

Long waves in contemporary capitalism

DANIEL ALBARRACÍN

IIRE, AMSTERDAM, 4/12/2024



IIRE

Capitalism studied over the long term



Schools that have produced a history of the very long term of capitalism:

- ❑ the **Annales School** (Braudel, 1995);
- ❑ the **social-geographical** view (Harvey, 2003) ;
- ❑ hegemonic changes in the world economy or **world-system** (Wallerstein, 1974);
- ❑ **Long systemic cycles of accumulation** (Arrighi, 2010).
- ❑ **School of “Long Cycle Economics”** Nikolai Kondratiev.
- ❑ **School of Innovation.** Joseph Alois Schumpeter. Post-Schumpeterians (Evolutionary Economics): Chris Freeman, Carlota Pérez, Alan Freeman, Mariana Mazzucato.
- ❑ **Capital Investment School.** Jay Forrester (complex mathematical modeling, feedback and disequilibrium).
- ❑ the **regulation school** (Aglietta, 1979) // **Social Structures of Accumulation** (McDonough)
- ❑ Various **mechanistic or monocausal theories** (based on trend law of the fall of the rate of profit, Michael Roberts, Carchedi, Kliman; or, based in competitiveness, Rolando Astarita)
- ❑ **Crisis Capitalist School.** We follow here **Ernest Mandel's long wave theory**, inspired by Leon Trotsky's work on *The curve of capitalist development*, based on a long series of data collected by Kondratiev. Plural and intertwined factors of change.



CURRENT CONTROVERSIES

- **Rolando Astarita** discusses the relation between the rate of profit and the process of overaccumulation/overproduction. He reverses the reasoning: it is overproduction that causes the crisis, and not the decline of the rate of profit. He understands the tendential law of diminishing rate of profit as a limiting horizon that is exhausted with the disappearance of competition and the end of capitalism by its technological evolution. This is an accelerationist interpretation. Astarita substitutes one monocausality (rate of profit) for another (competition as an immobile engine). In his observations he does not take into account the evolution of the mass of profit or the role of the effective rate of profit.
- **José Antonio Tapia**, correctly, observes how the fall in the rate of profit precedes the fall in investment/accumulation. However, although this generates recurrent crises, they are not periodic. He does not assume a more general interpretative scheme, and denies that long waves occur or that there are Social Structures of Accumulation.
- **Michael Roberts**, with observations analogous to the previous one, advocates a mechanistic monocausal model based on the profit rate guide.
- **Claudio Katz or Andreas Malm**, point out that, either by a new wave of technological innovations or investments in green capitalism, a new upward stage in accumulation could have been inaugurated in the mid-1990s.
- Some other authors, such as **Francisco Javier Braña**, would also assume, in line with some Schumpeterians, a fifth long wave, motivated by the industrial revolution 4.0, although conditioned by stimulating and limiting factors originating in financialisation.
- In relation to the mainstream, the debate on cycles is either absent, because the market is considered efficient, or crises tend to be overcome by entrepreneurial initiative, savings and risky investments, creative destruction and technological innovation.



Capitalism origins

- **New social relations of production/reproduction** must have emerged.
- **New institutions.** The bourgeois state and the predominance and extension of the logic of the commodity (competitive markets for profit).
- **Process of original accumulation and accumulation by permanent dispossession** (D. Harvey) of territories, population, natural wealth, old forms of production, knowledge and labour.
- **New forms of exclusive and exclusionary private property**, displacement of the commons and permanent productivist 'upgrading' (E. Meiksins Wood).
- **Extension of wage or economically dependent forms of labour.** Exploitation of the value produced by labour power.
- **Dynamics of capital accumulation.**

MODE OF PRODUCTION

SOCIAL STRUCTURE (production relations)

ECONOMIC STRUCTURE (productive forces)

Capitalist dynamic: commodity logic



Money->(Labour Force, constant capital)->Production->Commodities->Money+Profit

**CAPITALIST
DEPLOYMENT
TENSIONS**

DOMINATION/EXPLOITATION
OF ONE SOCIAL CLASS BY
ANOTHER (CLASS
STRUGGLES)
COMPETITION BETWEEN
PRODUCTION UNITS (FIRMS)
IN THE MARKETPLACE

Profit rate

=> It is the main reference for capitalists in determining the investments they make.

2. $c = \text{constant capital}$

3. $v = \text{variable capital}$

4. $s = \text{surplus value}$

5. $\theta = \frac{c}{v} = \text{organic composition of capital}$

6. $\xi = \frac{s}{v} = \text{rate of surplus value}$

7. $\pi = \frac{s}{c+v} = \text{rate of profit}$

8. $\pi = \frac{s}{c+v} = \frac{s/v}{c/v+1} = \frac{\xi}{\theta+1} = \frac{\text{rate of surplus value}}{\text{organic composition of capital} + 1}$

The **rate of exploitation** depends directly on the correlation of forces between the social classes.

The **organic composition of capital** depends mainly (but not only) on technical change:

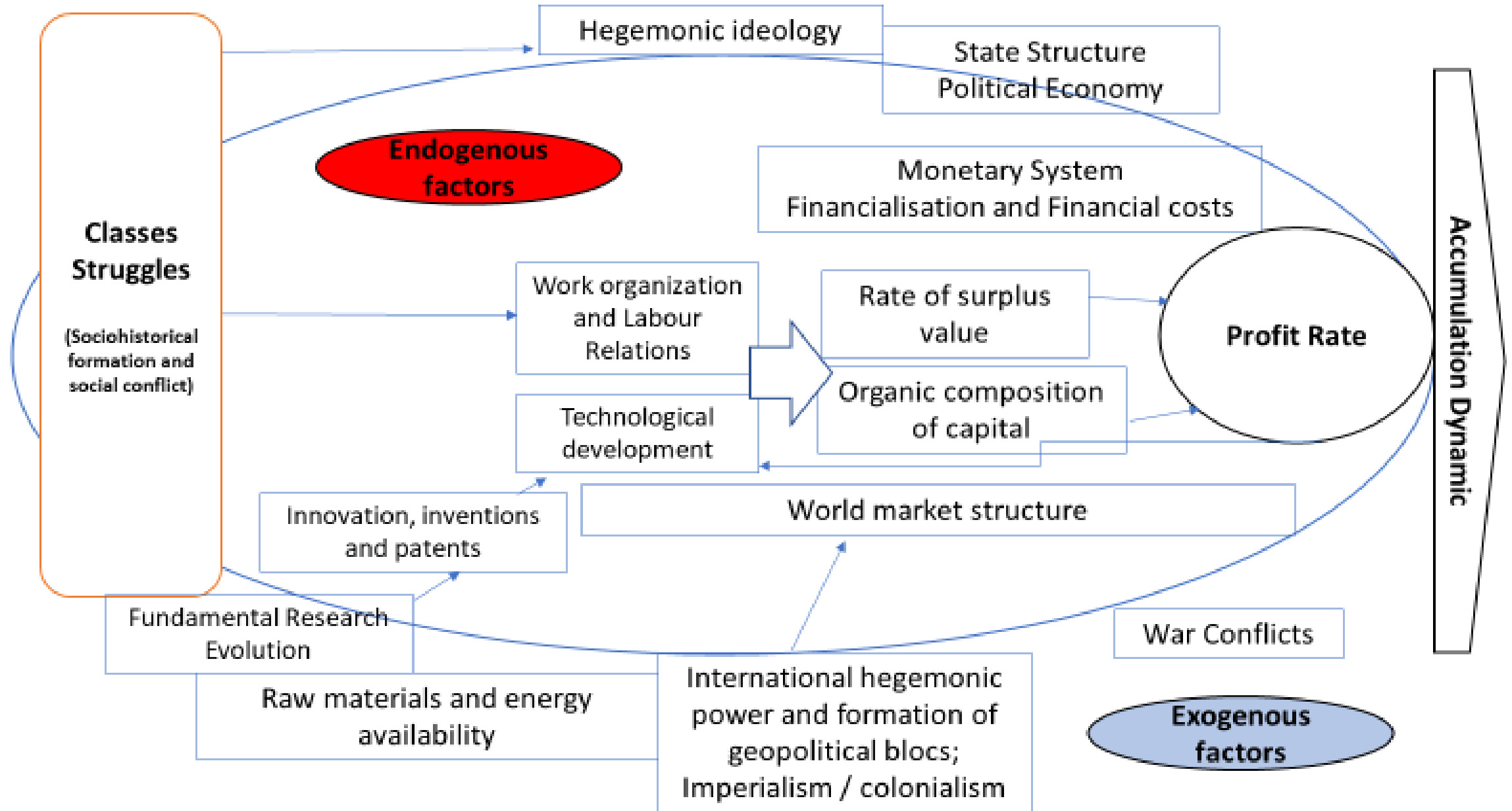
- The degree of mechanisation, which tends to increase. If the composition of capital increases, it grows.
- The trend of productivity.
- The real wage. If it grows, the composition of capital decreases

Long wave dynamics

- Accumulation is guided by the evolution of the effective **rate of profit**, although not exclusively or absolutely. There is a multiplicity of interlinked factors, influenced by endogenous, exogenous and socio-political aspects, in which social subjects are decisive.
- There have been, at least, **four long waves** in capitalist history.
- **Periods of prosperity endogenously followed by a period of recession/slowdown.**
- **Periodic industrial cycles**, within long waves, have behaved with durations of about 7-9 years. They last as long as it takes to replenish fixed capital.
- **The passage from a depressive phase to a new long expansive wave is not automatic**, it depends mainly on **socio-political factors** - class struggle - and on economic conditions - appearance of new markets - and technical conditions - potential new products to be marketed, productivity level, etc...



MULTIPLE FACTORS IN CAPITALIST DYNAMICS



The fourth long wave, the “Late Capitalism”

- Transition from the III to the IV long wave.
 - a) Destruction of capital and part of industry.**
 - b) Political defeat of the working class.**
 - c) Increase in the intensity and extent of work.**
 - d) Sharp decline in real wages.**
- Vigour and development of the 4th Long Wave, expansionary phase (1950-1973)
 - a) Incorporation of latent or newly developed technologies** (3rd Scientific and Technological Revolution) after World War II in conditions facilitated by the increase in the rate of profitability, increasing productivity.
 - b) Development of policies of partial integration of the working class** through indirect wages.
 - c) The state dampens and rationalises development.**
 - d) Colonisation and economic exploitation of the countries of the South continues**, despite their political independence.



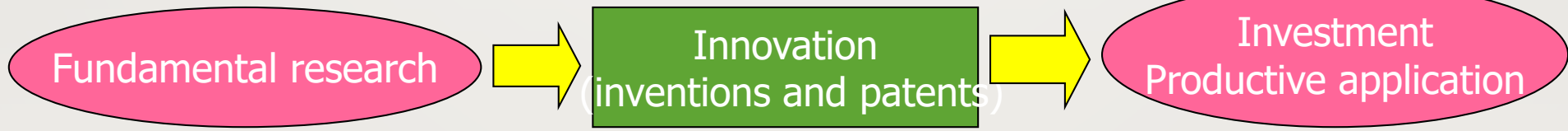
Profit rate and technology

Prosperity	Depression	Fundamental innovations
1793-1825	1825-1847	Manufacture
1847-1873	1873-1893	Steam engine
1894-1914	1914-1948	Oil Plastic
1955-1973	1973-...	Microelectronics Atomic energy Man-made synthetic fibres



Contrary to the Schumpeterian explanation, the accumulation of knowledge does not translate into massive investment in new technologies if it is not preceded by a rise in the rate of profit. Once the technological revolution is incorporated, it invigorates and prolongs the long wave, but does not initiate it.

- I Industrial Revolution
- II Industrial Revolution
- III Industrial Revolution



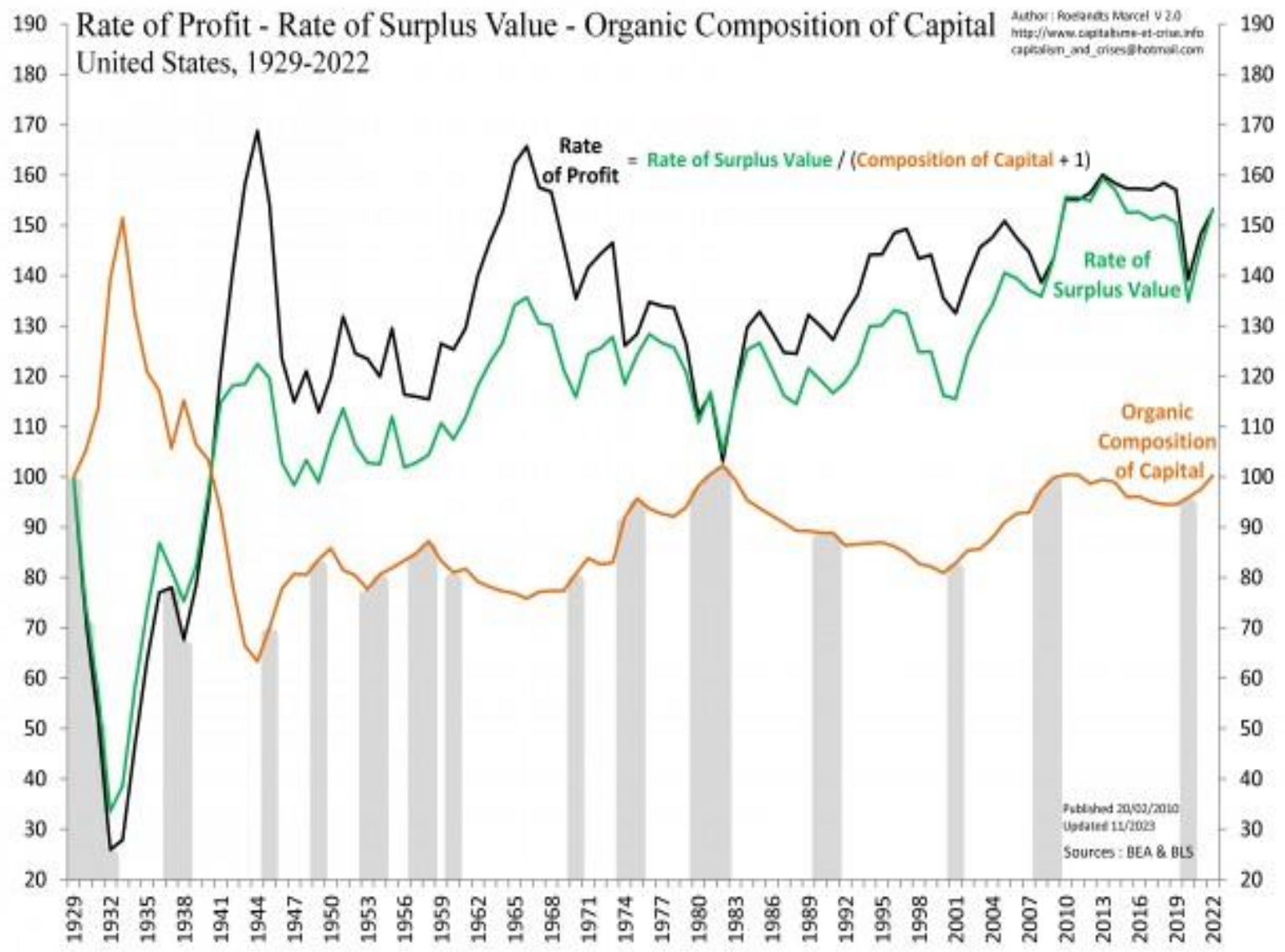
The long decline of the last long wave

- Falling rate of return in the 1970s. Crisis of 1973.
- A shift to neoliberal policies, based on the **financialisation of the economy**, is introduced in the context of the **transition to capitalism in Eastern countries, capitalist globalisation, and the rise of China**. The rate of profit is partially restored. It allows for a significant period of recovery between 1993-2006.
- **Productivity stagnation (except in 1995-2004), debt growth, wage adjustment, notional capital growth.**
- **In 2008, the compensatory effects of the financialisation policy are exhausted.** Its deepening only manages to cushion and postpone the crisis. **The last long wave would last more than 70 years.**

Developments since 1990 in the dynamics and structure of accumulation

- Expansion of markets and increased availability of global labour force within the wage framework or economically dependent (false self-employed, informality, etc.) at lower labour cost. Integration of global capitalism on a market and financial scale interconnecting value and supply chains (until 2015).
- Rise of China and other emerging countries in the world economy.
- The policies of **state-financialised neoliberalism**,
- The increase in the **speed of capital turnover** (altering the length of cycles, accelerating them).
- The emergence of **technological innovations** (microchips 1995-2004, digital revolution).
- Sectoral renewal in the oligopolistic accumulation regime (**investment companies, large technological companies, platform economies...**).
- Difficulties in obtaining key raw materials at low prices. **Climate, energy and biodiversity crises**. Extralimitation of seven out of nine indicators of climate tipping points.
- A process of **growing rivalry in the geostrategic and trade framework**. Serious risk of extended regional wars and nuclear warfare.
- **Irregular behaviour in the last long wave**, which opens the discussion as to whether there was a long wave between 1990-2007, a new expansive long wave was inaugurated (those who believe that the Digital Revolution is driving it), or whether it was an oscillation within a broader long wave, which is continuing towards a process of stagnation.



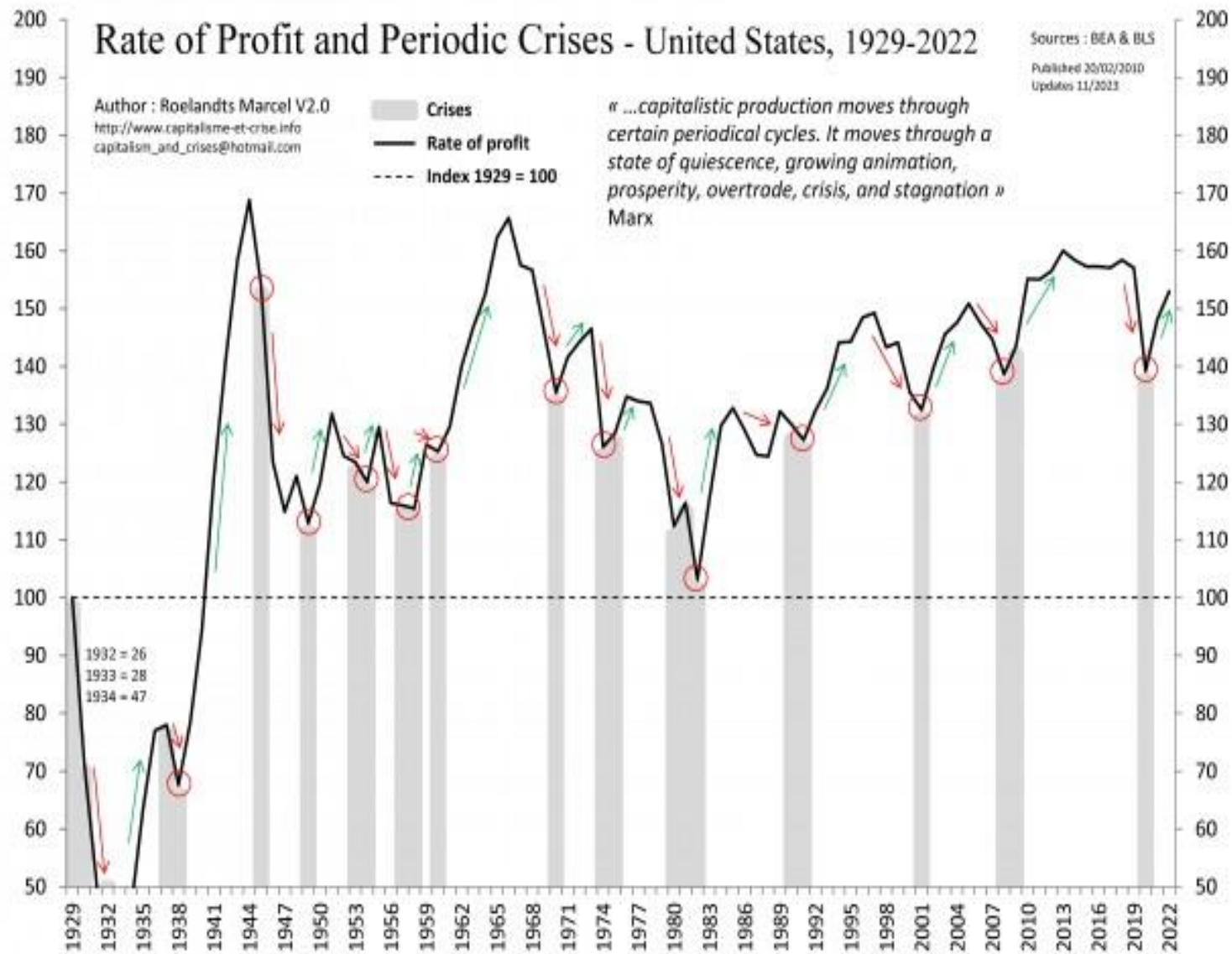


Although the tendency of the COC is to increase, it does so more slowly and gradually than the mechanistic models suggest.

The evolution of the **rate of profit seems to correlate more with the rate of surplus value**, a dimension and indicator that responds to the relations of social forces.

It should be noted that the accumulation process is driven by the rate of profit, but responds in a time-delayed manner. Moreover, the recession is additionally dependent on the **mass of profits** falling or stagnating.

More precisely, companies are guided by the **effective rate of profit** (return on investment minus financial costs) (A.Shaikh)



Since the crisis of the 1970s, policies to restore the rate of profit have employed multiple instruments, using state policies, deregulation of corporate and financial power, **against the world of work.**

Harmful measures have failed to reach post-war levels of prosperity, and have added growing problems (environment, debt, fewer rights, energy crisis,...).

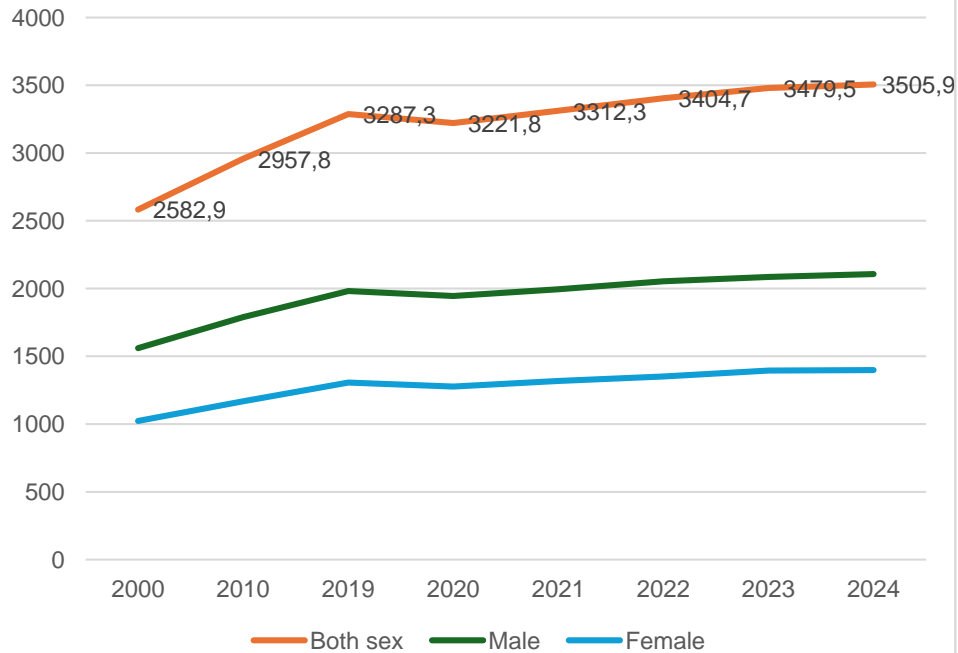
These prevent socially acceptable solutions and **threaten democracy, welfare and the biosphere** in which we live. What happens will depend on historical socio-political factors, which will bring alternative policies or, business as usual, we will deepen the problems.

Factors to restore rate of profit

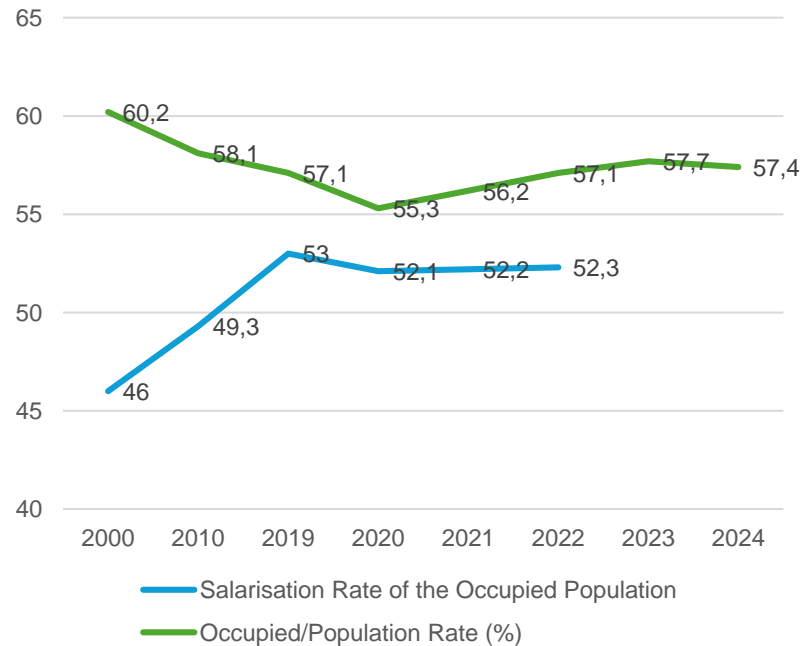
- Increase in the **rate of exploitation**. Correlation of social forces.
- **Destruction of capital** (fictitious, industrial). Financial crisis or war affecting the industrial apparatus. Increase in the organic composition of capital. Relocation of capital to areas of low organic composition.
- Vigorous **increase in the rate of productivity**.
- International markets.
- **Socio-political transformations**. Rise of State Capitalism and Authoritarian Neoliberalism.
- In general, a **defeat of the working classes**.

LABOUR STATISTICS IN THE WORLD ECONOMY

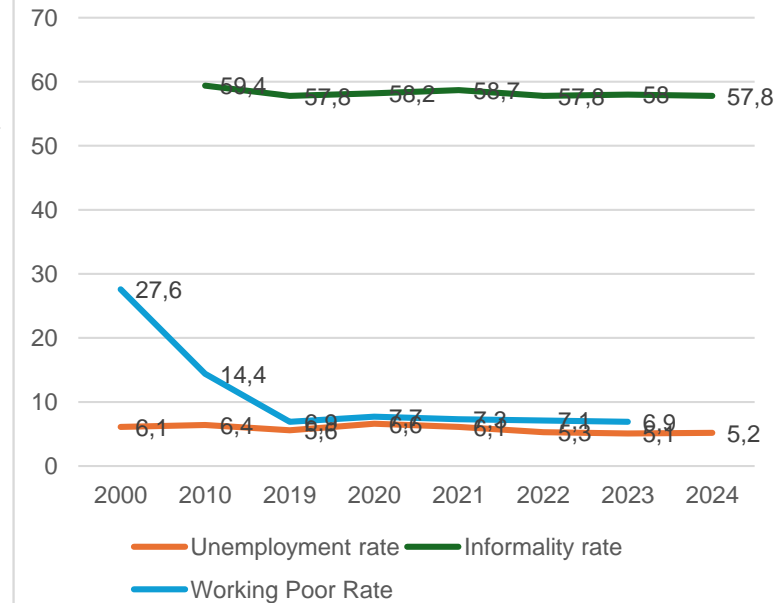
Occupied population (millions of people) at world level



Global Occupation/Population and Wage/Population Ratios

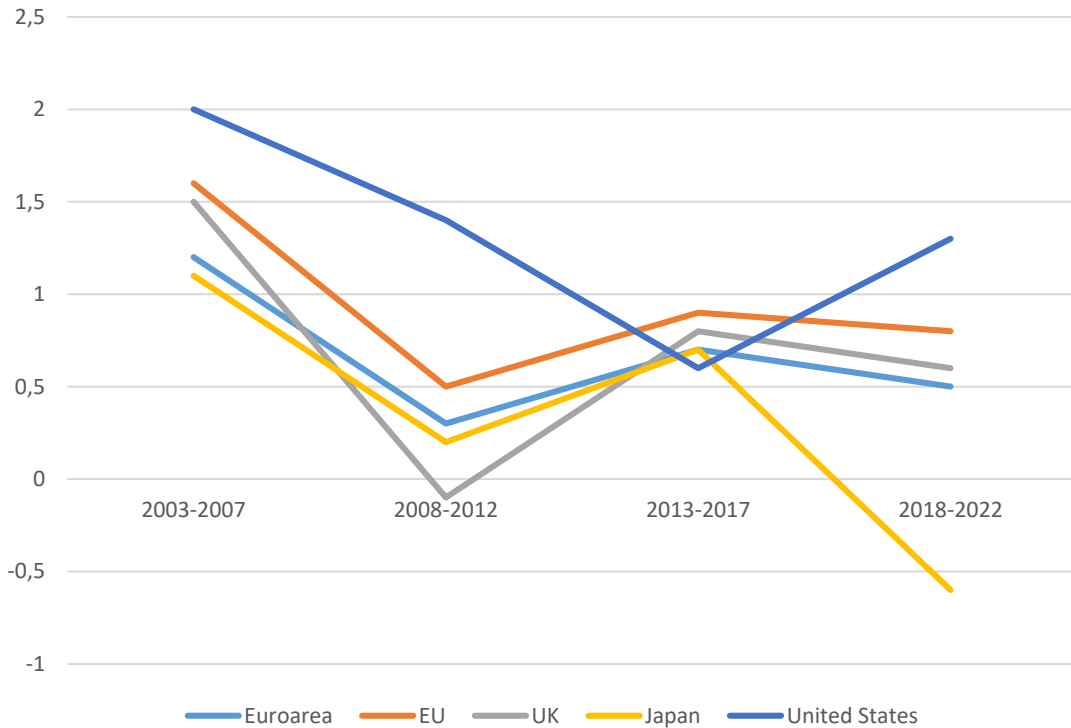


Informality, Unemployment and Working Poor Rates at world economy.



The world's employed population, except in 2020, has continued to grow, to 3.5 billion people. **New technologies do not eliminate work, they reorganise and control it better.** The employment rate fell with the 2008 crisis and until the pandemic, then recovered and is now stagnating at 57.4%. The percentage of employees as a proportion of the employed rose sharply until 2019, and then stagnated. In 2023, according to the ILO, 58% of the world's working population was informally employed, there were 6.9% working poor and the unemployment rate was 5.1%.

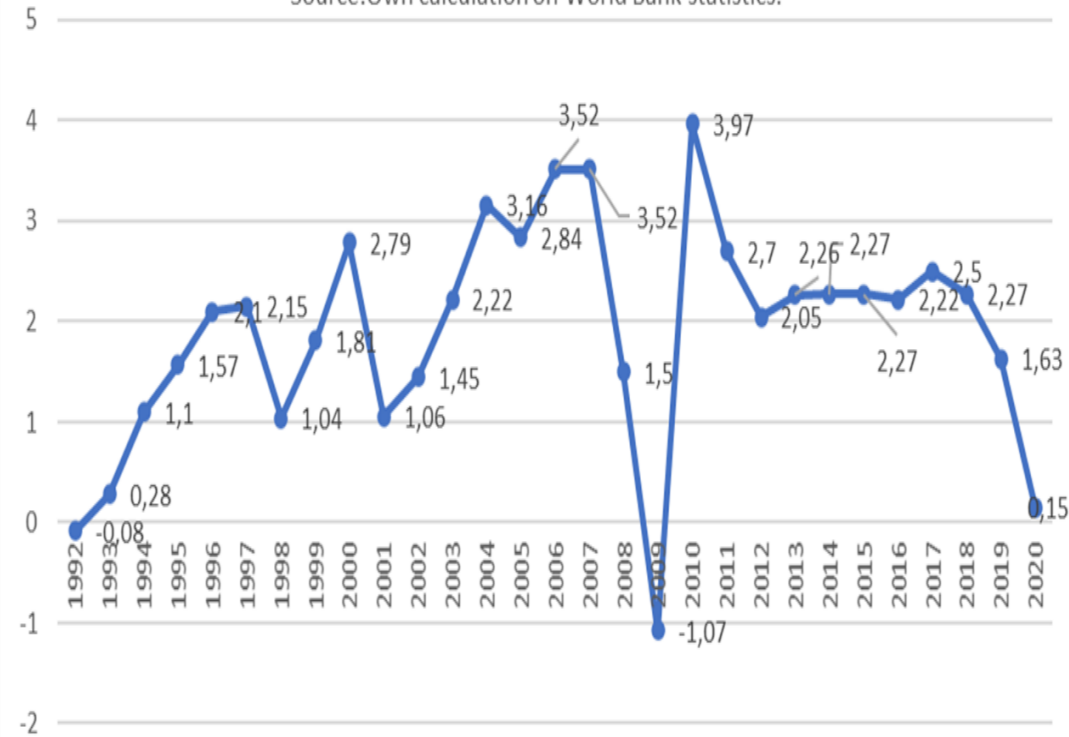
**Labour productivity (real GDP per occupied person)
%change 5 years averages (2003-2022)**



Source: Own elaboration based in European Commission. European Economic Forecast. Spring 2022. Institutional, paper 173 / May 2022 Statistical Annexes. Page 164.

World Productivity Rate

(Percentage of change of GDP per person employed, constant 2017 PPP\$).
Source: Own calculation on World Bank statistics.

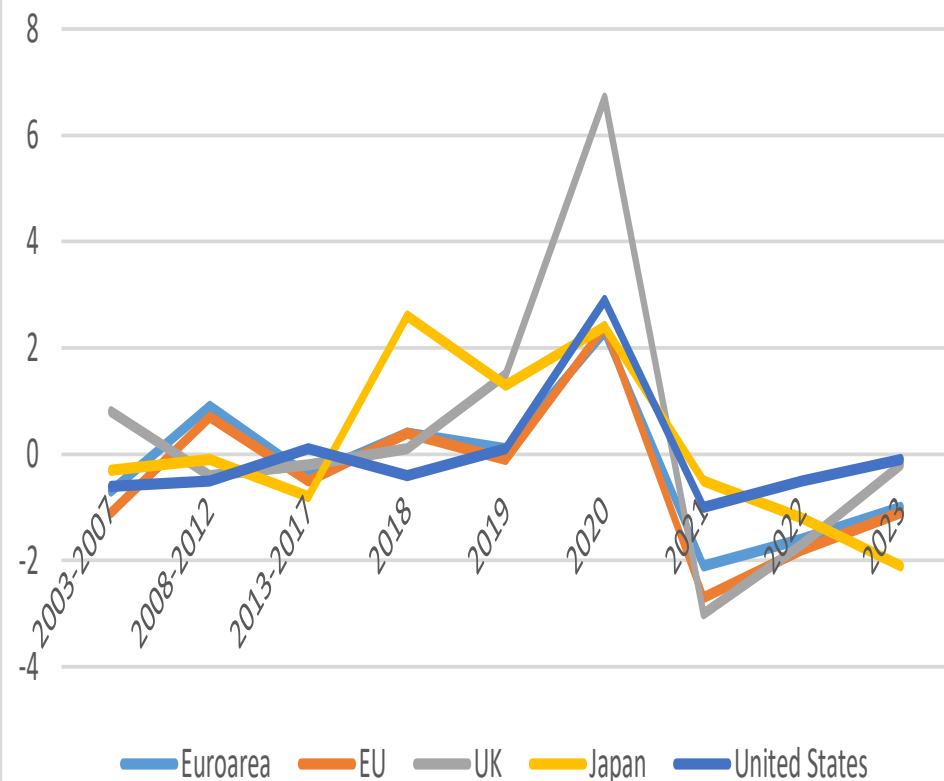


SOURCE: OWN CALCULATION ON WORLD BANK STATISTICS.

Over the period 1980-2018, overall productivity in advanced countries tended to stagnate. In the period 2003-2008, emerging economies increased their productivity by 5%, advanced economies by just 1.5%, and less industrialised economies grew by 3%.

Productivity gains since 2007 do not seem to be sufficient to boost accumulation, quite the contrary.

Relative Wage (Real Unit Labour Costs, %change 2003-2023). Selected data and forecast



Source: Own elaboration from European Commission.

Real Unit labour costs (Nominal unit labour costs divided by GDP price deflator) (percentage change on preceding year, 2003-2023)

	5 years averages						Spring 2022 forecast		
	2003-2007	2008-2012	2013-2017	2018	2019	2020	2021	2022	2023
Euroarea	-0,7	0,9	-0,4	0,4	0,1	2,3	-2,1	-1,6	-1
EU	-1,1	0,7	-0,5	0,4	-0,1	2,4	-2,7	-1,8	-1,1
UK	0,8	-0,4	-0,2	0,1	1,5	6,7	-3	-1,7	-0,2
Japan	-0,3	-0,1	-0,8	2,6	1,3	2,4	-0,5	-1,2	-2,1
United States	-0,6	-0,5	0,1	-0,4	0,1	2,9	-1	-0,5	-0,1

Source: Taken from European Commission. European Economic Forecast. Spring 2022. Institutional, paper 173 / May 2022 Statistical Annexes. Page 165.

Real unit labour costs, which refer to relative surplus value and relative wages, stagnating in previous years, are clearly decreasing from 2021 onwards.

Since the 1980s, the gap between productivity and wage developments has widened sharply in favour of the corporate surplus.

Latest World Economic Outlook Growth Projections

(Real GDP, annual percent change)	PROJECTIONS		
	2022	2023	2024
World Output	3.5	3.0	2.9
Advanced Economies	2.6	1.5	1.4
United States	2.1	2.1	1.5
Euro Area	3.3	0.7	1.2
Germany	1.8	-0.5	0.9
France	2.5	1.0	1.3
Italy	3.7	0.7	0.7
Spain	5.8	2.5	1.7
Japan	1.0	2.0	1.0
United Kingdom	4.1	0.5	0.6
Canada	3.4	1.3	1.6
Other Advanced Economies	2.6	1.8	2.2
Emerging Market and Developing Economies	4.1	4.0	4.0
Emerging and Developing Asia	4.5	5.2	4.8
China	3.0	5.0	4.2
India	7.2	6.3	6.3
Emerging and Developing Europe	0.8	2.4	2.2
Russia	-2.1	2.2	1.1
Latin America and the Caribbean	4.1	2.3	2.3
Brazil	2.9	3.1	1.5
Mexico	3.9	3.2	2.1
Middle East and Central Asia	5.6	2.0	3.4
Morocco	1.3	2.4	3.6
Saudi Arabia	8.7	0.8	4.0
Sub-Saharan Africa	4.0	3.3	4.0
Nigeria	3.3	2.9	3.1
South Africa	1.9	0.9	1.8
Memorandum			
Emerging Market and Middle-Income Economies	4.0	4.0	3.9
Low-Income Developing Countries	5.2	4.0	5.1

Source: IMF, *World Economic Outlook*, October 2023

Note: For India, data and forecasts are presented on a fiscal year basis, with FY 2022/2023 (starting in April 2022) shown in the 2022 column. India's growth projections are 6.5 percent in 2023 and 5.7 percent in 2024 based on calendar year. For Italy, data and forecasts reflect information available through September 21, 2023. For the United Kingdom, data and forecasts do not incorporate the significant statistical revisions released on September 29, 2023.

Energy crisis, trade war and geopolitical struggle

- The war in the Ukrainian scenario or the tension in Taiwan hide a fight for raw materials, in the midst of the energy and climate crisis, the control of the global value chain and a geopolitical tension between the US and China.
- The second half of 2022 is a **stagnation trend**, which will turn into recessions in 2023 in some countries, a scenario of **stagflation and instability**.
- There is a **return to restrictive monetary policy**. While fiscal policy is made pragmatic to give the state the capacity to finance the military budget or to bail out capital, while public services, entitlements and real wages are adjusted.
- There is **no sign of the inauguration of a new long wave**. Only a heavy defeat of the workers' movement and a destruction of industrial and financial capital would make it possible, although the energy crisis makes a period of vigorous growth impracticable.

GLOBALISATION REFORMULATED

%World Trade/GDP



Source: World Bank national accounts data and OECD national accounts data files

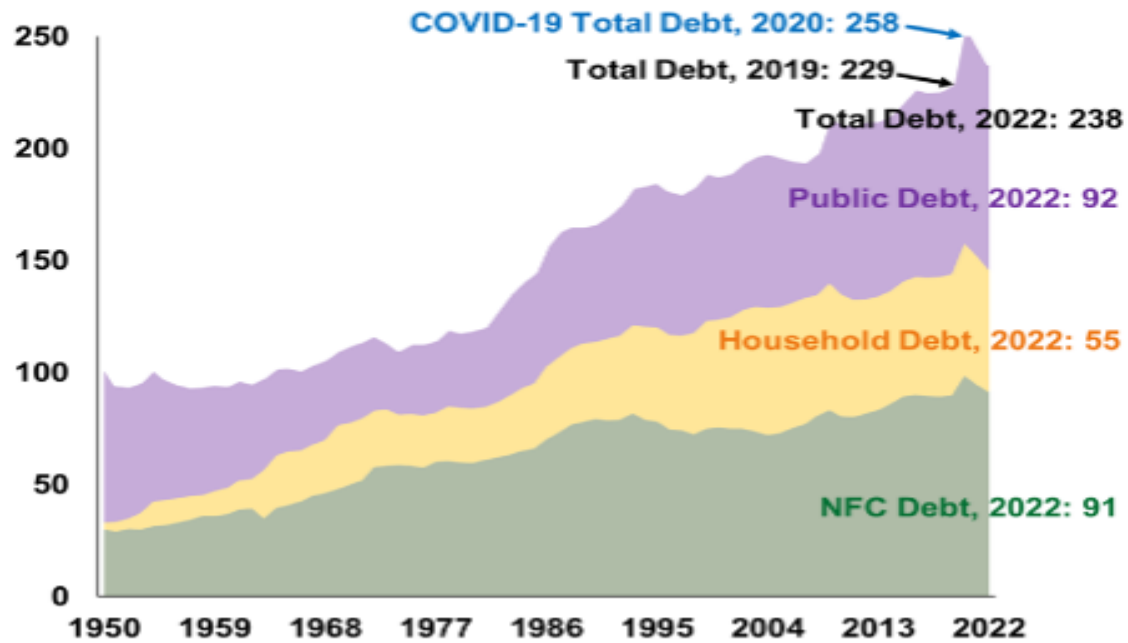
The pattern of globalisation is changing. Export shares have reached their limits. Trade wars and regional wars around the struggle for resources and markets are exacerbated.

It may imply a short-circuiting of certain supply chains in a highly interdependent and specialised model of globalisation.

The multilateral free trade model reverts to models of continental markets, bilateral agreements, and schemes where major powers demand to open their partners' markets while protecting their own.

2023 Global Debt Monitor

Figure 1. Global Public and Private debt, 1950–2022 (Percent of GDP)

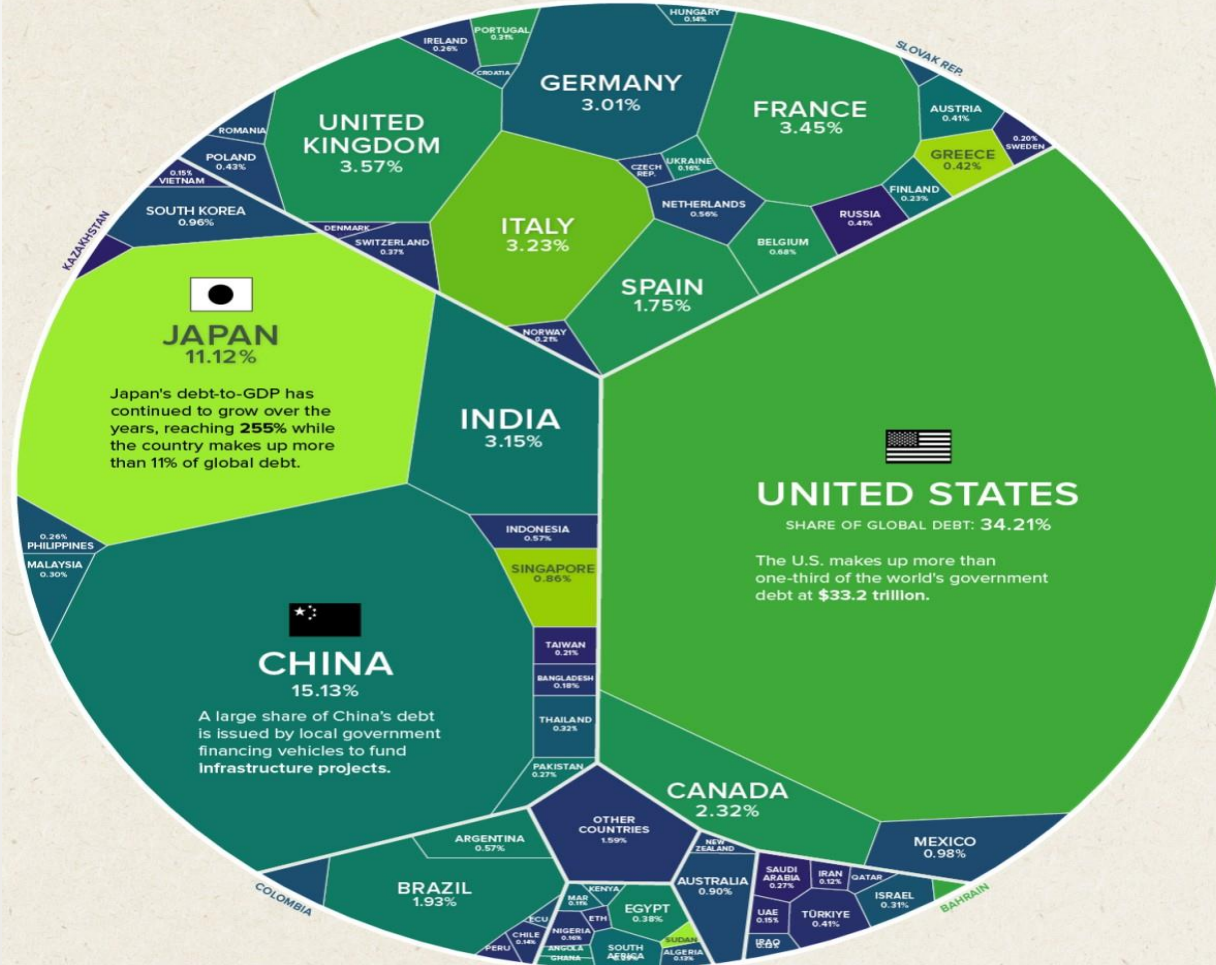


Source: Global Debt Monitor

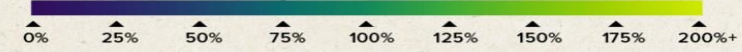
A WORLD OF DEBT

Percentage of World Debt BY COUNTRY

Governments around the world have accumulated **\$97 trillion** in total—a 40% increase since 2019.



Debt as a Percentage of GDP



Source: IMF



FINANCIALISED STATE NEOLIBERALISM

The **neoclassical and Austrian school** authors had been proposing to governments a **restrictive fiscal and monetary policy, privatisation, and a wage adjustment policy**. Although all governments in recent years have agreed on this last point, there has not been an economic policy implemented that clearly fits the first two points.

- In fact, **the state has increased its weight in the economy**, albeit in a differentiated trend depending on whether austerity conservatives or social liberals governed.
- **Monetary policy** has generally been **expansionary** in the 21st century (and since the 1990s in Japan). It was only less expansionary between 2008-2012 and after Q2 2022.
- **Fiscal policy** has oscillated between de-taxation of capital and re-taxation of consumption and labour income.
- **Spending policy** has combined between the generosity of bailouts and outsourcing of management to private initiative (contracting, public-private cooperation) and the erosion of public spending on universal services. At the international level, Keynesian formulas are being taken up again, leading to an increase in arms spending.
- This has made possible the **socialisation of losses and private debts**, in the form of deficits and public debt.
- In sum, the neoliberalism that actually exists does not adopt a single model, and if there is one, it must be differentiated from the schemes proposed by neoclassical theory. Elements of the **ordoliberal, neo-schumpeterian and neo-Keynesian paradigms** are possibly converging under a new type of **pragmatic neoliberal state management**.

Conclusions

- The long wave model framed in an understanding of the dynamics of the capitalist structure and accumulation indicates possible contradictions and anticipates crisis scenarios, where changes are possible.
- The analysis requires an open vision of the dynamics, understanding the protagonism of social subjects, their relations and politics.
- Stagnation is a tendency, given current inertias, but cycles will continue to occur, more often recessionary than recovery. Now, socio-political changes may change the pattern. If the ruling classes continue with their current line, and the world of work and the subordinate classes do not build an alternative, it is foreseeable that, in order to preserve the privileges of the minority, the rights of the social majorities will continue to deteriorate.
- A fundamental structural reason is the climate, energy and biodiversity crisis. It prevents capitalist productivism from continuing to extract natural resources at the same rate. By exceeding the carrying capacity of the planet, it is causing existential chaos in the biosphere for humanity.
- China's rise is challenging US hegemony. The takeover will not come without growing tensions and conflicts. The Chinese model of state capitalism, although more efficient, does not seem sufficient for a new long wave of global expansion, nor does it provide an emancipatory, sustainable and democratic solution.
- An alternative solution will not be appropriate to overcome the contradictions if it is limited to correcting secondary aspects of the capitalist model, while neo-Keynesian models, now hybridised with ordoliberal or Schumpeterian measures, of state neoliberalism, where the latter takes on a growing protagonism, may postpone crises, displace or mitigate their effects, but they also imply an increasing extraction of the value of workers' labour and natural wealth, which can only be consistent under more oppressive and less democratic regimes.
- The construction of a pro-humanity scenario requires that the **working/caring classes** sociopolitically confront the current model of **power relations and policies**, and address the construction of an ecosocialist and democratic model. If such a project is not put in place, the new phase leads us to models of authoritarian neoliberalism that will challenge us to raise the rates of exploitation, to increase the depredation of the planet in favour of a few, possibly also with the outbreak of more recurrent and deeper economic crises that will end in a great destruction of capital (financial and productive).

Questions to discuss...

- In your group, note, compare and discuss what factors and trends are occurring and affecting the exploitation rate where you live? Try to draw conclusions around the common trends.
- Do you think that there is a different dynamic in the dynamics of accumulation and growth in the countries of the South? Does it make sense to talk about emerging countries?
- Do you think that China could be opening a long expansive wave of its own? Is it enough for it to surpass the US economically to be able to open a new stage in capitalism? Discuss collectively and reason your answer.