

Strategic Trade Policy Intervention

8.3 Policy intervention in developed countries

✦ WTO constrains use of trade policy and subsidies

- ◆ Tariff ceilings are low, on avg
- ◆ No industrial subsidy
 - Subsidy of 75% of research costs; 50% of new prod develop
 - Subsidy for infrastructure

✦ Cases for gov't intervention of North

- ◆ Infant industry argument applied to R+D-intensive sectors
- ◆ Externality: de-industrialization
- ◆ Imperfect competition

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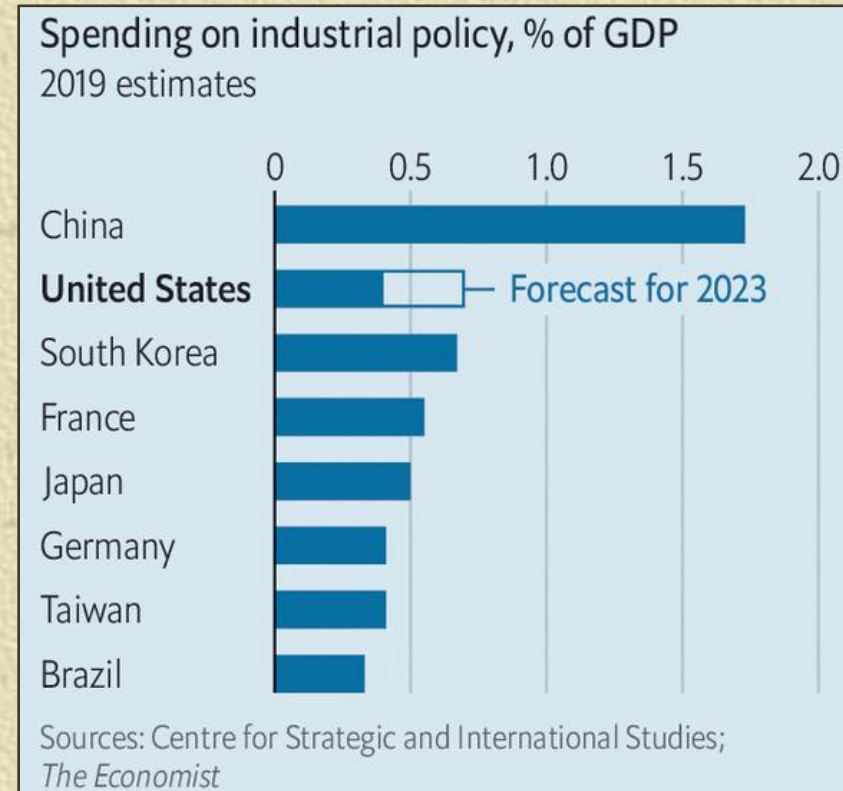
✦ Evolution of US-China trade war

- ✦ Tariffs were of limited use
- ✦ New US strategy: friend-shoring (“invest, align, compete”)
 - Subsidies in targeted sectors
 - Isolate rivals and recraft commercial ties with allies
 - Strengthen high tech supply chains, making them China proof



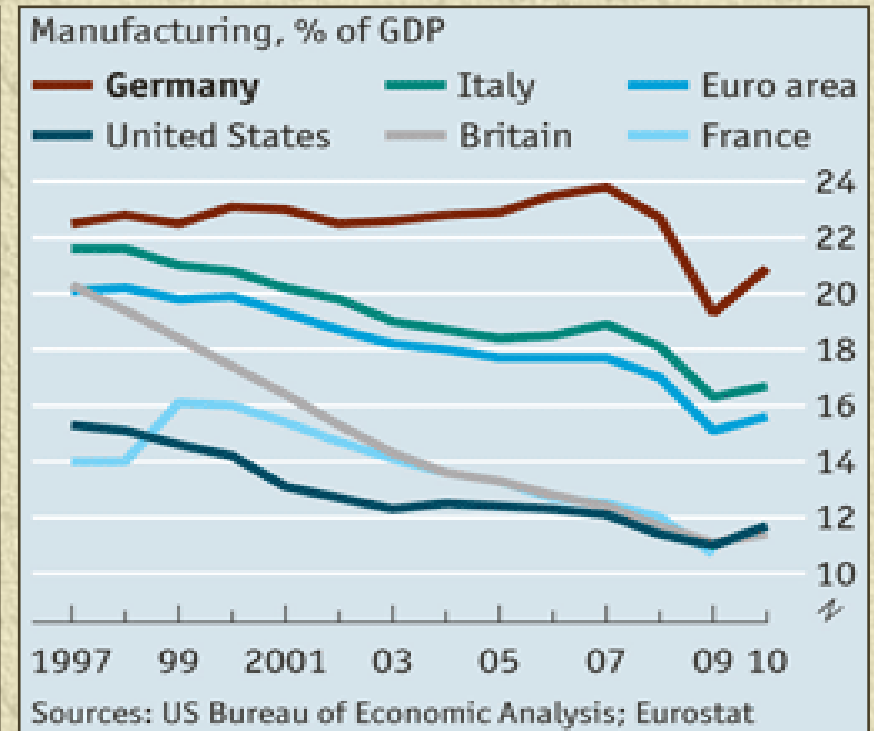
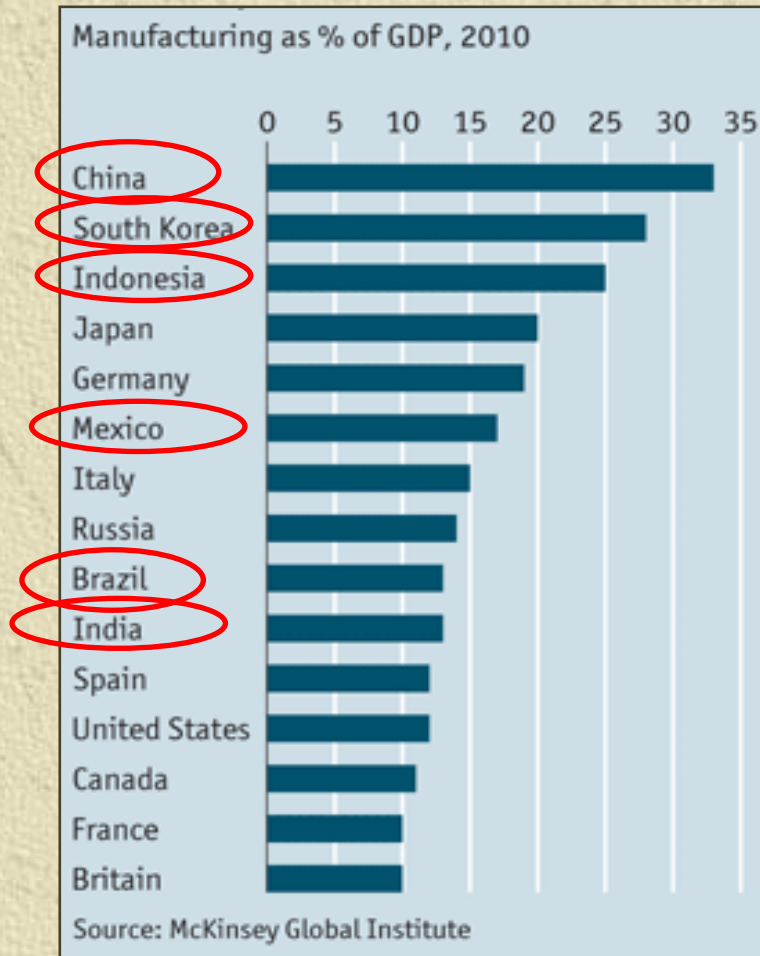
Strategic Trade Policy Intervention

- ◆ Subsidies
- ◆ Sanctions (nat'al security, 2019)
 - Block Huawei, Chinese 5G IT firm linked to gov't
 - Encourage allies to do same
- ◆ Export controls (2022)
 - US tech firms blocked from China
 - Export licenses for US firms
 - Much of IT runs on US software (Microsoft)
 - ◆ Western allies follow suit, or
 - ◆ 3rd country chip manufacturers affected as US software is blocked
 - Limit all US citizens/firms from aiding China's semi-conductor manu, supercomputing and AI



Strategic Trade Policy Intervention

- ◆ Externality: De-industrialization from North-South trade
 - Manufacturing shares

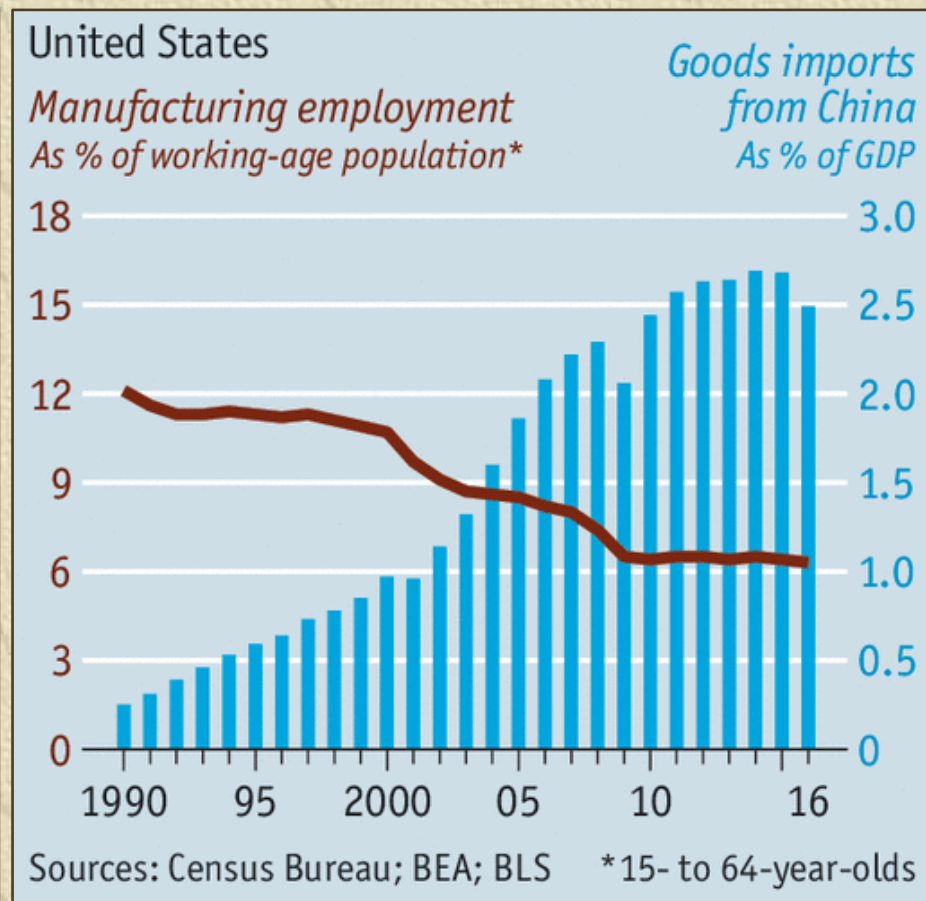
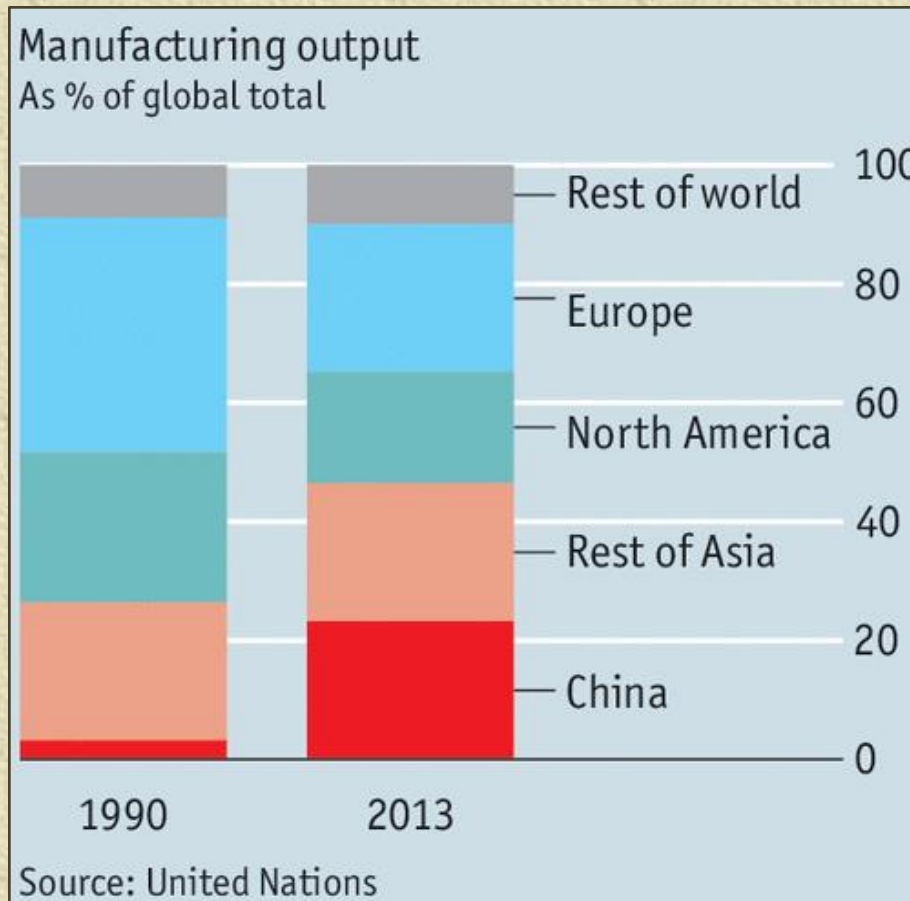


Economist, "What Germany Offers the World", 14 Apr 2012, p. 56.

Economist, "Manufacturing: The new maker rules", 24 Nov 2012, p. 66-7.

Strategic Trade Policy Intervention

- US-China trade and US employment in manufacturing



Economist, "The future of factory Asia: A tightening grip", 14 Mar 2015, p. 61-2.

Source: *Economist*, "Trade with China: Shock horror" 11 Mar 2017, p. 70

Strategic Trade Policy Intervention

◆ Relative productivity: manufacturing



Source: *Economist*, "Manufacturing: Making it in America" 14 Oct 2017, p. 55.

Many reckon that global trade, especially with China, is to blame for the loss of manu employment. Studies show majority of past factory job losses were result of investment in automation (tech). Output more than doubled in real terms. Output per labor-hr rose 47% between 2002-15.

When Taiwan's **Foxxconn**, the world's largest contract manufacturer, which employs over 1m people in China, stated it would **build a factory in the US employing up to 13,000 people in return for \$3bn in tax breaks and state subsidies**, Mr. Trump called a press conference to celebrate (\$230,769/job).

Strategic Trade Policy Intervention

- ◆ Relative productivity manufacturing and services



Substituting labor for capital is more difficult in services.

Some services sub-sectors are more labor intensive than others.

Thus, labor's share in the services sector is expected to increase relative to manufacturing.

- ◆ Services growth: alternative explanation for de-industrialization

Economist, "German Services: Protected and Inefficient", 18 Feb 2012, p. 24.

9. Imperfectly Competitive Markets

9.1 Imperfectly competitive markets

- ✦ Use and abuse of market power

- ✦ Market situations

- ◆ Large country cases, e.g., endowment over strategic factor
- ◆ Policy/regulations provides domestic market power
- ◆ Economies of scale (EOS) – increases firm size

9.2 Monopoly: trade implications

- ✦ Domestic monopoly

- ◆ Import monopoly: Vinmonopolet
- ◆ Export monopoly: commodity marketing boards

- ✦ International monopoly: theory and MR-P relation

Imperfectly Competitive Markets, continued ...

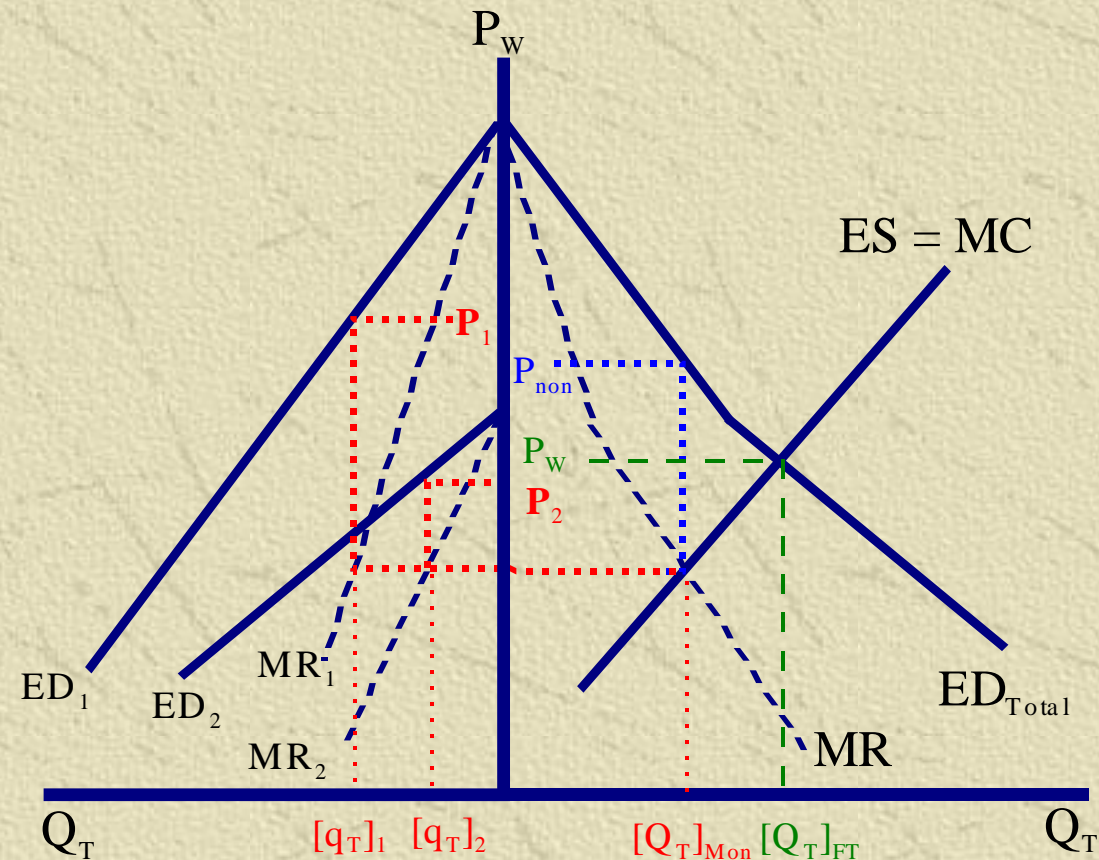
- ◆ Int'l monopoly: large country case – China rare earths
 - Quasi-monopoly rents
 - Export quota rents from Δ TOT



Imperfectly Competitive Markets, continued ...

- ◆ P-discriminating monopolistic behavior

- P_W – competitive FT price
- P_{Non} – non-discriminating monopoly P
- P_1, P_2 – P-discrim across import mkts

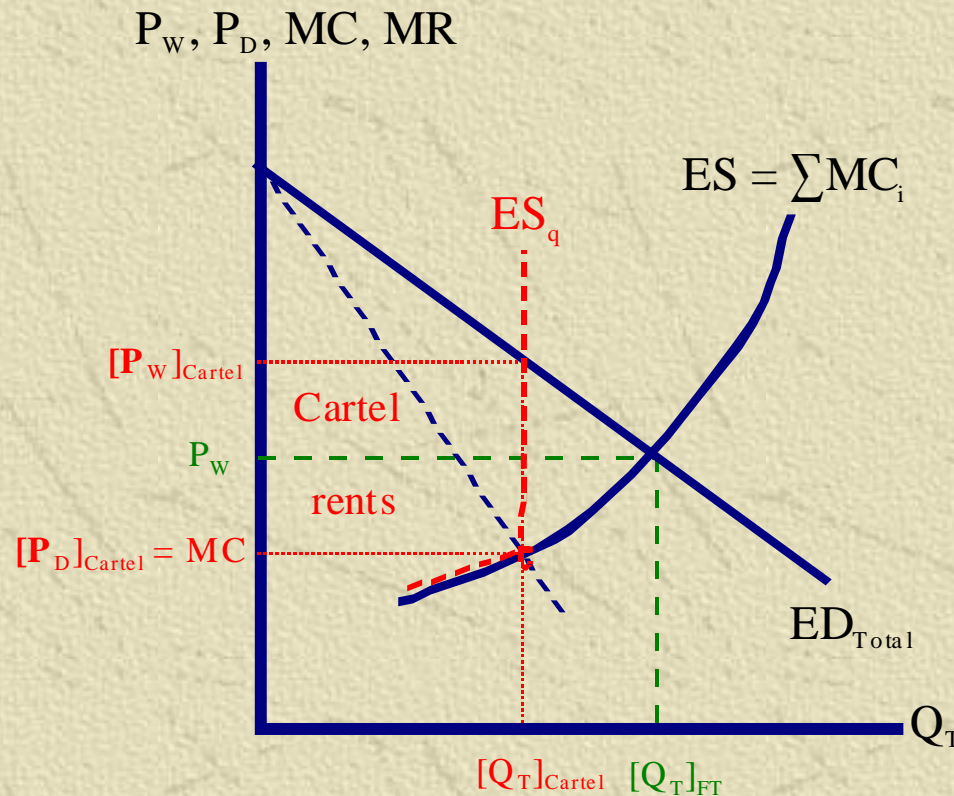


Imperfectly Competitive Markets, continued ...

✦ Oligopoly

◆ Cartel behavior (OPEC)

- Modeled as multi-plant monopoly: $\pi = P(q_1+q_2) \cdot Q - \sum TC_i(q_i)$
- Can a cartel stabilize int'l market? $\partial \pi / \partial q_1 = P + Q \cdot \partial P / \partial q_1 - MC_1 = 0$

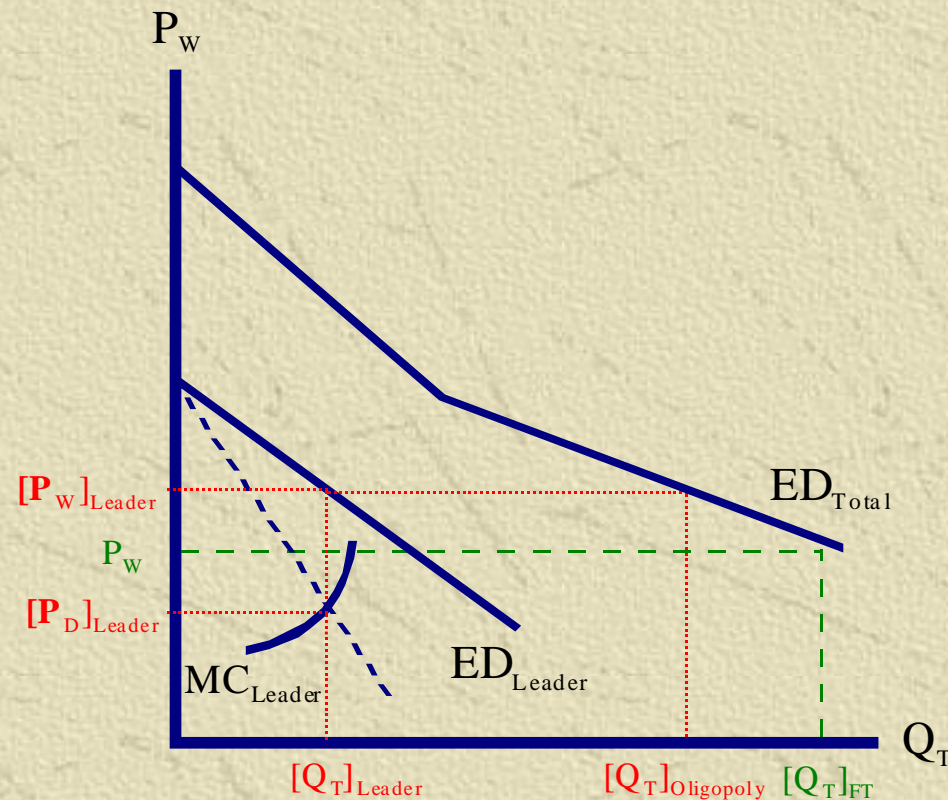


Note:

In reality OPEC applies production quota not exports.

Imperfectly Competitive Markets, continued ...

- ◆ Oligopolistic leader (Stackleberg leader-follower model)
 - 1 firm leads, others follow
 - Leader sets price from its share of world market, others follow
 - Model cannot explain why leader leads, followers follow



Imperfectly Competitive Markets, continued ...

9.3 Imperfect competition from economies of scale (EOS)

✦ Implications for H-O-S trade model

- ◆ EOS: types and definition
- ◆ Mkt structure, product differentiation, intra-industry trade

EOS: Implications for the H-O-S trade model

1. Type of industry	2. Goods markets	3. Input markets	4. Prodn functions	5. Prodn possibilities curve	6. Trade	7. SW and Y
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Imperfectly Competitive Markets, continued ...

✦ Imperfect competition and EOS

- ◆ Internal and external EOS
- ◆ Manufacturing and clusters
 - 2005-15: US prodvty growth in metro areas highest in top 10% and bottom 20% income places (uneven geographical income)
 - ◆ Manufacturing clusters with geographically concentrated prodn
 - ◆ Regional unemployment and displaced manu sectors



Economist, “Free exchange: Land of corporate giants”, 3 Nov 2012, p. 66; and “Briefing: Left-behind places”, 21 Oct 2017, p. 19-23.

Imperfectly Competitive Markets, continued ...

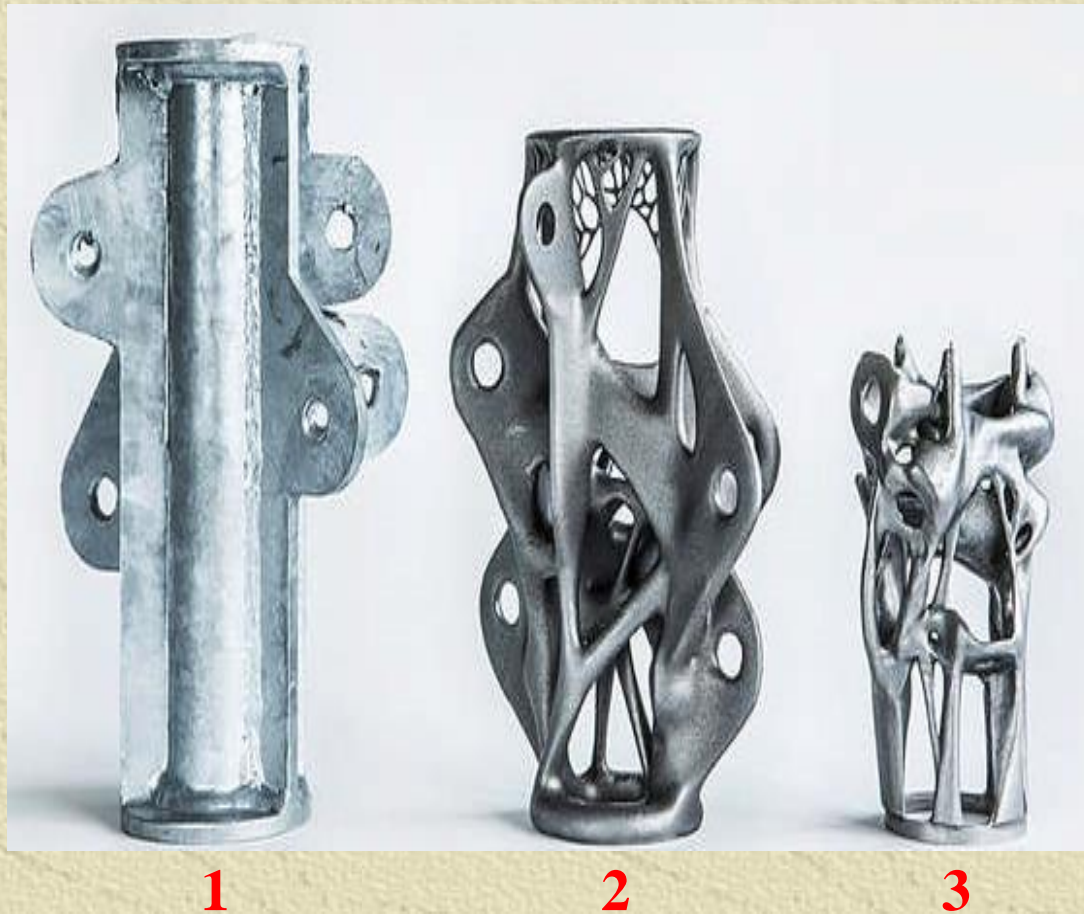
- ◆ How important are EOS by sector?
 - Services sub-sectors are heavily affected by networks (EOS)
 - ◆ Air transport, hotel chains, banking, telecom
 - ◆ EOS vs share economy
 - Info technology: Meta, Amazon, Netflix, Alphabet, Apple, Microsoft
 - ◆ Only Netflix requires capital markets to finance itself – all have cash
 - ◆ Employ only 1 mln staff; account for 1/5 of all I by S&P 500 firms
 - ◆ They supply “free stuff” but do not employ enough labor to sustain US economy

Rarely in stock market history have so many investors made so much money from so few shares going up for so long. Before the fall in stock values in Oct 2018, some 37% of the rise in value of all firms in the S&P 500 index since 2013 was explained by these six. In Sep 2020, the year of Covid-19, IT firms made up 25% of the value of the S&P 500.

Economist, “Schumpeter: The tech sell-off”, 3 Nov 2018, p. 64. *Fin Times*, “Big Tech’s dominance harms the US...” 28 Sep 2020, p.23.

Imperfectly Competitive Markets, continued ...

- ◆ Manu via digital printing: tailored-made vs mass production



Economist, “Wonderful widgets”, Technology Quarterly, 5 Sep 2015, p. 14.

Manufacturing involves use of components of all shapes/ sizes. The widgets perform the same job, but **1** was designed in the traditional manner by cutting, drilling sections and welding together, not by a combination of software and 3D printing. Widgets **2** + **3** were computer-analyzed to find optimal design (same strength from less material) which are 40% and 75% weight saving, respectively.

Many aircraft parts are already being 3D printed.