

## VI. Business

“In real nature, there’s enough diversity to cushion an ecosystem when something catastrophic happens. Nothing that we build, our ships, our stations, has that depth. Now in an artificial ecosystem, when one thing goes wrong, there’s only a certain amount of pathways that can compensate for it. Eventually those pathways get overstressed, and then they fail. Which leaves fewer pathways, and then they’ll get overstressed and then they fail (...) [The] Ganymede [space station] is a simple complex system. Because it’s simple, it’s prone to cascades, and because it’s complex, you can’t predict what’s going to break down next or how (...) This station is dead already. They just don’t know it yet.”

*The Expanse 2x10*

<https://tvshowtranscripts.ourboard.org/viewtopic.php?f=505&t=36380>

### 1. Globalization, deglobalization and Rodrik’s trilemma

**Political development, economic development and political stability: pick two?**

Globalization, the increasing integration of national economies (even countries), has been one of the big global economic events after World War II and, arguably, the big event after 1989 (the fall of the communist alternative to capitalism), at least until the global financial crisis of 2008. To be specific, ‘globalization’ here means ‘globalization 3.0’ in Fig. 1.

Globalization Era	Age of Discovery (15 <sup>th</sup> -18 <sup>th</sup> century)	Globalization 1.0 (19 <sup>th</sup> century – 1914)	Globalization 2.0 (1945-1989)	Globalization 3.0 (1989-2008)	Globalization 4.0
Leading Exports	Raw Material / Basic Goods	Textiles / Industrial Goods	Factories	Global Supply Chain	Digital Goods / Services
Leading Nations					
Exports as % World GDP	<5%	6→14%	5→15%	15→>20%	?
Enabling Era	Scientific Revolution (15 <sup>th</sup> -17 <sup>th</sup> century)	1 <sup>st</sup> Industrial Revolution (1780s–mid 19 <sup>th</sup> century)	2 <sup>nd</sup> Industrial Revolution (1870s-1910s)	3 <sup>rd</sup> Industrial Revolution (1960s-1990s)	4 <sup>th</sup> Industrial Revolution (2000s-2010s)
Enabling Innovations					
Characterizing GDP Trend	Europe ↗	Britain ↗↗	World ↗	United States ↗↗↗	China ↗↗↗↗

Fig. 1. Globalization as a very long run process

<https://www.weforum.org/stories/2019/01/how-globalization-4-0-fits-into-the-history-of-globalization/>

Historically, integration proceeded locally: political borders were established and secured first, and subsequently integration took place essentially within those borders. The result has been a world politically partitioned into sovereign territories, sustained by a centralized political authority.

- Does a fixed political border require a centralized authority or a territory may remain independent with a multiplicity of non-hierarchical political authorities?

In parallel, national political authorities tended to be legitimized through appeal to the will of the majority (‘democracy’ or, more precisely, representative democracy).

Thus, democracy prospered or failed at the national level.

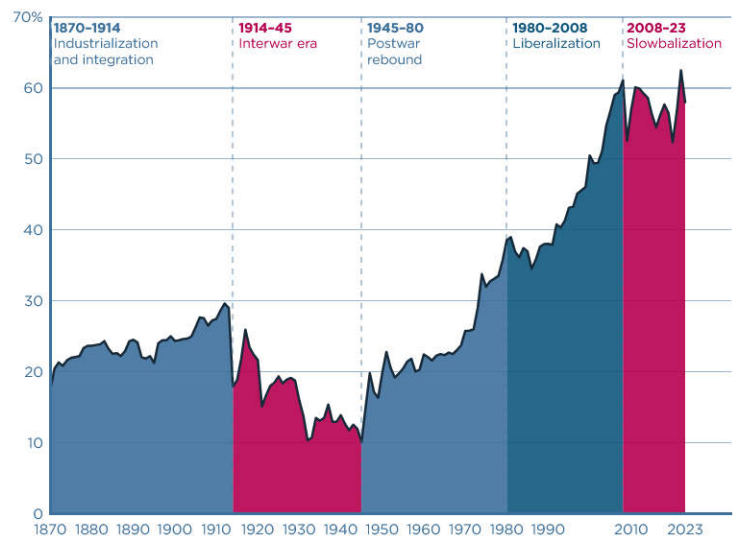
- Democracy can then be viewed as an intrastate creation: national governments allowed the emergence of democracy, tolerated their persistence and associated their legitimacy with democratic procedures.
- Conversely, national governments remain strong enough to block the emergence of democracy or to limit its scope within the territory under control of the national government.
- Are autocracies on the rise? Has the wave of democratization been a bubble?
- Are governments the only actors that could give birth or kill democracies?

Subsequently, a world politically fragmented into almost unchangeable territories (nation-states?) has been subject to a process of economic integration (globalization).

- This process tends to lower almost all kind of barriers between the national territories (economic, social, cultural, ideological, religious, demographic... even people apparently become more physically alike), at the expense of preserving the political barrier.
- An interpretation is that globalization has been a political (geopolitical) outcome: it has not been a spontaneous process (the result of the 'natural' activity of the private sectors of different territorial entities) but one decided and supervised by national governments.
- This interpretation suggests that globalization is also a creature of national governments: just as easily as governments endorsed, supported and stimulated global integration, they may choose to stop or revert the process; since 2008, that seems to be the case; see chart on the right (the backward march in multilateralism by the 2025 Trump Administration being the icing on the cake).

#### The world dramatically opened up to trade post-World War II, but integration has slowed recently

World trade in goods and services as percent of world GDP, 1870-2023



<https://www.piie.com/microsites/globalization/what-is-globalization>

The question: is it possible (sustainable, stable enough) to combine

- the integration of sovereign territories by removing essentially all borders,
- except the territorial one, and by
- preserving the respect for the will and interest of the majority of people?

Rodrik's trilemma answers in the negative: almost full integration in the presence of sovereign territories is inconsistent with a democratic organization of the territories; see Rodrik (2011): *The globalization paradox: Democracy and the future of the world economy*, W.W. Norton.

The reason for the impossibility of having the three outcomes is that globalization puts national governments in a position to choose between meeting the needs of the globalization process (satisfy the demands and requirements of the few actors having more influence in the globalization process: international corporations, big financial players, powerful foreign governments, some international organizations...) and meeting the needs, demands or requirements of the people in the territory over which the government is sovereign.

The presumption is that the kind of policies that most people in a territory will support (like make the rich pay, regulate financial and labour markets, have the government provide social services) goes against the interest of the main actors of globalization.

A more general interpretation of the trilemma is that there is a tension (a crowding out) between the three goals: getting closer to one of the goals implies separating more from at least one of the other two. For instance, the more national governments support the process of global integration without altering political borders, the less democratic the political decisions are (austerity politics in the eurozone as the response to the euro crisis in 2010-2012?).

Rodrik's trilemma can be extended to a trilemma suggesting that there is a tension between

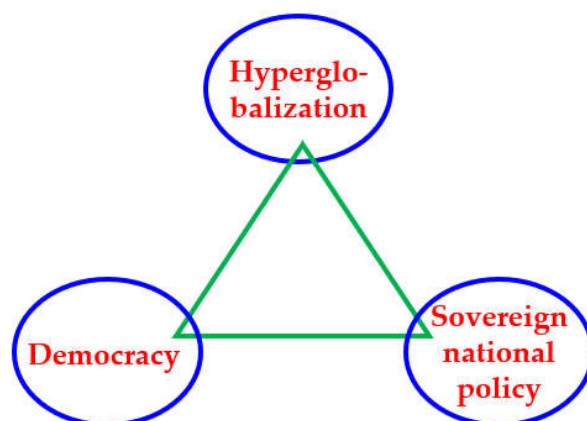
- global goals (deep integration, in Rodrik's trilemma; or revert global warming; or fight global poverty);
- national sovereignty (no global government: decisions on how to achieve the global goals involve independent political entities); and
- national policy tools (whatever decision is made to achieve the global goals, it is implemented at the national level).

The tension is justified by the following argument: national governments endowed with just national policy tools lack the coordination necessary to achieve global goals.

- As a rule, the decisions to reach global goals create costs and benefits asymmetrically distributed among national territories. If attaining the global goals is left to uncoordinated action of national governments, nothing guarantees that, when making a decision, a national governments takes into account the costs (negative external effects) caused on other territories.

### Rodrik's trilemma

Dani Rodrik (*Princess of Asturias Award for Social Sciences 2020*) proposed around 2007 an 'impossibility theorem' for the global economy (which he called the 'political trilemma of the global economy' and which is now known as 'Rodrik's trilemma'). The impossibility is expressed as a tension between economic reality (the global nature of many markets) and political reality (the national nature of the institutions under which markets operate).



“I maintain that any reform of the international economic system must face up to this trilemma. If we want more globalization, we must either give up some democracy or some national sovereignty.”

[https://rodrik.typepad.com/dani\\_rodriks\\_weblog/2007/06/the-inescapable.html](https://rodrik.typepad.com/dani_rodriks_weblog/2007/06/the-inescapable.html)

A sufficiently globalized economy obliges the government to preserve economic globalization and meet the needs and expectations of businesses, traders, investors and international organizations. When there is a conflict between the needs of the population and those of these agents, the government can choose to prioritize the latter. If it wished to restore national democratic legitimacy, it would be necessary to limit globalization. The third option would be to renounce national sovereignty to globalize democracy. Therefore, the options are: restrict democracy, limit globalization, or globalize democracy (sacrificing national sovereignty). Wanting deep enough international integration while maintaining respect for the interest of the majority of the people and national sovereignty is wanting too much.

According to a less strict interpretation, the problem is not having to give up one of the three objectives, but rather that the more one wants one objective, the more one must give up another. The metaphor would be that of three tanks with communicating vessels: the fuller one tank is, the emptier some other tank must become.

Rodrik (2011) offers the following examples of how globalization interferes with national democracies.

“...one of the central truths of the global economy: National democracy and deep globalization are incompatible. Democratic politics casts a long shadow on financial markets and makes it impossible for a nation to integrate deeply with the world economy. Britain had learned this lesson in 1931, when it was forced to get off gold. Keynes had enshrined it in the Bretton Woods regime.”

“There is a fundamental tension between hyperglobalization and democratic politics. Hyperglobalization does require shrinking domestic politics and insulating technocrats from the demands of popular groups.”

“Consider a few illustrations of how globalization gets in the way of national democracy.

**Labor standards.** Every advanced economy has detailed regulations that cover employment practices (...) Thanks to outsourcing, my employer can now do what he previously could not. Domestic labor laws still prohibit him from hiring you in my place and putting me to work under conditions that violate those laws. But this no longer matters. He can now replace me with a worker in Indonesia or Guatemala who will work willingly under those same substandard conditions or worse ... Why do national regulations protect me from downward competition in employment practices from a domestic worker but not a foreign one? Why should we allow international markets to erode domestic labor regulations through the back door when we do not allow domestic markets to do the same?

**Corporate tax competition.** The international mobility of firms and of capital also restricts a nation's ability to choose the tax structure that best reflects its needs and preferences. In particular, this mobility puts downward pressure on corporate tax rates and shifts the tax burden from capital, which is internationally mobile, to labor, which is much less so.

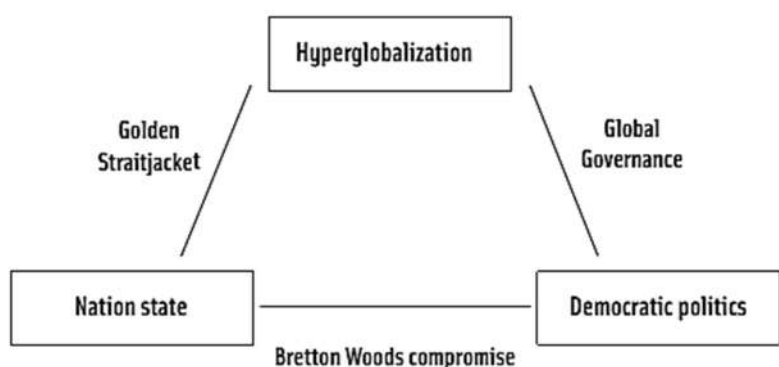
**Health and safety standards.** Most people would subscribe to the principle that nations ought to be free to determine their own standards with respect to public health and safety. What happens when these standards diverge across countries, either by design or because of differences in their application? How should goods and services be treated when they cross the boundaries of jurisdictions with varying standards?"

**"Industrial policies in developing nations.** Probably the most significant external constraint that developing nations face as a consequence of hyperglobalization are the restrictions on industrial policies that make it harder for countries in Latin America, Africa, and elsewhere to emulate the development strategies that East Asian countries have employed to such good effect."

Rodrik (2011) detalla así las diferentes opciones que son compatibles con el trilema.

"How do we manage the tension between national democracy and global markets? We have three options. We can restrict democracy in the interest of minimizing international transaction costs, disregarding the economic and social whiplash that the global economy occasionally produces. We can limit globalization, in the hope of building democratic legitimacy at home. Or we can globalize democracy, at the cost of national sovereignty. This gives us a menu of options for reconstructing the world economy.

The menu captures the fundamental political trilemma of the world economy: we cannot have hyperglobalization, democracy, and national self-determination all at once. We can have at most two out of three. If we want hyperglobalization and democracy, we need to give up on the nation state. If we must keep the nation state and want hyperglobalization too, then we must forget about democracy. And if we want to combine democracy with the nation state, then it is bye-bye deep globalization. The figure below depicts these choices."



"Consider a hypothetical fully globalized world economy in which all transaction costs have been eliminated and national borders do not interfere with the exchange of goods, services, or capital. Can nation states exist in such a world? Only if they focus exclusively on economic globalization and on becoming attractive to international

investors and traders ... The only services provided by governments would be those that reinforce the smooth functioning of international markets. We can envisage a world of this sort, and it is the one Tom Friedman had in mind when he coined the term 'Golden Straitjacket.' In this world, governments pursue policies that they believe will earn them market confidence and attract trade

and capital inflows: tight money, small government, low taxes, flexible labor markets, deregulation, privatization, and openness all around.”

“Must we give up on democracy if we want to strive for a fully globalized world economy? There is actually a way out. We can drop nation states rather than democratic politics. This is the ‘global governance’ option. Robust global institutions with regulatory and standard-setting powers would align legal and political jurisdictions with the reach of markets and remove the transaction costs associated with national borders ... Taking this idea to its logical conclusion, we can envisage a form of global federalism—the U.S. model expanded on a global scale.”

“The only remaining option sacrifices hyperglobalization. The Bretton Woods regime did this (...) The Bretton Woods–GATT regime allowed countries to dance to their own tune as long as they removed a number of border restrictions on trade and generally treated all their trade partners equally. They were allowed (indeed encouraged) to maintain restrictions on capital flows, as the architects of the postwar economic order did not believe that free capital flows were compatible with domestic economic stability (...) Until the 1980s, these loose rules left space for countries to follow their own, possibly divergent paths of development. Western Europe chose to integrate as a region and to erect an extensive welfare state.”

Rodrik, Dani (2011): *The globalization paradox: Why global markets, states, and democracy can't coexist*, Oxford University Press.

**Resolving Rodrik's trilemma**

Fig. 2 offers a rationalization of the recent historical apparent resolution of Rodrik's trilemma by the developed countries.

- After World War II and around the mid-1960s (in connection with the Bretton Woods system and the associated resolution of the open economy trilemma), developed countries gave up on globalization; see Fig. 2(ii). The full potential of national policies was devoted to rebuild economies and establish the welfare state.

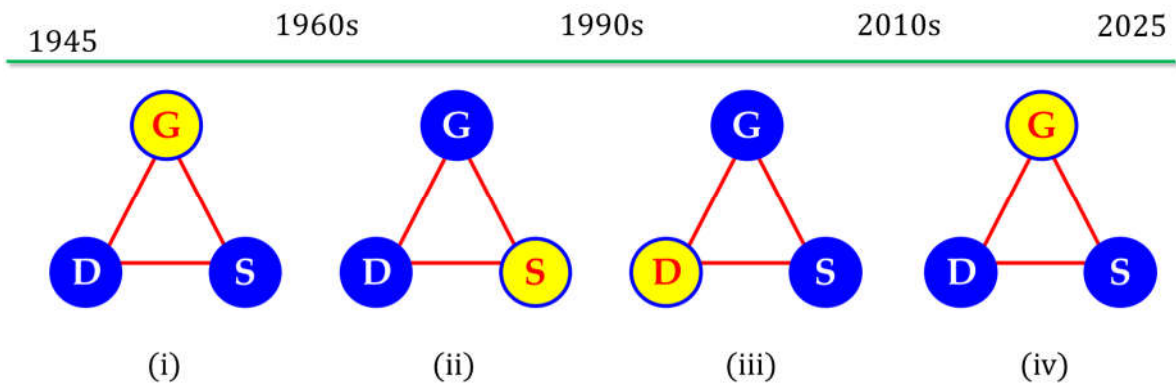


Fig. 2. Stylized sequence of the resolution of Rodrik's trilemma by developed countries

- Between the mid-1960s and the early 1990s, some globalization took place, more or less spontaneously, as a result of the economically successful outcomes of the two previous decades. The associated tensions were relatively mild and were absorbed by national governments,

accepting some sovereignty limitation (trade agreements, economic international cooperation, adherence to international economic organization...); see Fig. 2(ii). In this period, economies suffered from a global energy shock (the oil crises in the 1970s), to which governments responded trying to preserve the welfare state (that is, respecting 'democracy'). So a bit more of globalization was tolerated by limiting the freedom of national policies; that was also the response to the oil crises, the first global, negative effect of globalization occurring mainly in the real sector.

- Between the early 1990s and the late 2000s (the fall of the Berlin Wall and the 2008 global financial crisis) globalization deepened, both in the real side of economies (global supply chains, outsourcing, the China shock...) and the financial side (financial markets running wild and went crazy: the times when, as popularized by the 1987 Wall Street movie, 'greed, for lack of a better word, is good'). In that period emerged Rodrik's trilemma: globalization was changing so much the national economic reality that it was no longer acceptable for governments to absorb the shock and now it was the people's turn; see Fig. 2(iii). In that period, governments adopted policies that, if put to a referendum, people would have not approved (tax reforms favouring the rich, labour reforms against the working class, social spending cuts, privatization of public companies, deregulation of financial markets...). In those circumstances, it was easier for the governments to respond to the global financial crisis of 2008 differently than before, in the 1970s: now the burden of the adjustment fell entirely on the poorest 99% (in this time became popular the division between the 1% richest and the rest).
- After around the late 2000s to the present opting for deglobalization appears to be widespread strategy; see Fig. 2(iv). Brexit (the United Kingdom's exit from the European Union) was a shocking illustration of the new strategy: people's attribution of the cause of domestic economic and social problems to globalization gave governments strong incentives to adopt more popular measures intended to put limits to globalization (restrict migration, stop outsourcing, adopt ambitious industrial policies measures...). The first Trump Administration hailed the new strategy by initiating a trade war with China in January 2018. The second Trump Administration has massively and aggressively expanded the strategy in April 2025, by firing tariffs at everyone (ridiculously named 'Liberation day tariffs'). The hegemon breaking its own globalization rules is the evident sign that globalization has gone too far and it is time to take in the sail. The triumphant strategy for governments is to become populist, presenting themselves as guardians and protectors of the people against evil globalization.
- Less developed countries faced a different reality. Fig. 3 rationalizes the choices of two such groups of countries: Latin American countries in (i) and Asian countries in (ii). When those countries started to become globally relevant from an economic point of view in the 1960s, the Latin American countries apparently tries to replicate the strategy followed by the developed countries to reconstruct their economies after the world war shock: to limit globalization and pursue industrial policies based on import substitution. When a two to three decades later the strategy proved to be a failure, they joined the globalization wave and sacrificed democracy.

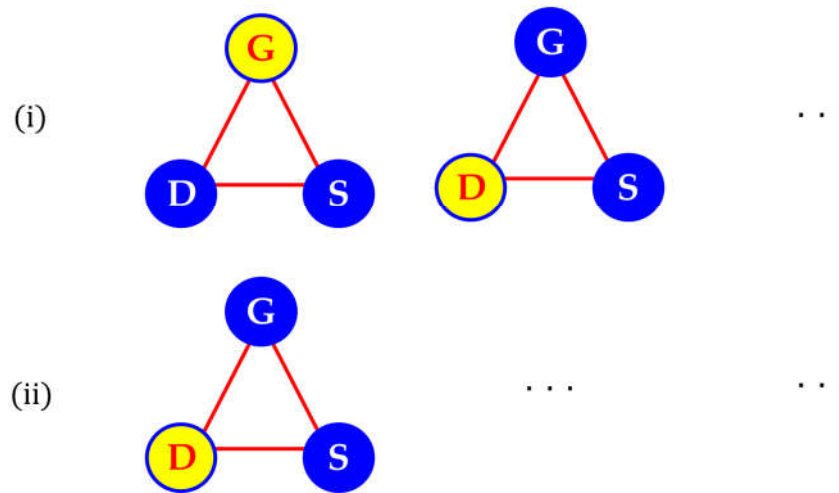


Fig. 3. Stylized sequence of the resolution of Rodrik’s trilemma by less developed countries  
 (i) = Latin America (ii) = Asia

- Asian countries followed, from the very start, the strategy of joining globalization (with an industrial policy promoting exports) and restricting democracy. The most successful countries (South Korea) have joined the ranks of the developed countries and may accept some democracy by keeping globalization and, in exchange, tolerating foreign limits to national sovereignty (for instance, taking their share in the cost of global cooperation). The main case in the Asian approach is China. Though formally not a democracy, it can be interpreted that, with respect to some issues, to ensure social stability, the government implements policies as if they cared for the interest of the majority.

**The Lee thesis**

The Lee thesis is the claim (attributed to the Singapore Prime Minister Lee Kuan Yew, 1959–1990) that it is acceptable to deny civil and political rights to citizens if it promotes economic development and improved well-being for the majority. Alternatively, the

Lee thesis argues that democracy is neither necessary nor effective for economic development.

The justification is that democracy generates social instability and/or political gridlock, which prevents the implementation of reforms and policies that favor and stimulate development. An authoritarian government can approve and implement these reforms and policies free from the interference of pressure groups and the need to achieve short-term goals, thus achieving high levels of investment by implementing appropriate industrial policies. Democracy diverts social and economic forces into political confrontation and generates instability and tensions that do not favor the adoption of measures aimed at long-term objectives.

<https://thediplomat.com/2015/09/why-do-outsiders-care-about-singapores-elections/>

Knutsen, Carl Henrik (2009): “Investigating the Lee-thesis: ¿How bad is democracy for Asian economies?”, artículo para “Den nasjonale fagkonferansen y statsvitenskap 2009”.

“Lee Kuan Yew fervently argued that denying civil and political rights to people was acceptable if it promotes economic development and general wealth for the majority. That idea, subsequently dubbed ‘the Lee Thesis,’ has been fiercely debated since.”

<https://thediplomat.com/2015/09/why-do-outsiders-care-about-singapores-elections/>

“Indonesia’s democratic transition was a success, and now is in the third decade of democratic experience. But it has been backsliding, bringing the country to the edge of competitive authoritarianism. During the three-decades of Suharto’s authoritarian rule, the economy grew at 7% annually, while the democratic Indonesia grew only at around 5%. Higher authoritarian growth resonates with the so-called Lee thesis, popularised by the founding Prime Minister of Singapore, Lee Kuan Yew. It is argued that that development requires some restraints on democracy, famously put as a choice between two ‘D’s’ - democracy and development or between democracy and discipline. Its proponents hold the view that poor developing countries are not fit for democracy.

The Lee thesis is supported by high growth phases under the authoritarian rules of Singapore under Lee himself, Mahathir’s Malaysia, Park Chung-hee’s South Korea, and Chiang Kai-shek’s Taiwan. Authoritarian China’s phenomenal growth since the early 1990s has also provided credence to the thesis. Thus, temptations to authoritarianism can also be seen in other developing Asian and African countries. However, it is argued that democratic growth is more stable and more resilient to crises. AK Sen argued that it is wrong to ask whether a country is fit for democracy; rather a country becomes fit through democracy. Entering the second half of the third decade of its current democratic experience, Indonesia will have to decide whether to stay with the path of democratic growth or returning to an authoritarian path.”

<https://indonesia.crawford.anu.edu.au/news-events/events/22487/democracy-andor-development-reflecting-lee-thesis-indonesia>

“Amartya Sen claims in *Development as Freedom* that democracy is the solution to helping poor economies, but the Lee thesis states otherwise. The thesis states that authoritarianism eradicates poverty because of a focus on economic development rather than freedom.”

“Some opponents of democracy in developing countries echo the ‘Lee thesis,’ named for former Prime Minister of Singapore, Lee Kuan Yew. It states that authoritarian regimes are better at enriching poor nations than democracies.

Proponents of the Lee thesis attribute this to an authoritarian focus on economic development rather than on freedom, which is seen as unnecessary to eradicating poverty. For example, Singapore, South Korea, and China achieved higher growth while under authoritarian governments than did democracies like India, Costa Rica, and Jamaica.

However, Sen states that the Lee thesis is based on faulty evidence. Empirical studies reveal there’s no relationship between authoritarianism and economic growth. By contrast, democratically-oriented policies are proven growth drivers. Examination of the ‘East Asian

Miracle' economies (such as Japan, Singapore, Taiwan, and South Korea), which achieved rapid economic growth in the 20th century, suggests the following policies are most helpful:

- Openness to competition
- Use of global markets
- High literacy rates
- Land reforms
- Incentives for industrialization, research and development, and exports

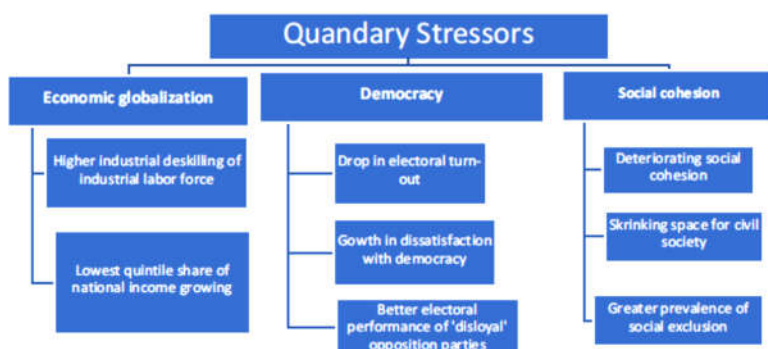
Sen argues all of these helpful policies are compatible with democratic rights. Additionally, many authoritarian regimes that have failed to adopt these policies have remained poor. Therefore, the assertion that authoritarianism is either necessary or sufficient to achieve economic growth is false."

<https://www.shortform.com/blog/lee-thesis/>

Knutsen, Carl Henrik (2010): "Investigating the Lee Thesis: How Bad is Democracy for Asian Economies?", *European Political Science Review* 2 (3): 451–473.

### Dahrendorf's quandary

Dahrendorf's quandary was proposed in 1995 by sociologist, political scientist, and economist Ralf Dahrendorf (*Prince of Asturias Award for Social Sciences* 2007). Dahrendorf's quandary anticipates Rodrik's trilemma and conceptually seems related to (global) zero-sum games.



"Dahrendorf's Quandary, an early formulation of the Rodrik Trilemma, stipulates that maintaining economic competitiveness requires countries either to adopt measures detrimental to the cohesion of civil society, or to restrict civil liberties and political participation."

Anheier, Helmut K.; Alexandru Filip (2021): "The Dahrendorf Quandary, Crisis Severity, and Country Performance", *Global Policy* 12(3), 298-312 <https://doi.org/10.1111/1758-5899.12901>

"... a growing and integrating world economy would sooner or later create 'perverse choices' for liberal democracies. Over time, he said, staying economically competitive would require either adopting measures detrimental to the cohesion of civil society or restricting civil liberties and political participation. For liberal democracies, he concluded, the ask ahead for the early 21st century, 'is to square the circle between economic growth, social cohesion and political freedom.' This challenge became known as the Dahrendorf Quandary."

<https://blog.lareviewofbooks.org/55-voices/55-voices-democracy-quandaries-trilemma-globalization-democracy-society-helmut-anheier/>

## “The tide has turned

After a decades-long process where national economies became more and more entangled and interdependent at both the international and regional level, increasing strains to economic integration are evident both at the global and the European level.”

“The current rise in populist parties is a wake-up call resembling what the late Ralf Dahrendorf ... summarised a little more than 20 years ago as a quandary between globalisation (as a means towards growth), social cohesion and political freedom:

‘To stay competitive in a growing world economy [the OECD countries] are obliged to adopt measures which may inflict irreparable damage on the cohesion of the respective civil societies. If they are unprepared to take these measures, they must recur to restriction of civil liberties and of political participation bearing all the hallmarks of a new authoritarianism (...) The task for the first world in the next decade is to square the circle between growth, social cohesion and political freedom.’ (Dahrendorf 1995).

Indeed, the EU integration process has traditionally been conceived as a means to square the circle, allowing for catching-up economic growth and convergence (the EU as a great ‘convergence machine’...), while preserving Europe's social model(s) ... However, while the deepening globalisation and integration process has generated overall income gains via higher static and dynamic efficiency, in combination with skill-biased technical progress, it has almost certainly not been Pareto-optimal, creating winners (take-it all) and losers in an age of massive transformation. The financial crisis and its fall-out have only fuelled an already existing undercurrent of discontent and fading trust in democratic institutions and the so-called ‘elites’ to deal with the (real or imagined) unfair distribution of gains and burdens in society. In this context, EU institutional settings and policies have been increasingly perceived as being pro-market biased, paying little attention (if any) to their social impact, and undermining cohesion, solidarity, autonomy, and governability at the national, regional, and local levels. Put succinctly, in Musgrave's Three Functions of Government, the EU is seen as dealing with the allocative and, subordinately the stabilisation function, while not caring about the redistribution function which was largely left to member states.”

Pichelmann, Karl; Marco Buti (2017): “European integration and populism: Addressing Dahrendorf's quandary”, 22 Feb 2017

<https://cepr.org/voxeu/columns/european-integration-and-populism-addressing-dahrendorfs-quandary>

Dahrendorf, Ralf (1995): “Economic Opportunity, Civil Society and Political Liberty”, UNRISD Discussion Paper 58.

## 2. Kaldor's growth laws

There are not much generally accepted stylized facts on how business activity affects aggregate economic output. Nicholas Kaldor's (1966, 1967) growth laws are candidates to such facts.

Thirlwall (1983) formulates as follows Kaldor's laws as follows ("This catalogue of propositions is more or less the full Kaldor model of growth rate differences in advanced capitalist countries.")

- **Kaldor's first law.** "The faster the rate of growth of the manufacturing sector, the faster will be the rate of growth of Gross Domestic Product (GDP) (...). This is not a new idea. It is summed up in the maxim that the manufacturing sector of the economy is the 'engine of growth.'" In simpler terms: "there exists a strong relation between the growth of manufacturing output and the growth of GDP".
- **Kaldor's second law** (also known as the Kaldor-Verdoorn law). "The faster the rate of growth of manufacturing output, the faster will be the rate of growth of labor productivity in manufacturing owing to static and dynamic economies of scale, or increasing returns in the widest sense." This law contends that there is a positive relationship between manufacturing output and productivity growth; specifically, as the manufacturing sector grows, labor productivity in the sector increases. In sum: "there is a strong positive relation between the rate of growth of productivity in manufacturing industry and the growth of manufacturing output."
- **Kaldor's third law.** "The faster the growth of manufacturing output, the faster the rate of labor transference from nonmanufacturing to manufacturing, so that overall productivity growth is positively related to the growth of output and employment in manufacturing and negatively associated with the growth of employment outside manufacturing."

Thirlwall, A. P. (1983): "A Plain Man's Guide to Kaldor's Growth Laws", *Journal of Post Keynesian Economics* 5(3), 345-358.

Kaldor, N. (1966): *Causes of the Slow Rate of Economic Growth of the United Kingdom*, Cambridge University Press.

Kaldor, N. (1967): *Strategic Factors in Economic Development*, Cornell University Press.



<https://www.weforum.org/publications/global-economic-futures-productivity-in-2030/>

### 3. North-South divide, global inequality, Kuznets waves, global imbalances

“In my view, macroeconomics as currently practised has only served to fictionalise the world and encourage policy interventions (or lack of them) that have served the elites – widened inequality, impoverished communities, hastened the damaging impacts of climate change, hastened the emergence of the labour market precariat and more.”

<https://billmitchell.org/blog/?p=61636>

#### North-South gap

The North-South gap (or North-South divide) refers to the fact that most rich and developed countries lie above the equator and most of the least developed and poor countries lie below; see Figs. 4 and 5.

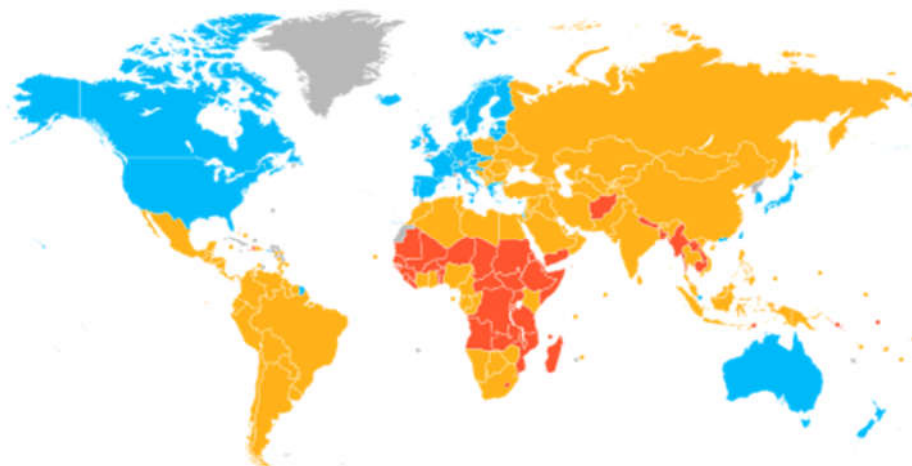


Fig. 4. Global North and Global South

[https://en.wikipedia.org/wiki/Global\\_North\\_and\\_Global\\_South](https://en.wikipedia.org/wiki/Global_North_and_Global_South)

[44 countries]  
Africa 32, Asia 8, Caribbean 1 and Pacific 3

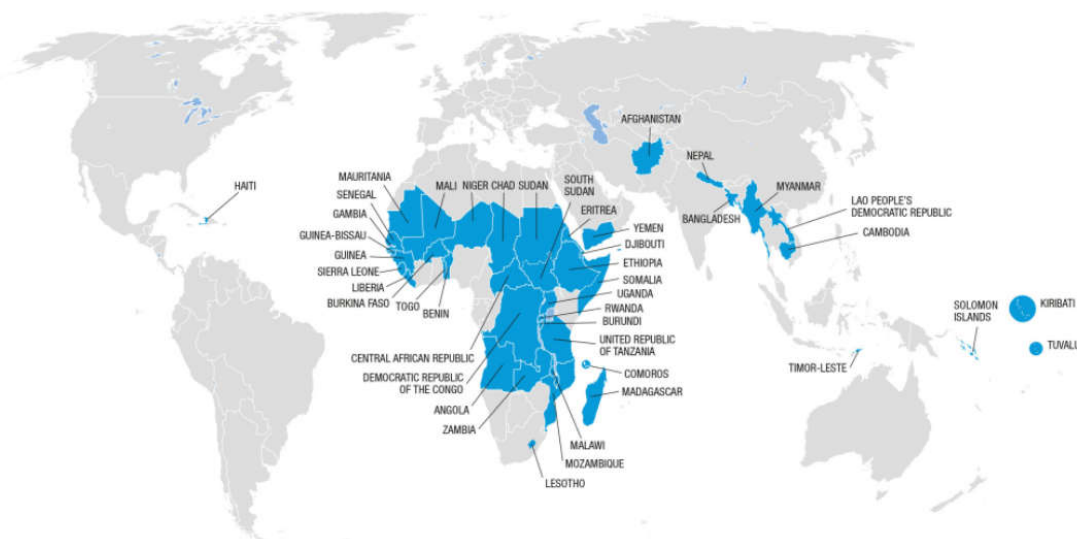


Fig. 5. Map of the least developed countries

<https://unctad.org/topic/least-developed-countries/map>

The Brandt line (from a 1980 report by Willy Brandt, [https://en.wikipedia.org/wiki/Brandt\\_Report](https://en.wikipedia.org/wiki/Brandt_Report)) separated the developed North from the less developed or developing South; see Figs. 6 and 7.

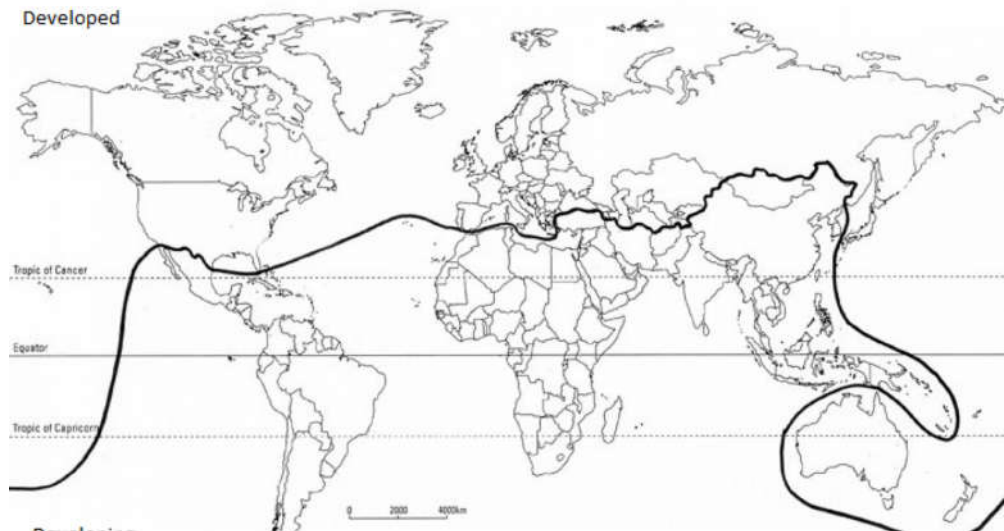


Fig. 6. The original Brandt line

<https://www.bisa.ac.uk/articles/brandt-line-after-forty-years-more-north-south-relations-change-more-they-stay-same>



Fig. 7. The original Brandt line

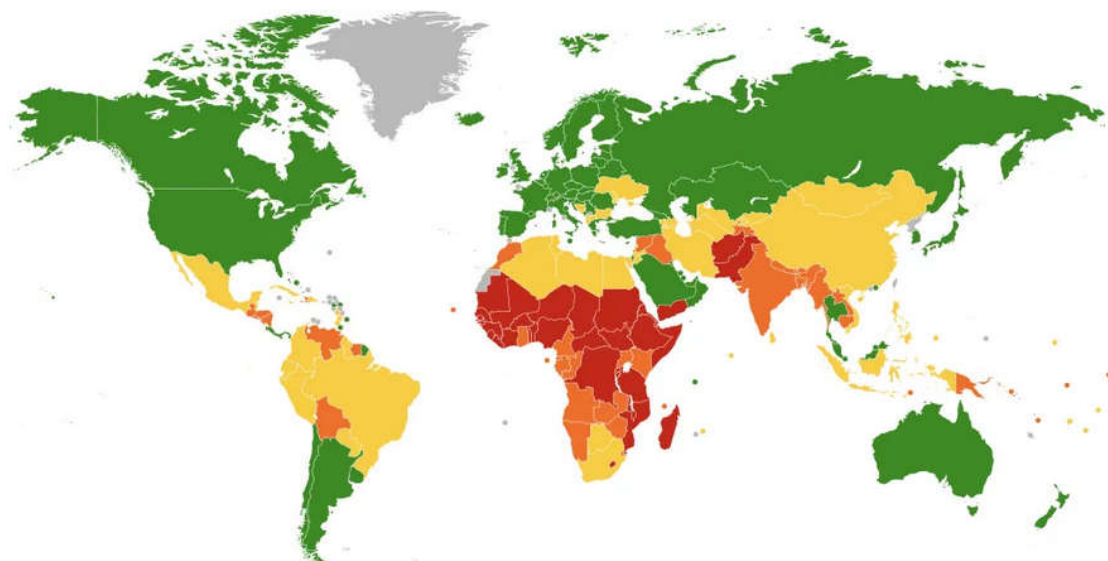
<https://bigthink.com/strange-maps/brandt-line-update/>

Using the Human Development Index (Fig. 8), an updated Brandt line has been suggested (Fig. 9).

“Every decade seems to bring with it a new set of arguments that the North-South divide is no longer relevant, or that its irrelevance is imminent. A perennial claim is that the global South is a transitory category because less economically developed societies should experience ‘catch-up growth’ and move towards the income levels of earlier waves of industrialisers. Some have claimed that catch-up growth is conditional on adopting the right policies, implying that the South will separate into different strata based on policy choices. But evidence for catch-up growth as a general pattern has been elusive and the debate among economists continues. Another wave of research in political economy and sociology investigated whether globalisation was decreasing or increasing inequality worldwide. The findings of this research tended to be quite nuanced: rising within-nation inequality might have offset falling

international inequality, with the 'lower South' catching up with the middle income 'upper South' rather than the South catching up with the North as a whole."

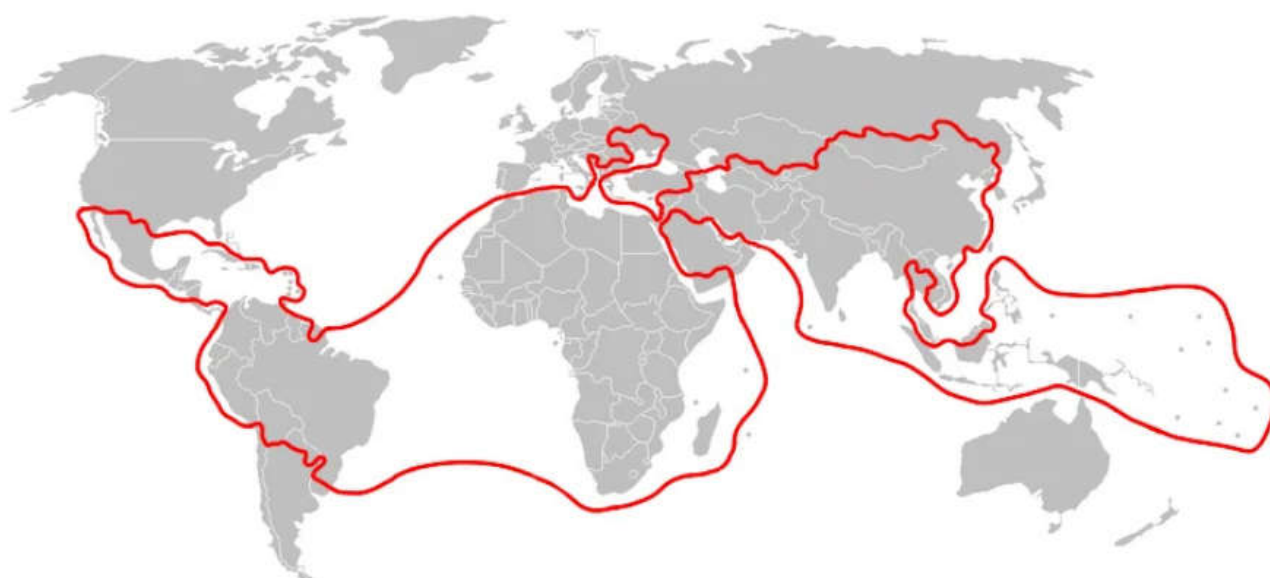
<https://www.bisa.ac.uk/articles/brandt-line-after-forty-years-more-north-south-relations-change-more-they-stay-same>



The UN's 2022 Human Development Index: green is "very high" (>0.8), yellow is "high" (0.7-0.799), orange is "medium" (0.55-0.699), and red is "low" (<0.549). (Credit: AltendoYT, CC BY-SA 4.0)

Fig. 8. The United Nations Human Development Index

<https://bigthink.com/strange-maps/brandt-line-update/>



The New Brandt Line, based on the HDI data – not sure whether it will catch on. (Credit: zzz\_ch/Reddit)

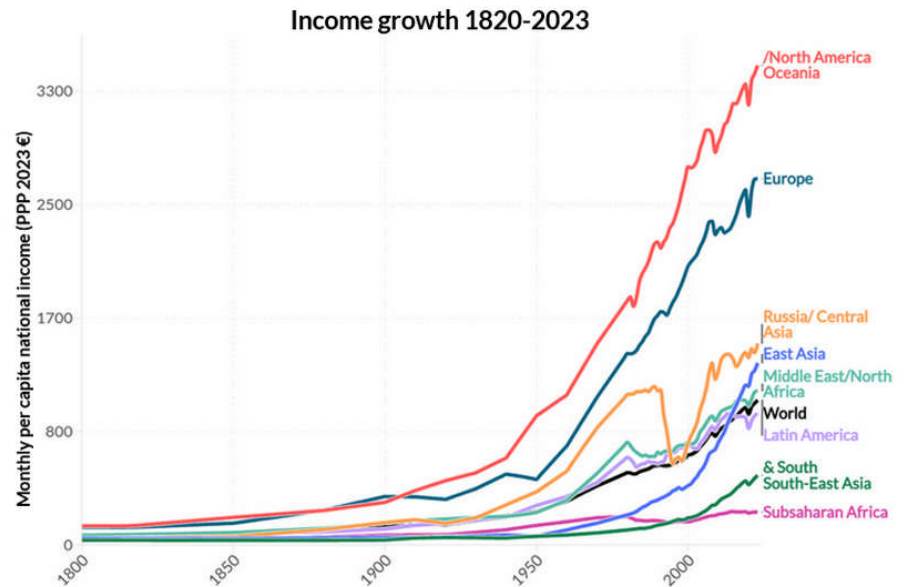
Fig. 9. A new Brandt line

<https://bigthink.com/strange-maps/brandt-line-update/>

"In the Americas, Chile and Argentina have joined the Global North. In Europe, Turkey is in, but large parts of the Balkans (Bosnia, Albania, North Macedonia, Bulgaria), Moldova, and Ukraine, as well as the Southern Caucasus (Armenia and Azerbaijan), have gone 'South.' With the exception of war-torn Yemen, the entire Arabian Peninsula has gone in the opposite direction. In East Asia, Thailand, Malaysia, Singapore, Hong Kong, Brunei, and South Korea have joined the North. Africa is the only continent that remains entirely stuck in one camp — unfortunately, the one below HDI 0.8."

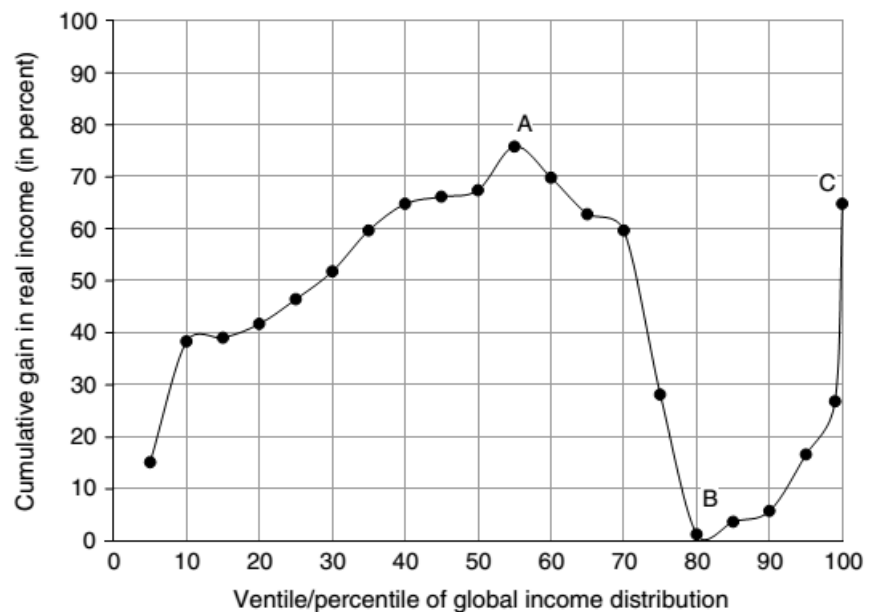
The North-South divide testifies to the fact that the global economy is not symmetric, just like national economies. Most of them suffer from territorial inequalities. From instance, in Spain, France, Italy... there is a richer geographical north and a relatively poorer geographical south; in the UK, the regions seems inverted (the souther regions are wealthier); in China, the distinction is between a richer east (the coastal regions) and a poorer west (the inner territories).

The graph on the right displays the historical dynamics of income (GDP) growth by regions. The North-South gap is the result of this dynamics of growth: the North started to grow before and the South has globally failed to converge.



<https://wid.world/news-article/10-facts-on-global-inequality-in-2024/>

**The elephant curve** As with most economic events, globalization has not distributed its gains evenly. The 'elephant curve' (also known as the Lakner-Milanovic graph or the global growth incidence curve,) is a graph showing who has benefited more from globalization: the curve illustrates the unequal distribution of income growth for different income groups.



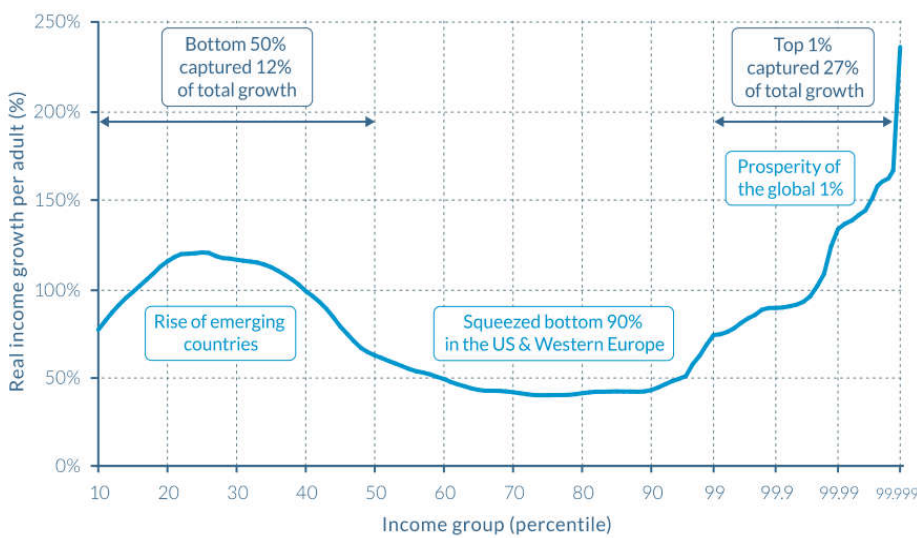
The *elephant curve* on the right shows the percentual gain in real per capita income between 1988 and 2008 (the high globalization period). The horizontal axis ranks people in the world from the poorest (extreme left) to the richest (extreme right). The maximum gain (point A) is near the median (people slightly above the 50th percentile of the global income distribution) and for the richest (the top 1%, point C). The minimum gain (point B) corresponds to the global 80th percentile (most of it in the lower middle class of the rich countries) this asymmetry.

- **Beneficiaries of globalization (1988-2008).** (1) People between the 40th and the 60th percentile (1/5 of the world population). Most members in this group belong to Asian economies (China,

India, Thailand, Vietnam, and Indonesia): the emerging global middle class. Hence, the Asian poor and middle classes define the great winners of globalization. (2) The global very rich (the global plutocrats).

- **The least benefited from globalization (1988-2008).** (1) The global poor (located in the countries that are not rich). (2) The global lower middle classes (most of whom live in the rich countries). Thus, the great losers of globalization are the lower middle classes and the poorer segments of the rich world.

Figs. 10-11 next update/extend the previous one, confirming the unequal distribution of gains. Hence, they provide some evidence for the claim that capitalist economic growth is not consistent with the fair, symmetric distribution of what growth generates.



“The vertical axis shows the total real income growth between 1980 and 2016 for each percentile of the global distribution of income per adult. The bottom 10 percentiles are excluded as their income levels are close to zero. The top 1% is divided into smaller groups (up to the top .001%) so as to better account for its share in total global growth captured”.

Fig. 10. The elephant curve of global inequality and growth, 1980-2016 (WID.world)  
World inequality report, <https://wir2018.wid.world/>

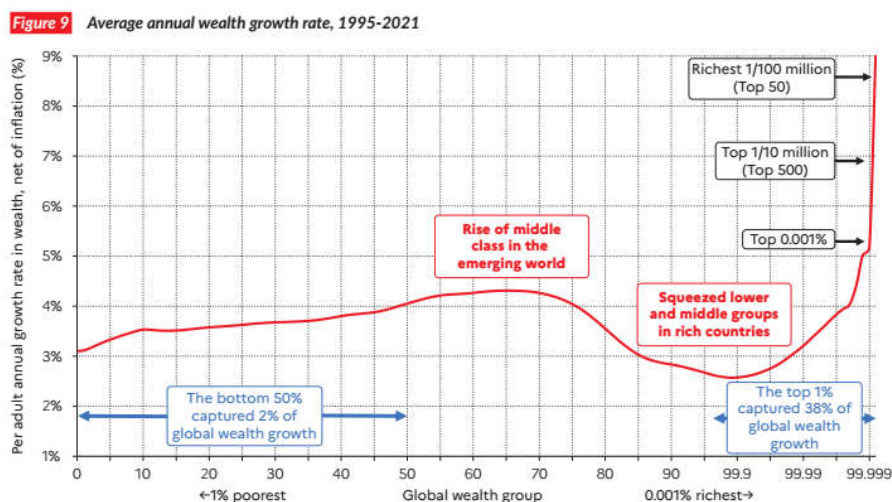
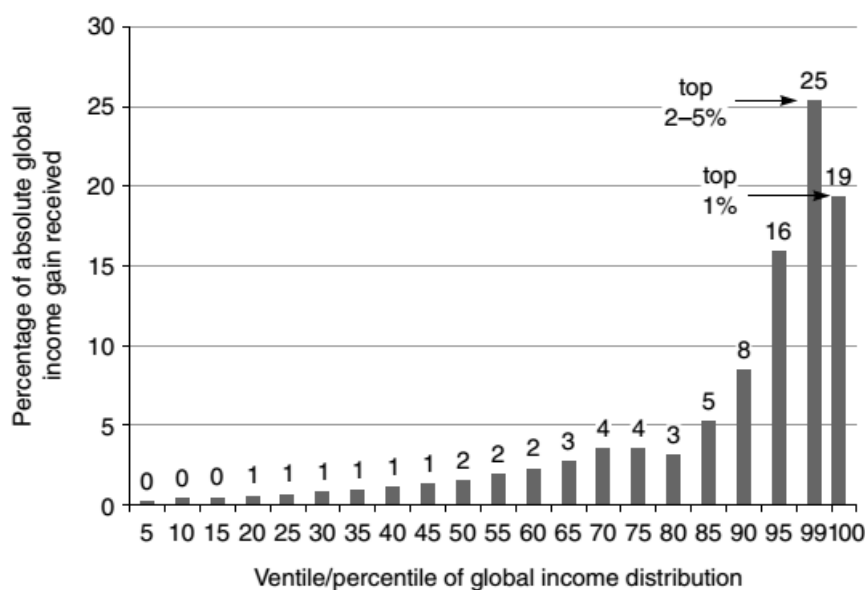


Fig. 11. The elephant curve of global inequality and growth, 1995-2021

“Interpretation: Growth rates among the poorest half of the population were between 3% and 4% per year, between 1995 and 2021. Since this group started from very low wealth levels, its absolute levels of growth remained very low. The poorest half of the world population only captured 2.3% of overall wealth growth since 1995. The top 1% benefited from high growth rates (3% to 9% per year). This group captured 38% of total wealth growth between 1995 and 2021. Net household wealth is equal to the sum of financial assets (e.g. equity or bonds) and non-financial assets (e.g. housing or land) owned by individuals, net of their debts.” World inequality report 2022

Facundo Alvaredo, Lucas Chancel, Thomas Piketty, Emmanuel Saez, Gabriel Zucman(2017): “The elephant curve of global inequality and growth”, WID.world Working Paper N° 2017/20.

The elephant curve pays attention to relative gains: income growth. But absolute gains also matter. In passing from 1000 to 1100, the relative gain is 10%, whereas in passing from 10 to 50 the relative gain is 400%. Yet, in the first case, the absolute gain (100) more than doubles the absolute gain in the second case (40). The chart on the right shows how the total increment in income between 1988 and 2008 has been distributed by global income level. It indicates that around the 44% of all the gains have been received by the richest 5% of the world population (the top 1% receiving 19% of the income rise). The other beneficiaries of globalization (the emerging global middle class) pocketed only between 2 and 4%.



### Piketty's theory of inequality

Thomas Piketty (2014) has suggested a simple theory of inequality in connection with GDP and financial growth: the fundamental inequality of capitalism. In Piketty's  $r > g$  theory of inequality,

- the symbol  $r$  stands for an average rate of return on holdings of wealth over long periods (average return of stocks, corporate bonds, savings accounts, government bonds, real estate, other financial assets...); and
- the symbol  $g$  is the GDP growth rate and can be interpreted as the average speed at which incomes in an economy grow.

Piketty's theory is that inequality increases when  $r$  grows faster than  $g$ . With  $r > g$ , wealth grows more than income; and as wealth is distributed more unequally than income, a wealth growth faster than income growth contributes to an increase in inequality: the rewards to the owners of wealth are larger than the income that, on average, generates the economy.

A simple, formal version of Piketty's theory is based on the following definitions.

**aggregate income = salaries + profits**

$$Y = W + P$$

**rate of return = profits / capital**

$$r = \frac{P}{K}$$

**capital tomorrow = capital today + investment**

$$K' = K + I$$

**investment = savings rate · income**

$$I = sY$$

**income tomorrow = income today · (1 + income growth rate)**

$$Y' = Y(1 + g)$$

Let  $\alpha = \frac{P}{Y}$ ,  $\beta = \frac{K}{Y}$  and  $Y = \frac{Y}{L}L$ , where  $L$  is population and  $\frac{Y}{L}$  is average (labour) productivity. Given that  $Y = W + P$  presumes that GDP (aggregate income) is distributed between workers (as salaries) and businessmen (as profits), the ratio  $\alpha$  is the business share in GDP: the fraction of aggregate value that accrues to businesses. Ratio  $\beta$  represents the fraction of GDP that is accumulated (as investment goods).

Therefore,  $g \approx \lambda + n$ : income growth  $g$  is approximately equal to productivity growth  $\lambda$  plus population growth  $n$ . As  $r = \frac{P}{Y} \frac{Y}{K}$ , it follows that  $r = \alpha/\beta$  or, equivalently,

$$\alpha = r\beta$$

which Piketty calls 'the first fundamental law of capitalism': the larger the rate of return  $r$  or the fraction of GDP accumulated as capital, the larger share in the aggregate income pie that businesses get. Moreover,

$$\frac{K'}{Y'} = \frac{K + I}{Y'} = \frac{K}{Y'} + \frac{I}{Y'} = \frac{K}{(1 + g)Y} + \frac{sY}{(1 + g)Y} = \frac{1}{1 + g} \frac{K}{Y} + \frac{s}{1 + g}$$

At a stationary state,  $\frac{K'}{Y'} = \frac{K}{Y} = \beta$ . Hence, solving for  $\beta$ , it is obtained Piketty's 'second fundamental law of capitalism' or dynamic law of accumulation:

$$\beta = \frac{s}{g} \approx \frac{s}{\lambda + n}$$

A falling share  $\frac{W}{Y}$  of wages in income can be interpreted as a rise in inequality: capital (the business sector) gets an increasing larger portion of income. From  $Y = W + P$ ,  $1 = \frac{W}{Y} + \frac{P}{Y} = \frac{W}{Y} + \alpha$ . As a result,

$$\frac{W}{Y} = 1 - \alpha = 1 - r\beta = 1 - \frac{sr}{g} \approx 1 - \frac{sr}{\lambda + n}$$

The above equation indicates that the wage share  $\frac{W}{Y}$  decreases (inequality goes up) when:

- (i) the savings rate  $s$  rises;
- (ii) the rate of return  $r$  rises;
- (iii) the rate of growth  $\lambda$  of labour productivity falls;

- (iv) the rate of growth  $n$  of population falls; or
- (v) the rate of growth  $g$  of the economy declines (this is a combination of (iii) and (iv)).

• **Forces of convergence and divergence in market economies.** With a constant  $s$ , the dynamics of inequality is explained by the evolution of the private rate of return  $r$  on capital and the rate of growth  $g$  of income. Having  $r > g$  implies that wealth accumulated in the past grows faster than income (and wages). That capital tends to expand itself more rapidly than the economy is the principal force of divergence (and inequality). The diffusion of knowledge and skills is a powerful force of convergence (and social stability).

• **Piketty's claims**

- (1) The growth (or contraction) of an economy's wealth-to-annual-income ratio ( $\beta = K/Y$ ) is the quotient  $s/g$  between the net savings (the accumulation rate) and the economy's growth rate.
- (2) Wealth is eventually concentrated in the hands of a small group: the larger  $\beta$ , the more unequal the distribution of wealth.
- (3) An unequal distribution of income is the consequence of an unequal distribution of wealth: the privileged small group will steer political decisions on their behalf, to prevent the rate of profit from falling.
- (4) The privileges of the small group will be preserved through inheritance.
- (5) When wealth is inherited, the small privileged group will possess great influence (politically, economically, socioculturally) that will most likely be exercised to the detriment of the majority. "The process by which wealth is accumulated and distributed contains powerful forces pushing toward divergence, or at any rate toward an extremely high level of inequality (...). It is possible to imagine public institutions and policies that would counter the effects of this implacable logic: for instance, a progressive global tax on capital. But establishing such institutions and policies would require a considerable degree of international coordination." (Piketty, 2014, p. 27)

• **The three recent epochs of capitalism.** (1) The Belle Epoch (1880–1914): the first era of global financial capitalism; (2) the Golden Age (1945–1975) of capitalism; (3) the Neoliberal Era (1980–2020): the second era of global financial capitalism. The Belle Epoch, the product of the cumulative development of capitalism, collapsed: two world wars with a Great Depression in between. By comparing the Belle Epoch with the Neoliberal Era, Piketty anticipates the persistence of a low-growth regime and a traumatic end to the Neoliberal Era (global wars and economic crises), unless there is a global political peaceful reorganization that stops the forces that, through the progressive accumulation of capital in fewer hands, is exacerbating class conflict. As in the Golden Age, an interventionist welfare state (at a global scale) is the needed counterbalancing force, to temper the forces of global financialization, even at the price of sacrificing economic growth.

Dickens, Edwin (2015): "Piketty's Capital in the Twenty-First Century: A review essay", *Review of Political Economy* 27(2), 230–239.

López-Bernardo, Javier; Félix López-Martínez; Engelbert Stockhammer (2016): "A Post-Keynesian Response to Piketty's 'Fundamental Contradiction of Capitalism'", *Review of Political Economy* 28(2), 190–204.

Piketty, Thomas (2014): *Capital in the twenty-first century*, Belknap Press.

Thompson, William R.; Rafael Reuveny (2010): *Limits to globalization: North-South divergence*, Routledge.

### The Kuznets curve

The Kuznets curve (or hypothesis) is the conjecture (by Simon Kuznets) relating the level of economic inequality with the level of real income.

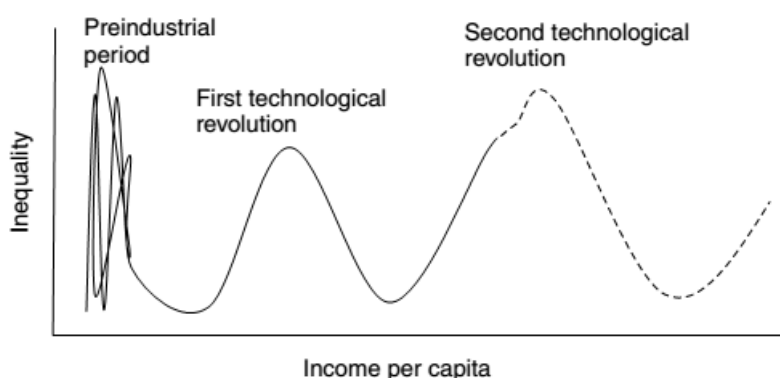
Graphically, it takes the form an inverted U: for low income levels, inequality is low; as income grows, inequality increases; and, from some sufficiently high income level on, inequality decreases. However, the recent experience of the advanced economies shows that inequality need not decrease with development

### The Kuznets wave

The Kuznets wave (or cycle)

is the conjecture (by Branko Milanović) that there are waves of alternating increases and decreases in inequality in time (as income increases).

- Before the Industrial Revolution inequality undulated around a fixed average income level (in a Malthusian cycle the source of the fluctuation in inequality is demographic: an income rise lowers inequality and triggers a population increase among the poor; in the presence of a decreasing marginal productivity of labour, a larger population leads to a reduction in productivity and a fall in income, which increases inequality and moderates population growth).
- The Industrial Revolution made possible a sustained growth of income and also an increase in inequality. First, because higher incomes create the potential for more inequality. Second, because structural changes in the economy (urbanization, rising importance of the industrial sector) drove up inequality. Inequality eventually decreased when the supply of more educated workers increased and economic policies responded to pressures to correct the unevenness of the distribution of income (the welfare state). Military conflicts and political revolutions (themselves often consequences of excessive inequality) also contributed to the reduction in inequality. The 'Great Leveling' refers to the reduction in inequality in the richer countries between 1945 and 1980.



- A new technological revolution affected the rich countries in the 1980s (digital revolution) by widening income disparities. The new technologies rewarded the more skilled workers, pushed up the return to capital and made the less skilled worker suffer the strong competition from China and India. The service sector increased in importance, with many of the new jobs not requiring much qualification and being badly paid. Moreover, pro-rich economic policies tended to be universally adopted.

Extreme inequality can be solved through the tax system. The mechanisms involved in the first reduction were increased taxation, social transfers, hyperinflation, nationalization of property and wars. Globalization makes more difficult to raise taxation on capital income: it is harder to tax a mobile capital. The rich are also resistant to the application of redistributive measures (neoliberalism and trickle-down economics). And one of the characteristics of globalization is that the winner takes all.

Milanović, Branko (2016): *Global inequality: A new approach for the age of globalization*, Harvard University Press.

### Some myths

- **Myth 1:** Inequality is a necessary counterpart of economic dynamism and competitiveness. According to this myth, rising inequality is an inevitable consequence of rapid economic growth (or a necessary condition for competitiveness). Policies that lower inequality, it is claimed, reduce the incentives to work hard and innovate.
- **Myth 2:** The best way to help the poor is to help the rich ('Equity needs growth').
- **Myth 3:** Inequality is actually not a problem as long as extreme poverty is avoided and incomes are all rising ('the rising tide lifts all boats').
- **Myth 4:** As pay is related to ability, rising inequality is just the result of increasing differences in people's ability (I am paid more because I am worth it).

Sudhir Thomas Vadaketh; Donald Low (2014): *Challenging the Singapore Consensus*, NUS Press.

### Globalization fallacies

Steingart (2008) identifies seven fallacies in the globalization debate.

- Fallacy 1: the natural progression for a developed economy is to move from an industry-based to a service-based economy. In fact, industrial work is merely shifting to Asia.
- Fallacy 1: economics and morals have nothing in common. The way commodities are produced and services provided is not a merely technical question, but is subject to moral judgment.
- Fallacy 3: the new world is flat. There is a dark side in free trade: when the West imports goods from Asian economies, their labour and environmental unfair practices are imported as well and this endangers jobs in the West. Trade is politics and the political world is not flat.
- Fallacy 4: globalization is a tide that lifts all boats. Even if this is the long run outcome, globalization is so far delivering asymmetric results: upper classes benefit comparatively more than the rest.

- Fallacy 5: globalization creates peace. Conflict persists but now the struggle is conducted on the economic field (it can be interpreted that the US won thus the Cold War). Increasing economic interdependence does not prevent military conflict (as the First World War illustrates).
- Fallacy 6: governments can no longer take care of their people. Politicians tell that globalization is omnipotent, a force of nature that has weakened the power of states, when it is them who have chosen to relinquish or not make use of that power (“Arguing against globalization is like arguing against the laws of gravity”, Kofi Annan, seventh secretary-general of the United Nations, 1997-2006). The rise of China was a political not a market project: it was the achievement of politicians, not market forces. It is not Big but Smart Government what is needed.
- Fallacy 7: globalization is a hot issue. Globalization should be subject to anyone’s scrutiny, not something outside our comprehension or control. Democracy means taking control of, or at least shaping, history. ‘The challenge is to figure out how to ensure that globalization serves the people,’ not the other way round.

In Steingart’s (2008) view, the world is broken. Globalization is not flattening the world, but mismanaging it (events after the 2020 pandemic seems to have validated that view).

- The world is for sure not flat for workers. Globalization has created a global labour market dominated by a race to the bottom in salaries and a loss of power of the workers’ associations. Jobs migrate to the lowest bidder. Current globalization has for the first globalized the markets for all the factors of production: capital, labour, energy and raw materials. Many of the unpleasant features of globalization stem from connecting economies which are significantly different (the West and the Rest). Globalization avoided those features when it involved more similar economies (Europe and North America during the Golden Age, 1945-1975).
- The national welfare state is in retreat, leaving people more vulnerable to the adverse effects of globalization and benefiting a few (or a larger part of the population but insufficiently).
- The great knowledge transfer. This transfer is allowing developing countries to move from agriculture to services without going through industry. That means that the rich countries cannot rely on the presumption that only low-paid, unskilled, routine (blue-collar) jobs could go abroad: white-collar workers will be the victims of the next great wave of offshoring.
- Capitalism is not just exploitative of labour, but also the natural resources. ‘China, the country with the most impressive growth rates in recent years, also tops the list of countries with little respect for their people and environment’.
- Benefits are asymmetrically distributed: “It’s like being in a crowded lifeboat. Only if one of the passengers jumps into the water can the other nine survive”, Jagdish Bhagwati.

Steingart, Gabor (2008): *The war for wealth: The true story of globalization, or why the flat world is broken*, McGraw-Hill.

**“Trade wars are good, and easy to win”, Donald Trump, 2 March 2018**

### Yates' dilemma

"It is impossible to create a society that is both just and capitalist", Yates (2016, p. 47). According to Yates, in a capitalist economy, capital rules: the system works by creating a few winners and many losers, poles of wealth and poverty, periods of expansion and recession, overworked employees, alienating workplaces, exploitation by the powerful, despoiled environments... "Losses are always socialized, and gains are always privatized."

Yates, Michael (2016): *The great inequality*, Taylor & Francis.

### Omnibus trilemma

This is a suggestion for a general growth-stability-distribution trilemma (of which many other trilemmas could be seen as particular cases): for a sufficiently complex system (social, biological, chemical, physical), there is a tension between

- growing (or, in general, becoming bigger or expand),
- remaining stable (at least in the sense that the system preserves essential traits), and
- keeping some form of symmetry (in a social system, this third requisite could be interpreted as respecting some non-discrimination or fairness property, enjoying some form of equality or expressing a distributive or welfare condition).

Rodrik's trilemma combines a growth condition (hyperglobalization means making markets bigger through integration), a stability requirement (the world is organized politically in terms of sovereign states created without an expiry date) and a symmetry property (in a democracy everybody's opinion regarding collective decisions formally counts the same: 'one man, one vote').

For most of the last decades the world economy has been characterized by growth. For most of this period, this growth appeared stable (this may be debatable if the state of the world ecosystem is taking into account). But there is mounting evidence that the growth of the world economy has not been symmetric (North-South divide, elephant curve). On the one hand, some countries (typically the richer ones) have benefited more from global growth (the gap between the richest countries and the poorest ones has widened); on the other, within countries, some groups or sectors of economic activity have benefited more than the rest.

Edelman (2018) argues that any sentient being at most two of integral identity (stability condition), effective immortality (a sort of growth property: life does not stop) and situated happiness (a welfare requirement).

Shimon Edelman (2018): "Identity, Immortality, Happiness: Pick Two", *Journal of Evolution and Technology* 28(1), pp. 1-17.

The fundamental theorem in social choice theory (a mathematical branch in microeconomics) is Arrow's (1963) theorem, which holds that aggregating individual preferences into a collective preference is not possible if three properties must be satisfied: universal domain (all individual preferences are admissible, an expansive requisite), independence of irrelevant alternatives (a stability requirement: similar preferences are aggregated similarly) and efficiency (a welfare condition, akin to a distributive condition of non-waste).

Kenneth Arrow (1963): *Social Choice and Individual Values*, 2nd ed, Yale University Press.

On global imbalances, revisit Varoufakis' global minotaur hypothesis discussed in Topic IV:

“Varoufakis' Global Minotaur hypothesis uses the Greek myth of the Minotaur to describe the post-1971 global economy, where the United States acted as a 'minotaur' that fueled global demand by running large deficits, while absorbing surpluses from countries like Germany, Japan, and China. This system created an unstable cycle of capital flows and deficits that was essential for global capitalism until the 2008 financial crisis, which Varoufakis argues was the collapse of this 'Global Minotaur'.” Google IA

#### 4. Industrial policy, international trade and development

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##### What is modern industrial policy?

“... modern industrial policy concerns anticipating change and facilitating it by removing obstacles and correcting market failures... In practice, modern industrial policy comprises restructuring policies that facilitate the transfer of resources to the more dynamic activities of an economy, be they agriculture, industry or services.

These are both 'horizontal' and 'vertical' policies. The former refers to the provision of inputs that can be used by a broad range of firms across different sectors. Typical examples are transport infrastructure, well-educated engineers, or health and safety inspection systems. Vertical policies favor a particular sector (for example, training electronic engineers). Very often, however, publicly provided inputs (for example, a road) are sector or product specific; that is, vertical.

Examples of these inputs are a remote road that fosters eco-tourism—it does not help carry merchandise to a port—or a laboratory certifying the quality of meat, which is different from a laboratory certifying the quality of vegetables. Such examples show there is a small difference between horizontal and vertical policies.

Consequently, modern industrial policy also entails sector selection (...) However, the strategies used to select sectors have a clear rationale and the tools to promote them are stage-development dependent and linked to performance measures.”

“Modern industrial policy also has a clear objective: to address the typical market failures that many firms face in the discovery of new activities in which they may thrive and that may ultimately lead to an economy's transformation (...) Finally, to succeed, modern industrial policy has to be conducted in a highly competitive environment.”

“Firms from developing countries face a multiplicity of market failures. Two that are typical are information and coordination externalities. The first derives from the difference between the social and private values that entrepreneurs face when they try a new venture (...) Coordination externalities refer to the fact that new industries require capital that private entrepreneurs may not have.”

“... new industries require coordinated investments in many related industries that individual entrepreneurs cannot organize by themselves. These investments generate demonstration effects and technological spillovers that raise the social return above the private return. This is the role of modern industrial policy.”

“Another significant problem that many firms in developing countries face is a lack of organizational capabilities (...) Sutton (2000, 2005) argues that becoming a rich country is about being able to earn higher real wages, and that some economic activities are more lucrative than others. Countries that specialize in such activities enjoy a higher level of real wages. But, unlike the traditional neoclassical model in which higher real wages are the result of an increasing capital–labor ratio, Sutton argues that the primary driver of growth is the gradual buildup of firms’ organizational capabilities (...) For example, a car is a car if and only if all systems and components work. This implies that the value of each worker’s effort depends on the quality of the efforts of all workers.”

“There is also another class of problems that countries face as they become richer (...) network failures. In a wide array of technological and industrial arenas, advances are achieved not entirely through competitive transactions, but also through mutual learning processes fostered by well-managed collaboration between specialists in complementary fields, as well as between designers, producers and end-users. These failures can be addressed through policies aimed at helping dispersed network partners acquire a degree of certainty about the trustworthiness and competence of one another.

Seen in this light, industrial policy need not be controversial. Here, industrial policy is much less about the efficacy of government intervention—in particular about the incorrect allocation of funds to the wrong sectors or the capture of subsidies by private interests—than about collaboration and the design of mechanisms to avoid these problems... Public–private collaboration is the essence of modern market economies and a key differentiating factor between economies that function well and those that do not.”

“The following is a summary of these findings and arguments:

1. Development is about the structural transformation of the economy. This idea has three key dimensions: diversify the economy, increase product/service sophistication and transfer of resources (both labor and capital) toward the more productive activities of the economy. These lead to higher wages (...) Structural transformation is slow and not a natural process (...) The rationale for industrial policy is the desire to expedite this process through government intervention.
2. Modern governments, in coordination with the private sector, can play an important role in addressing the coordination and information externalities, as well as the lack of capabilities, inherent in attempts to diversify. This coordination is a key pillar of modern industrial policy.
3. (...) industrial policy should be stage-of-development dependent (...) The nature of industrial policy changes as economies mature. Production technologies become more sophisticated and the promotion of new industries moves into uncharted territory. Industrial policy then has to confront high-return, high-risk trade-offs that are too much for the public sector to take on alone.

Furthermore, as economies mature, the balance of expertise gradually shifts from the public to the private sector (...)

4. Political economy is an important factor. Industrial policy is unfair by nature as some areas of society benefit more than others. This inherent unfairness becomes less widely accepted as a society becomes more democratic. Furthermore, as an economy develops, foreign competitors will not be as forgiving of government subsidy support to certain sectors. Therefore, the role of government's conducting industrial policy tends to be more indirect in advanced economies.

5. A common misconception is that governments in advanced economies no longer pursue industrial policies. The reality is that many advanced economies do rely on 'indirect industrial policy' by selecting and supporting industries through private financial markets. Here, governments broadly define favored industries and announce incentives for private financing. The role of private financial institutions is to find candidates to support. Governments then adjust the level of incentives to assume a minority or majority share of the guarantee depending on the risk (...) Indirect industrial policy works only in a competitive environment. In the US, the government undertakes a significant amount of industrial policy to address network failures.

6. The benefits of indirect industrial policy are numerous (...) With indirect industrial policy, private financial institutions—not the government—interact directly with firms, and can, if necessary, withdraw their support without causing political backlash or giving the impression that the 'government is taking away the umbrella when it rains.'

7. The selection of industrial policy tools is also stage-of-development dependent. These can be classified into one of eight categories: fiscal incentives, investment attraction programs, training policies, infrastructure support, trade measures, public procurement, financial mechanisms and industrial restructuring schemes... Governments in advanced economies rely increasingly on financial tools as their economies mature, while the public sector's role in industrial policy becomes less and less visible.

8. Risk management tools are important in modern industrial policy. Although there are potentially significant social returns from pursuing industrial policy, the fiscal cost of credit program failures are absorbed by the government and, ultimately, taxpayers. A stop-loss mechanism is necessary to ensure that ineffective or wasteful credit programs are not continually funded year after year (...)

9. Human capital development and innovation are essential components of industrial policies. Low- and middle-income economies need to develop high-quality basic and vocational education to gain competitiveness in existing industries or to move into new ones. Societies need workers who can be trained to assimilate technologies. As countries become richer, they should develop high-quality tertiary education (...)

10. Foreign direct investment is an important element of the industrial diversification process. However, if not properly designed, preferential treatment and R&D incentives for foreign multinational corporations can increase their profitability without resulting in technology transfer to domestic firms. Sometimes, buying technology and paying royalties may be more effective in developing the domestic technology base.

11. A strong monitoring and evaluation mechanism is essential for successful industrial policies, and there are several general rules for effective mechanisms, including establishing clear objectives, developing simple check-up systems and ensuring coordination among relevant agents...

12. As economies mature, industrial policies become more complex. It is virtually impossible to trace all spillover effects across industries and come up with a comprehensive macroeconomic evaluation of a modern industrial policy package. Therefore, industrial policies in advanced economies are typically reviewed and monitored on a program-by-program basis rather than evaluated as an overall industrial policy package. Evaluation programs must be decentralized and have multiple layers of oversight. An appropriate legal framework is also needed to make monitoring and evaluation mechanisms effective and transparent."

Felipe, Jesus; ed. (2016): *Development and modern industrial policy in practice. Issues and country experiences*, Edward Elgar.

**Modern industrial policy, trade and development**

The Vanek-Reinert effect contends that, when less developed countries open their economies to international trade, their most advanced industries tend to disappear. This observation contradicts the conventional view that openness benefits all countries, in particular the less developed ones.

Reinert (2007) identifies 'emulation' rather than 'comparative advantage specialization' and 'free trade' the strategy leading to successful development. At least, it appears that the West became rich through emulation: when the West started to rise, the more developed economies were Asian (China, India).

Spain in the 16th century is an example of what not to do: the immense amounts of gold and silver taken from the Americas were not invested in productive systems but instead de-industrialized the economy. "Successful states protected manufacturing industry, unsuccessful Spain protected agriculture to the extent that it killed manufacturing".

Reinert (2007) defines two main types of economic theories (or canons). The conventional one relies on metaphors from physics (invisible hands like gravity, equilibrium states) and builds the theories (and elaborates economic policy recommendations) down from those metaphors. This type of theory has eventually become disconnected with time (history) and space (geography). The other type invokes biological metaphors and starts the construction of theories (are experience-based) from the ground up. Policy recommendations often precede theoretical elaborations and rely on the identification of empirically relevant factors, like increasing returns, technological change, synergies and side effects. These theories accept diversity and heterogeneity as essential elements in the understanding and control of reality.

Each type of theory leads to a different view of globalization and development. The conventional type supports income convergence in the world economy. The heterodox type holds that globalization reinforces differences: countries unable to emulate the richer ones will experience retrogression and primitivization (they fail to develop and enjoy progress). Hence, unless ready to

emulate, it would be premature to participate in the globalization process. Regarding development, the first type tends to view it a capital accumulation; the second, rather as the result of emulation and knowledge assimilation.

*Reinert, Erik S. (2007): How rich countries got rich... and why poor countries stay poor, Constable.*

“It will be argued that the factor that is fundamentally responsible for the generation of economic growth has been largely overlooked by economists and social scientists. It will be held that this factor is intimately linked to the manufacturing sector. Manufacturing shall be understood as all economic activity that does not fall into the category of primary sector activities, construction, and services. At present, manufacturing occurs almost exclusively in factories.”

“Analyzed over the long term, manufacturing has proven to be, by far, the most productivity-intensive sector. Since technology is the fundamental variable determining productivity, it becomes inevitable that the sector that is most intimately bonded to technology is also the one with the most productivity-enhancing characteristics. Primary activities, services, and construction seem only to have the capacity to passively absorb the technology created by manufacturing. Because these sectors are mere technology recipients, their productivity performance inevitably ends up being inferior to that of manufacturing.

It is also worth noting that from 1950 to 1997, as well as before that period, new technology systematically came to life in the form of manufactured goods, such as printing presses, steam engines, spinning gins, telephones, light bulbs, automobiles, airplanes, pharmaceuticals, medical equipment, refrigerators, microwave ovens, TV sets, electronics, composite materials, microchips, computers, spacecrafts, satellites, biotechnological medicines, and video conference machines.”

“History suggests that faster growth of technology is the inevitable result of faster growth of this sector. This ultimately finds itself expressed in a faster pace of innovation, a faster rate of technology imports, or a faster pace of both. A government that finds itself in possession of the policy tools that can accelerate the pace of economic growth finds itself automatically in possession of the tools to accelerate the pace of technological development ... When factory output has grown rapidly in a developed nation, there has also been faster growth of technology imports in the form of patents, machinery, equipment, and the like.”

“The macroeconomic policy implication of such historical facts is that state support for manufacturing becomes the fundamental effort that any government must undertake in order to attain fast and sustained economic growth ... Contrary to what the infant-industry school of thought asserts, practically all nations, regardless of their level of development, constantly need to supply their manufacturing sectors with a strong dose of support ... The moment the support stops, manufacturing production tends to stagnate and, along with it, the rest of the economy.”

*Sabillon, Carlos (2000): Manufacturing, technology, and economic growth, M.E. Sharpe.*

“Everything this book presents is—or at least was—well and widely known. Recently, however, much seems to have been forgotten. So this book tries ... to remind us ... how the American

economy, again and again, was reshaped and reinvigorated by a loveless interplay of government making broad economic policy and entrepreneurs seeking business opportunities.”

“This book ... is about government and entrepreneurship. But it will not rehash the sturdy and well-known arguments that, to thrive, an entrepreneurial economy needs an environment characterized by a broad range of freedoms, protections, and incentives ... We are here to talk about the other important interplay of government and entrepreneurship ... Repeatedly, government in the United States opened a new economic space, doing what was needed to enable and encourage entrepreneurs to rush into that space, innovate, expand it and, over time, reshape the economy. Each time, and there were many, this was done pragmatically.”

“From a global, bird’s-eye view, three centuries ago the world’s high civilizations were roughly equal in prosperity. Today the North Atlantic nations (including a few ‘honorary’ North Atlantic countries like Japan and Australia) are richer by a factor of at least five. And the overwhelming bulk of that divergence is due to economic policy. The post–World War II reinvigoration of Western Europe, the post-1975 rise of China, and the post-1913 relative economic decline of Argentina were, no serious thinkers dispute, predominantly driven by good and bad economic policy.”

“That policy matters most is clear from this global record. In successful economies, economic policy has focused on what works for people who are trying to increase productivity on the ground, not on the voices heard by madmen in authority or the doctrines of academic scribblers. That is the lesson we draw from our reading of economic history. Getting ... economic policy right is and has been of overwhelming importance in generating prosperity. But a global, bird’s-eye view cannot provide us with enough detail to understand how, exactly, or what “getting the economic policy right” really means. For that, we have to focus. And so this book will focus on the United States, which is ... the place where economic policy has been, without a doubt, the most successful over the past couple of centuries.”

“When we look at the United States, we find not one design of economic policy, but rather sequential redesigns as the economic environment and the policies that offer the best chance of successful medium-term growth shift. Beginning with Alexander Hamilton, the architect of the first and most important redesign, and moving on to Abraham Lincoln and the Republican ascendancy, to Teddy Roosevelt, Franklin Roosevelt, and Dwight Eisenhower, the US government is always there, taking the lead, opening new economic spaces. It is doing so consciously. And it is doing so pragmatically—not ideologically. And it is doing so very successfully, at least until recently.”

*Cohen, Stephen S.; J. Bradford De Long (2016): Concrete economics. The Hamilton approach to economic growth and policy, Harvard Business Review Press.*

“... industrialization is a good thing economically, but it involves a costly, risky, and complex process. Many confuse industrialization with the construction of many factories. In fact, it is a capacity-building process with a significant intangible aspect; more than hardware, industrialization resembles software. It goes through certain stages and many countries of the world have not been able to proceed to advanced stages. However, as the country progresses towards advanced stages, the economic returns it reaps from industrialization increase.”

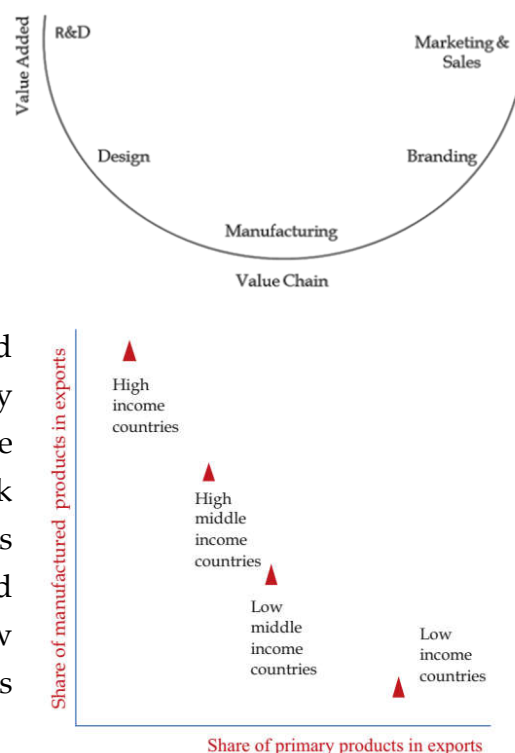
The observation is that successful industrialization in the modern era has nowhere and never been an accident. It has always been based on some policy that aimed at supporting manufacturing. Currently, we call these ‘industrial policies.’”

“Few fully realize that industrialization is a crucial necessity for economic development and requires design and implementation of appropriate policies. Many countries ignore industrial policy or fail to employ it effectively. The outcome is that countries such as Japan, South Korea, Germany, Sweden, China, and Finland stand out as rare relatively recent examples of successful economic development on the back of industrialization. Meanwhile, the majority of countries remain in the middle-income trap, or—if we may call it so—the low-income trap.”

“Industrial policy is used to change the production structure of an economy in favour of the manufacturing industry by channelling a government’s selected budgetary and non-budgetary resources and by channelling private capital, labour, and entrepreneurs towards the manufacturing sector. Industrial policy, as other ‘structural policies,’ is designed and implemented in order to improve the long-term growth performance of the economy. In particular, it helps countries surmount the so-called middle-income trap by raising growth performance over the long term. This is made possible by the innovational and growth-inducing nature of the manufacturing sector.”

“In the UK, the Industrial Revolution began in the eighteenth century. It was not an accident; what can be identified as industrial policies had started much earlier. It started at a time when the UK was characterized as a mercantilist, colonizing, hegemonizing, and brutal empire built after the fifteenth century. The Spanish and Portuguese empires preceded Britain with their versions of mercantile, brutal, and hegemonizing histories. However, they could not industrialize, as they ultimately failed to employ industrial policies. They started the twentieth century as poor countries...”

“Britain started to employ policies to achieve industrialization as early as the fourteenth century through import–substitution-type industrial policies. After it built its global empire, its industrial policies aimed at keeping its colonies as suppliers of raw materials (at prices commanded by the British) and the mainland as a manufacturing hub: navigation acts, restricting manufacturing activities in the colonies through its colonial laws, enforcing triangular trade arrangements that gained Britain a monopoly power over its international trade and opening up new markets for its industrial export apparatus by forcing the (‘unequal’ as East Asians called it) free trade agreements with unprepared and politically and militarily weak markets (such as China). The outcome for Britain was impressive; it indeed became the manufacturing and commercial hub of the world; it collected raw materials at low prices from around the world and disseminated its manufactured products to its colonies and other markets.”



“Today’s industrialized nations which experienced their industrial revolutions after the British have all employed industrial policies at different times in their development cycles. This is confirmed by the stories of France, the USA, Japan, Germany, and Russia. In each of them, one or more dominant leaders pushed for economic (and social) reform and industrialization.”

“... manufacturing is the hotbed of productivity, and innovations and services are the hotbed of employment. In our world today, global imbalances are more crucial than ever. They are driven by the major trade deficits of some countries and surpluses of others. A trade surplus of a country drives growth and employment. That ‘export-led growth’ explains growth in countries such as Germany, South Korea, Japan, and China; without trade surpluses, these countries would have had lower growth rates. On the other hand, trade deficits, in particular caused by ‘unnecessary’ imports, mean less growth and more unemployment for the importing country than would otherwise occur. As manufacturing constitutes the major part of world exports and imports, the manufacturing sector, then, is vital for growth and overall employment.”

“Overall, industrialization is a capacity-building process that materializes through real manufacturing experience over time. It requires the development of human and institutional skills. It is important to stress that not all manufacturing makes money for the manufacturer. The *smile curve* implies that some manufacturing forms may yield peanuts for the firm and country. However, manufacturing always has positive side effects through linkages to other industries and through learning effects that generate larger impacts on society than on the individual manufacturing firm.”

“Sectors are often qualified as ‘strategic,’ but from an economic point of view, there is no consensus let alone an analytical study on what makes a sector ‘strategic.’ (...) Industrialization is possible through the industrial layer of industrial firms and entrepreneurs, industrial labour and managers, and industrial finance. Industrial policy is designed and implemented by the state on the industrial layer. It is the capacities of the state and the industrial layer that are the key to a successful industrial policy.”

*Yülek, Murat A. (2018): How Nations Succeed. Manufacturing, Trade, Industrial Policy, and Economic Development, Palgrave Macmillan.*

“... what this book is asking is: ‘How did the rich countries really become rich?’ The short answer to this question is that the developed countries did not get where they are now through the policies and the institutions that they recommend to developing countries today. Most of them actively used ‘bad’ trade and industrial policies, such as infant industry protection and export subsidies — practices that these days are frowned upon, if not actively banned, by the WTO (World Trade Organisation). Until they were quite developed (that is, until the late nineteenth to early-twentieth century), they had very few of the institutions deemed essential by developing countries today, including such ‘basic’ institutions as central banks and limited liability companies.

If this is the case, aren’t the developed countries, under the guise of recommending ‘good’ policies and institutions, actually making it difficult for the developing countries to use policies and institutions which they themselves had used in order to develop economically in earlier times?”

“So are the developed countries, and the international development policy establishment (IDPE) that they control, recommending policies that they find beneficial for themselves, rather than those beneficial for the developing countries? Is there any parallel between this and the nineteenth-century British push for free trade against the protectionist policies of the USA and other NDCs which were trying to catch up with it? Is it fair to say that the WTO agreement that puts restrictions on the ability of the developing countries to pursue activist ITT policies is only a modern, multilateral version of the ‘unequal treaties’ that Britain and other NDCs used to impose on semi-independent countries? In other words, are the developed countries ‘kicking away the ladder’ by which they climbed up to the top beyond the reach of the developing countries? The answer to all these questions, unfortunately, is yes.”

Ha-Joon Chang (2003): *Kicking Away the Ladder. Development Strategy in Historical Perspective*, Anthem Press.

### The Antwerp Declaration

“The undersigned companies and organisations express their full support for a European Industrial Deal to complement the Green Deal and keep high quality jobs for European workers in Europe.

There is an urgent need for clarity, predictability, and confidence in Europe and its industrial policy. As very clearly stated by the Belgian PM Alexander De Croo: ‘We need our industry for their innovation capacity. To come up with tomorrow’s climate solutions. That is why Europe should not only be a continent of industrial innovation, but should remain a continent of industrial production’.

To meet climate neutrality by 2050 and the recently communicated 2040 target, Europe’s electricity production will need to multiply, and industry investments will need to be a factor six higher than the previous decade. This enormous challenge comes just as both large companies and SMEs face the most severe economic downturn in a decade, demand is falling, production costs increase and investments move to other regions.

A US economy that benefits from the financial support from the Inflation Reduction Act (IRA) and its ease of accessibility, a Chinese overcapacity and increasing exports to Europe all increase the pressure for the European industry even more. Our companies face this challenge every day. Sites are being closed, production halted, people let go. Europe needs a business case, urgently.

An Open Strategic Autonomy for a competitive and resilient EU is crucial for the transition of Europe in an ever changing geopolitical landscape. It can however only be achieved if also basic and energy intensive industries remain and invest in Europe. Without a targeted industrial policy, Europe risks becoming dependent even on basic goods and chemicals. Europe cannot afford this to happen.”

“This needs to be a European approach, instead of twenty-seven different national incentives, by keeping and strengthening the integrity of the internal market while keeping global competition better into account.

We need to keep industry in Europe because the industry will deliver the climate solutions Europe needs. Solutions that citizens and governments can use, but that can only be invented and implemented with speed and scale by the industry, and the support from governments. Only with a strong industrial fabric and strengthened social dialogue in Europe can we ensure that the green transition will be a Just Transition, as agreed in the Val Duchesse tripartite declaration. A competitive European industry, based on a European Industrial Deal, is the 'conditio sine qua non' for the successful delivery of the EU Green Deal. It is also the only way to show to the rest of the world that the Green Deal works for all."

"Our Declaration calls to Member State Governments, the next European Commission and Parliament to:

1. Put the Industrial Deal at the core of the new European Strategic Agenda for 2024-2029
2. Include a strong public funding chapter with a Clean Tech Deployment Fund
3. Make Europe a globally competitive provider of energy
4. Focus on the infrastructure Europe needs
5. Increase the EU's raw materials security
6. Boost demand for net zero, low carbon and circular products
7. Leverage, enforce, revive and improve the Single Market
8. Make the innovation framework smarter
9. A new spirit of law-making

Let entrepreneurship thrive to find the best solutions to overcome challenges. Legislation should create incentives for businesses to invest in clean technologies. Avoid that the Green Deal policy targets are followed by prescriptive and detailed implementing regulations. Prevent over reporting, ensure coherence, stay tuned with industrial reality and integrate legislative proposals through a stronger Secretariat General and Regulatory Scrutiny Board which systematically applies a Competitiveness Check and a European Innovation Stress Test against which each new legislation and policy initiative should be evaluated. Use robust data and scientific evidence for effective policymaking. Assess the cumulative impact of legislation.

10. Ensure the structure allows to achieve results

Install a First Vice-President responsible for the delivery of the European Industrial Deal and for ensuring the seamless integration of legislation and alignment with the agenda of the next European Commission, overseeing the key DG's for the Industrial Deal in one integrated approach."

**The Antwerp Declaration for a European Industrial Deal, 20/02/2024**

<https://antwerp-declaration.eu/>

“One cannot profitably add as much human capital to the job of washing dishes as to the job of being a lawyer. For this reason economists would often recommend for their children professions which require a university education, although by doing this they express what they – at the macro level of an African nation – would describe as ‘a mercantilist preference for one profession to another’. On the macro level the same economists recommend nations to stick to their comparative advantage, whatever it may be. Compared to this modern logical inconsistency in advice between ‘my children and the children of Africa’, Adam Smith comes across as being much more consistent. He argues that the mechanisms that work on the macro also work at the micro level: all risks considered it is safer to let your son become a shoemaker’s apprentice than to become a lawyer (Adam Smith had no children).”

“Renaissance economics saw no limits to progress ... In Adam Smith’s system, however, nations reach a stationary state where they can ‘advance no further’, when that ‘full complement of riches which the nature of its soil and climate ... allowed it to require’ had been reached ... In today’s setting, Smith’s attitude to new knowledge might have made him into a believer in de-growth.”

“In the understanding of wealth and poverty, the Cold War gave us a strange set of mutually exclusive countermovements: on the one hand, the Marshall Plan (1947) that emphasized the importance of manufacturing industry; but on the other hand, Paul Samuelson’s revival in 1948–1949 of David Ricardo’s 1817 trade theory ... that ‘proved’ the exact opposite: whatever a country produced there would be a tendency for the prices of the factors of production – capital and labour – to ‘equalize’. The latter became the centrepiece of post-war international trade policy.”

“My contention is that the cumulative effects of the blind spots listed below, in distorting the reality as it is seen by mainstream economics, are formidable, as are their effects on the inability to cure poverty.

## TEN BLIND SPOTS

### 1. Synergies

The basic insight that synergies, based on the diversity of economic activities in an area, are an important wealth-creating mechanism creating a common good ... dates back to the Florentine philosopher and statesman Brunetto Latini (1220–1294) and to Niccolò Machiavelli (1469–1513) ... The growth of towns and cities brought these synergies into evidence. Towns permitted communication that unleashed individual freedom, creativity, diversification and synergies that together created unprecedented wealth. This was the fundamental observation of one of the earliest best-selling books in economics, *Delle Cause della Grandezza delle Città* written by Giovanni Botero (1543–1617) ... The subject was kept alive over centuries ... But in spite of all this accumulated knowledge the World Bank and the International Monetary Fund (IMF) fail to see the dangers when they fail to warn poor countries against monoculture and lack of economic diversity more than 500 years later.”

“Historically the most important of all synergies was specified already in 1767 by David Hume, Adam Smith’s best friend, when he discussed the reign of Henry VII (starting in 1485): ‘Promoting husbandry ... is never more effectually encouraged than by the increase of manufactures’ ... The

introduction of manufactures creates employment, increases wages, and diminishes population pressure, and is at the core of the cumulative causations which we call development. As US Secretary of State George Marshall expressed in his Harvard speech in June 1947, announcing what came to be called the Marshall Plan: ‘the farmer has always produced the foodstuffs to exchange with the city dweller for the other necessities of life ... This division of labor is the basis of modern civilization’.”

## 2. Institutions

“The ability to create such Schumpeterian institutions [‘change-inducing and change-enabling institutions’] which enable the structural change that we call economic development, and to change these institutions when new conditions so require, comes across as a key feature of the organisational capability of any society.”

“Some institutional innovations are crucial to create economic growth. Primogeniture – the right of the first-born legitimate son (or child) to inherit his parents’ entire estate – has created stability in European kingdoms compared, for example, to the Arab world. In agriculture, primogeniture prevented farm sizes from diminishing into or beyond self-sufficiency.”

“It is generally most useful to see institutions as born out of problems in the production system ... The problem came before the solution: it is not that the Venetians invented insurance so that they could have long-distance trading, it is the other way around. In contrast, in their 2012 book *Why Nations Fail: The Origins of Power, Prosperity, and Poverty*, Daron Acemoglu and James Robinson in practice come to the defence and salvation of neoclassical theory by blaming former European colonies for not ‘getting the institutions right’ ... They seem to disregard the key point that the ‘extractive institutions’ they blame for the lack of development represent the very essence of Western colonialism. When explaining that ‘North America became more prosperous [than Peru and Mexico] precisely because it enthusiastically adopted the technologies and the advances of the Industrial Revolution’ ..., Acemoglu and Robinson leave out that Peru and Mexico for a long time were colonies, and that a key element in colonial policies was precisely to prohibit manufacturing there. When Peru and Mexico later gained formal independence, they were still de facto colonies, as power just shifted from Spaniards in Spain to Spaniards residing locally, locked into the same system of exporting raw materials. In this way, Acemoglu and Robinson appear to be blaming the victims of colonialism for their own poverty.”

## 3. Knowledge/Technology Adding Value

“Giovanni Botero’s (1589) bestselling *On the Greatness of Cities* explains the wealth of cities mainly by the value added to raw materials, emphasising the difference between ‘a heap of logs and stones and a house’, and ‘a marble block and what Michelangelo does to it’. What Nietzsche called *Geist und Willenskapital* – Mankind’s wit and will ... – is there in Schumpeterian evolutionary economics, but not in mainstream neoclassical economics.”

“In 1994 the world’s most efficient producers of baseballs (which are hand-sown) worked in Haiti earning US\$0.30 an hour; whereas the world’s most efficient producers of golf balls (a mechanised production), in the United States, made at least \$9 an hour. In the mercantilist/Renaissance view, by

exporting baseballs and importing golf balls Haiti exchanged 30 hours of labour (in baseball production) for one hour of labour (in golf ball production). At the time, Haiti had a very large share of the world market in baseballs... Whereas golf ball production is mechanised, all the capital of the United States has yet to mechanise the production of baseballs. This uneven advance of technical change makes it possible for a nation to be locked into a comparative advantage of being poor and ignorant. This possibility is ignored in today's economic theory, but was clearly perceived by the more sophisticated Renaissance mercantilists, who held the variables of skill and knowledge up front."

#### **4. Time-Specific Technological Contexts Produce Different Windows of Opportunity for Growth**

"Here also, Giovanni Botero's 1589 book is an early mover. He finds that there are more opportunities for innovation in city activities than in countryside activities. Also, when we talk about historical periods as the Stone Age and Bronze Age we implicitly understand that at a certain point the opportunities for innovation are greater in Bronze Age activities than in Stone Age activities. We find this as a basis of the work of Carlota Perez (2003) and her techno-economic paradigms."

#### **5. Diminishing and Increasing Returns**

"Former World Bank Chief Economist Justin Yifu Lin very succinctly writes: 'Except for a few oil-exporting countries, no countries have ever gotten rich without industrialization first' ... At the core of an explanation for this lies the dichotomy between diminishing returns (in raw material) and increasing returns (in industry). Explaining wealth and poverty by contrasting increasing and diminishing returns entered economics in 1613, in a book written in a prison cell in Naples by a certain Antonio Serra."

"If we ask ourselves why the most efficient farmers in the world, in the European Union (EU) and US, to such a large degree depend on protection and subsidies, the reasons are the same: diminishing returns, perfect competition (no market power), and price volatility due to variabilities in climates and harvests."

"Alfred Marshall recommended taxing diminishing returns industries (agriculture, fisheries and mining) in order to give bounties to activities produced under increasing returns (industrial goods). The first part has proved difficult, due to the low income in the agricultural sector, but the second part – giving bounties (and protection) to manufacturing industry – has been necessary in all countries that have travelled the road pointed to by Justin Yifu Lin."

"In 1981 – at the age of 28 – later Nobel economist Paul Krugman briefly reintroduced Antonio Serra's increasing/diminishing returns dichotomy in international trade ... Reintroducing this dichotomy, Krugman found what others had been finding for centuries: in a world with increasing and diminishing returns to scale, some countries may find themselves specialising in diminishing returns industries and consequently being poor ... Some years ago, I had a student go through Krugman's later writings, and he never found the increasing/diminishing returns dichotomy used again. Schumpeter had invented the 'Ricardian vice': the tendency for economists to make and test theories that are not troubled by the complexities of reality, resulting in theories that are

mathematically beautiful but largely useless for practical applications ... I added the 'Krugmanian vice': having produced a much more relevant theory than Ricardo, but refusing to apply it in practical economic policy.

So, in practical policy this literature had no influence whatsoever on the policy recommendations of the Washington Consensus. Krugman had rediscovered the medicine that worked against poverty, but refused to use it, apparently for ideological and/or career reasons ... I find it deeply unethical that economists as a community – starting with the mature Alfred Marshall – have so systematically shown so much more loyalty to their models than to the fate of the poor. In my imagination this resembles a medical doctor having an effective medicine on the shelf, but refusing to use it for ideological reasons."

## **6. How the Benefits from Innovations Spread**

"The fruits of new knowledge and new technology may spread in the economy in two different ways, reflecting two different regimes of appropriation: in the classical mode, through reduction in prices to the consumer; in the collusive mode, through higher profits to the capitalist, higher wages to the producer, and a larger economic base for government to tax. Here, rents from new innovations are shared between capital, labour and government."

"In industries that might be labelled 'high-quality activities', this profit-enhancing innovation can involve increasing the skill levels of workers. Note that this will increase workers' value in the labour market; this is precisely the US 19th century 'high-wage strategy' argument. Under Schumpeterian competition, a high degree of collusive spread is normal; the individual rent-seeking of the Schumpeterian entrepreneur is converted into collective rent-seeking on behalf of society. Under these conditions, what's good for General Motors generally is what's good for the country."

"In avoiding ruinous price-competition, the dynamic process of Schumpeterian rent-seeking produces an ever-increasing diversity of products; competition is based on product differentiation and different quality levels. Development and the impact of innovation will – over time – fan out to encompass more and more of the economy.

In any system with differing degrees of increasing and diminishing returns, and with a mixture of collusive and classical means of distributing gains from technical progress, some nations will be better off under autarchy than under free trade; at least until they have secured a competitive base in increasing-returns/collusive spread activities. This is the basic reason why Werner Sombart and most other German historical economists were critical of free trade between nations at different levels of technological development."

"In a world where the benefits from innovation spread in these two different ways, it is virtually impossible for an agricultural nation to innovate itself out of poverty. The only way to do this is by being part of an industrial society, and converting agricultural products into niche products, restricting the area in which the products are produced, such as Parmesan cheese and Parma ham. This strategy was first invented in 1716 with the Gallo (rooster) brand for Chianti wine by Grand Duke Cosimo III of Florence (...) Since the end of the Cold War the economic strategy of Europe had, in the spirit of Friedrich List, been based on a symmetrical form of integration among nations

at approximately the same level of industrialisation and technical sophistication. The underlying assumption, which was left from the spirit of the Marshall Plan, was that manufacturing matters.

The integration of Spain into the EU had taken place in the 1980s by gradually reducing Spain's import duties – which had been very high – in order to make sure that advanced industries, such as the car industry, survived. We later found the opposite mechanism – a shock therapy type of integration – and documented how this form of integration of former Comecon ... countries very frequently led to a de-industrialisation of these countries. As a consequence, the social structures of these countries became more like those found in Latin America.”

“... we noticed what we called the Vanek–Reinert effect: with rapid trade liberalisation the most efficient industries in the least developed of the trading partner countries are the first to become extinct.”

## **7. The Two Roles of Human Beings: Consumers and Producers**

“During the 19th century US debate on protectionism, the Americans granted the English free traders the point that locally produced goods in the US initially would become more expensive, punishing the US consumers. But, the Americans countered, in the long run this would be more than compensated by the much higher wages the same consumers would receive as producers in an industrialised economy, rather if they had stayed employed as farm hands.

In a dynamic setting, high wages would also be driving technological development, forcing employers to make productivity-enhancing investments ... The failure of neoclassical economics to see the advantages of high wages, combined with a lack of understanding of any positive role of unions (after all, trade unions increase demand), has clearly prevented technological development and caused unnecessary poverty in the US.”

## **9. Separating Productive Capital from Mammon**

“A key element in Western culture has been the prevention of hoarding. In other words, making sure that money was circulating, not idle. The biblical term for idle money is mammon ... Continental European economics has always continued this in a sense Biblical separation of the financial economy from the real economy.”

“In good times the financial economy serves as scaffolding for the real economy; as a bridge in time, as Keynes put it. If allowed to grow in ways that do not positively impact upon the real economy – by making money on money without going through production in the real economy – the financial sector will become like a parasite which grows at the expense of the real economy. Since the times of Hammurabi, 1500 BC, societies which survived have managed to cancel unpayable debt. Bankruptcy, like bookkeeping, was a necessary invention in the early centuries of capitalism.”

## **10. Unlearning the Balance of Countervailing Powers**

“The most successful and powerful states of the Renaissance – Venice and Florence – both had systems which consciously created a political balance of countervailing powers preventing both the concentration of powers and corruption. In Venice the head of government, the Doge, was elected in a process so full of checks and procedures that to modern eyes it seems exaggerated. With the

privilege and honour of being Doge came the duty to give up all his business interests, and he was in a sense a prisoner in his own city (...) In Florence the Prince ruler was not elected, but his government of eight or ten persons – *la Signoria* – all represented different branches of trade and industry. So this government only had a minority of one single person representing both bankers and dealers in gold and silver. This prevented the problems listed under point 7 above.

The importance of institutions creating a balance of countervailing powers was again brought into focus by Charles Montesquieu (1689–1755), and is reflected in Western constitutions. The freedom from arbitrary power is an important goal of these institutions. It was this freedom that eventually – in some areas well into the 20th century – killed feudalism in Europe.

In his 1952 book *American Capitalism: The Concept of Countervailing Power*, US economist John Kenneth Galbraith (1908–2006) explained to us how capitalism functioned at its best when subject to three countervailing powers: big business, big government and big labour. Neoliberalism removed big government and big labour, and left big business, inside which finance gradually took on more and more power.”

Reinert, Erik S.; Ingrid H. Kvangraven; eds. (2023): *A Modern Guide to Uneven Economic Development*, Edward Elgar.

Starting point for the standard canon	Starting point for the 'Other Canon'
Equilibrium under perfect information and perfect foresight	Learning and decision-making under uncertainty (Schumpeter, Keynes, Shackle)
High level of abstraction	Level of abstraction chosen according to problem to be resolved
Man's wit and will absent	Moving force: <i>Geist- und Willenskapital</i> : Man's wit and will, entrepreneurship
Not able to handle novelty as an endogenous phenomenon	Novelty as a central moving force
Moving force: capital per se propels the capitalist engine	Moving force: new knowledge which creates a demand for capital to be provided from the financial sector
Metaphors from the realm of physics	Metaphors (carefully) from the realm of biology
Mode of understanding: Mechanistic ( <i>begreifen</i> )	Mode of understanding: Qualitative ( <i>verstehen</i> ), a type of understanding irreducible only to numbers and symbols
Matter	<i>Geist</i> precedes matter
Focused on Man the Consumer A. Smith: 'Men are animals which have learned to barter'	Focused on Man the Innovator and Producer. A. Lincoln: 'Men are animals which not only work, but innovate'
Focused on static/comparative statics	Focused on change
Not cumulative/history absent	Cumulative causations/ 'history matters'/ backwash effects (Myrdal, Kaldor, Schumpeter, German Historical School)
Increasing returns to scale and its absence a non-essential feature	Increasing returns and its absence essential to explaining differences in income between firms, regions and nations (Kaldor)
Very precise (would rather be accurately wrong than approximately correct)	Aiming at relevance over precision, recognises the trade-off between relevance and precision as a core issue in the profession
'Perfect competition' (commodity competition/ price competition) as an ideal situation = a goal for society	Innovation- and knowledge-driven Schumpeterian competition as both engine of progress and ideal situation; with perfect competition, with equilibrium and no innovation, capital becomes worthless (Schumpeter, Hayek)
The market as a mechanism for setting prices	The market also as an arena for rivalry and as a mechanism selecting between different products and different solutions. (Schumpeter, Nelson and Winter)

Starting point for the standard canon	Starting point for the 'Other Canon'
Equality Assumption I: No diversity	Diversity as a key factor (Schumpeter, Shackle)
Equality Assumption II: All economic activities are alike and of equal quality as carriers of economic growth and welfare	Growth and welfare are activity-specific: different economic activities present widely different potentials for absorbing new knowledge
Both theory and policy recommendations tend to be independent of context ('one medicine cures all')	Both theory and policy recommendations highly context-dependent
The economy largely independent from society	The economy as firmly embedded in society
Technology as a free good, as 'manna from heaven'	Knowledge and technology are produced, have cost and are protected; this production is based on incentives of the system, including law, institutions and policies
Equilibrating forces at the core of the system and of the theory	Cumulative forces are more important than equilibrating ones, and should therefore be at the core of the system
Economics as <i>Harmonielehre</i> : The economy as a self-regulating system seeking equilibrium and harmony	Economics as an inherently unstable and conflict-rich discipline; achieving stability is based on Man's policy measures (Carey, Polanyi, Weber, Keynes)
Postulates the representative firm	No 'representative firm'; all firms are unique (Penrose)
Static optimum; perfect rationality	Dynamic optimisation under uncertainty; bounded rationality
No distinction made between real economy and financial economy	Conflicts between real economy and financial economy are normal and must be regulated (Minsky, Keynes)
Saving caused by refraining from consumption and a cause of growth	Saving largely results from profits (Schumpeter) and saving per se is not useful or desirable for growth (Keynes)