at home, but off-shored quickly. (e) tendency toward institutional socialism (entitlements & public/private unionization).
Concluding remarks

• The PSF theory (money-sector model, though, needs to be restated for today’s world), and the PKF theory (real-sector) are complementary in shedding light on differences in economic performances among countries.

• The PKF model gives an explanation of how an emerging nation catches up and how a mature nation slows down—in terms of factors that develop over the course of interactive growth.
References

Figure 1  U.S. import market shares for labor-intensive goods

Note: Labor-intensive goods consist of textiles (SITC 65), non-metallic mineral manufactures (SITC 66), furniture (SITC 82), travel goods, handbags, etc. (SITC 83), clothing (SITC 84), and footwear (SITC 85).

Figure 2  U.S. TV Import Market Shares for Japan, the NIEs, the ASEAN-4 and China

Figure 3  The ladder of economic development: industrial upgrading under UK- and US-led global capitalism

UK-led era
Golden Age of Capitalism, Mark I (1870-1913)

WWI

US-led era
Golden Age of Capitalism, Mark II (1950-1971)-->

Tier IV-A

‘McLuhan’
Internet-based
industries

Tier IV

‘Schumpeterian’
R&D-driven
industries
(information)

Tier III

‘Differentiated
Smithian’ assembly-
Based industries
(microchips & computers)

Tier II

‘Nondifferentiated
Smithian’ scale-
driven industries
(automobiles)

Tier I

‘Heckscher-Ohlin’
endowments-
driven industries
(textiles)

Bourgeois Capitalism/Colonialism/
Communism/Fascism

Endowed assets (home-bounded)

Natural resources-based manufacturing /elitist consumption

Production primary

Created assets (foot-loose)

Knowledge-based manufacturing

High mass consumption

Natural capital

Physical capital

Human capital

Intellectual capital

Source: based on Ozawa (2005, 2009)
Figure 4  Fragmentation of production along the capital-labor intensity ratios

*Capital includes human capital.