

New Technologies, Jobs, Growth and Development

Some remarks

François Bourguignon
Paris School of Economics

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- David Autor's nuanced view on what we learn from the past about employment and productivity gains
 - Will it be the same story with the forthcoming (??) revolution?
- No doubt on initial negative disequilibrating effects of technological change on employment ... and the convergence towards a new equilibrium
- Doubts about how long and how painful the transition will be.

Issues

- Nature of new jobs and what kind of restructuration of the labor force will be involved?
- Will part of the income effect of the technical revolution be absorbed by shorter working time or less participation?
- The crucial distributional dimensions of the transition
 - a) Distribution of the gains: rents vs. wages
"Who owns the robots ?"
 - b) More wage inequality
Lower wages in contracting jobs and higher wages in expanding ones
 - c) The need for enhanced redistribution and social assistance system – unemployment insurance, minimum income guarantee, retraining facilities, ..
 - d) The geographical dimension of the adjustment

Illustration: the slow acceleration of growth and the rise in inequality in the first industrial revolution

Table 3 Sources of Economic Growth
(Growth rates, per cent, per year)

	Capital Stock (1)	Labour Force (2)	Total Factor Inputs (3)	Output (GDP) (4)	Total Factor Productivity (5)
1700-1760	0.7	0.3	0.4	0.7	0.3
1760-1800	1.0	0.8	0.8	1.0	0.2
1801-1831	1.5	1.4	1.3	2.0	0.7
1831-1860	2.0	1.4	1.5	2.5	1.0

Source: Crafts [1], p.81. Note: Land is not shown separately, but is included in col. (3).

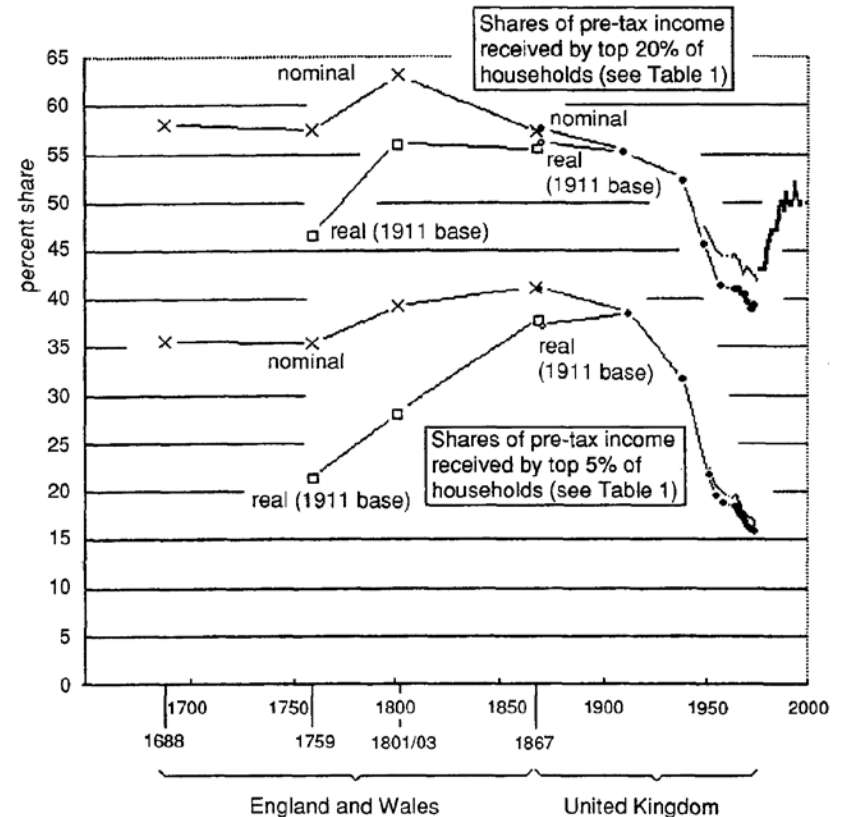


Fig. 1. Income inequality trends in the UK since 1688. (Sources: See text and the notes to Table 1.)

Where do we stand in the present (?) revolution?

- Difficulty to distinguish between technological change and globalization in recent evolution
- Decreasing labor share
- Job polarization
- Increase in wage inequality – although heterogeneous across countries
- Increasing precarity of employment in low-skill jobs

At the same time... apparent delay in picking up of growth

Implications for developing countries

- Automation likely to produce less effects in countries where labor is cheap
- But automation elsewhere likely to reduce the need for labor intensive production in low-income countries
 - Labor intensive industrialization not a development engine anymore
- Diffusion of 'mobile' technology in the developing world suggests there may be gains in the next steps of the technological evolution
 - Unclear they could unveil a new 'development engine'

Conclusion

BE PREPARED!