

# Still Seeking the New Paradigm

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# The Technology

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- 56% average annual growth rate in computational power
- cluster of related technologies: biotech, nanotech, robotics, materials
- IT has characteristics of general purpose technology

# GPTs: Three stages

- faster productivity growth in the innovating sector
- falling prices in this sector lead to capital deepening in other industries
- reorganisation of production around new capital goods through economy

# Policy context in 19th century

- financial innovations: limited liability, stockmarket, investment banking
- market context: anti-trust policy, national standardisation
- legal background: contract law, tort liability

# Policy context in 21st century?

- competition policy in network markets
- intellectual property
- globalisation (scope of market)
- accountancy
- structure and boundaries of the firm
- corporate governance

# Productivity trend: the services puzzle

- declines in measured productivity in some cases inconsistent with experience
- but are the growing sectors bound to be the low-productivity ones?
- the leisure society, consumption vs production
- time use
- productivity not a post-industrial concept
- quality vs quantity

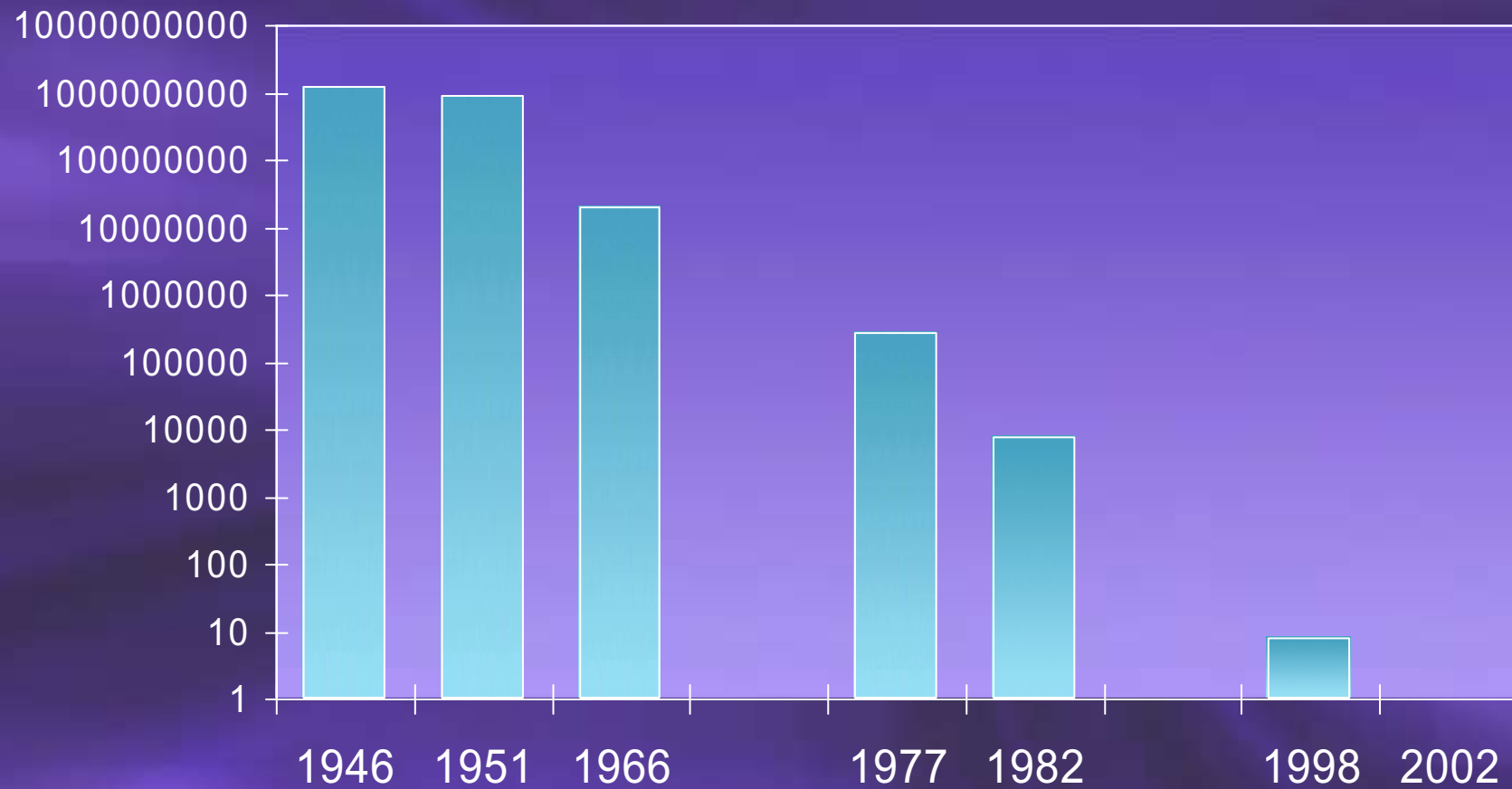
“Any time of fundamental technological change is likely to be a time when our concepts, our units of measurement, our framing of issues change. We are on a frontier, and frontiers develop frontier cultures and frontier ideologies.”

*Robert Shiller, forthcoming*

“An information age strangely lacking in information....”

# Cost of computer power

US\$ per mflop/s (log scale)



Source: Intel

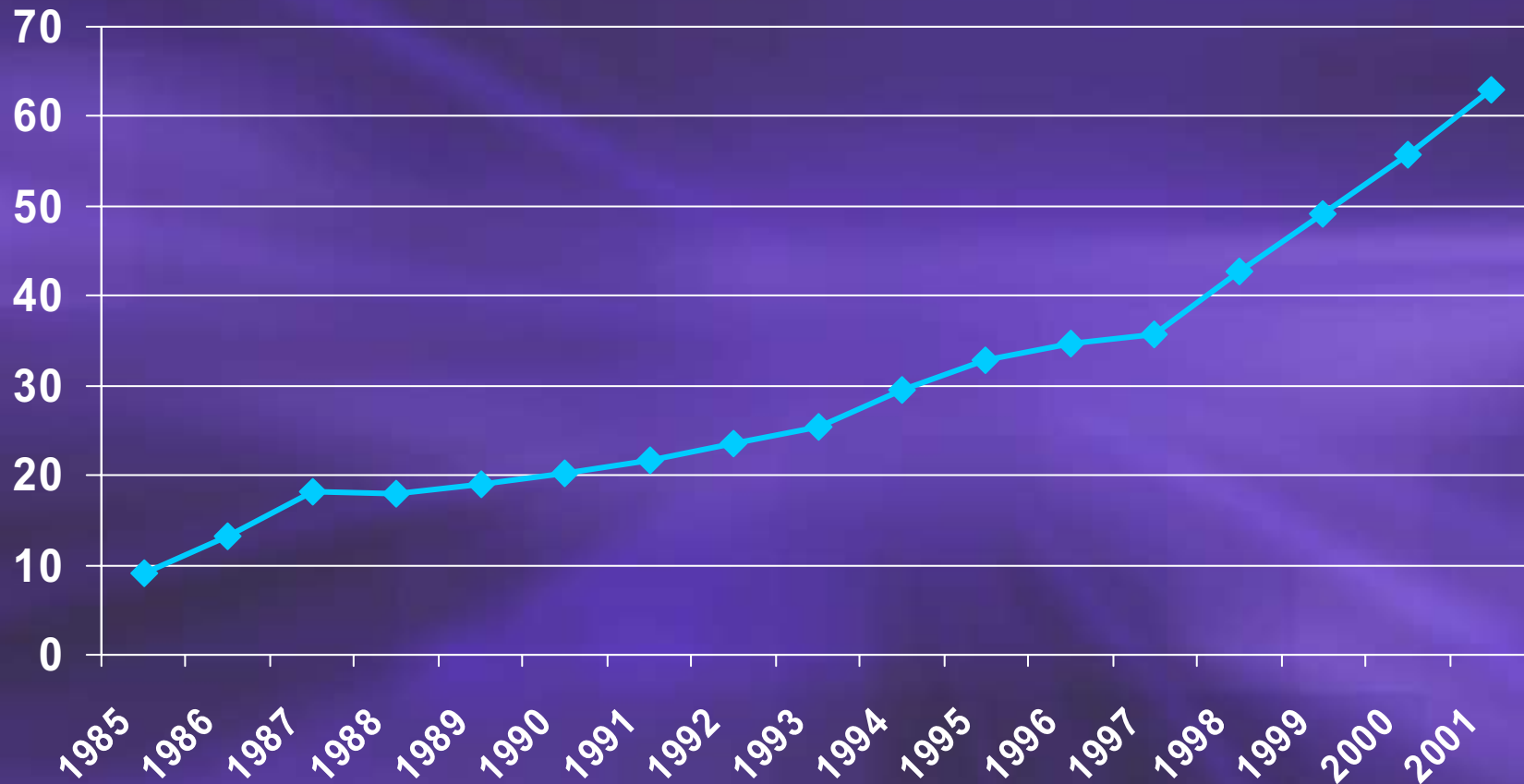
# Global manufacturing

Manufactures exports as share of manufacturing value added

	1890	1913	1960	1970	1980	1990	1999
FR	18.5	23.3	16.8	25.7	44.0	53.5	64.9
GY	22.7	29.2	24.6	31.3	48.5	57.8	94.3
UK	61.5	76.3	33.8	40.7	52.6	62.8	64.0
US	14.3	13.2	9.6	13.7	30.9	35.8	47.2

Source: OECD

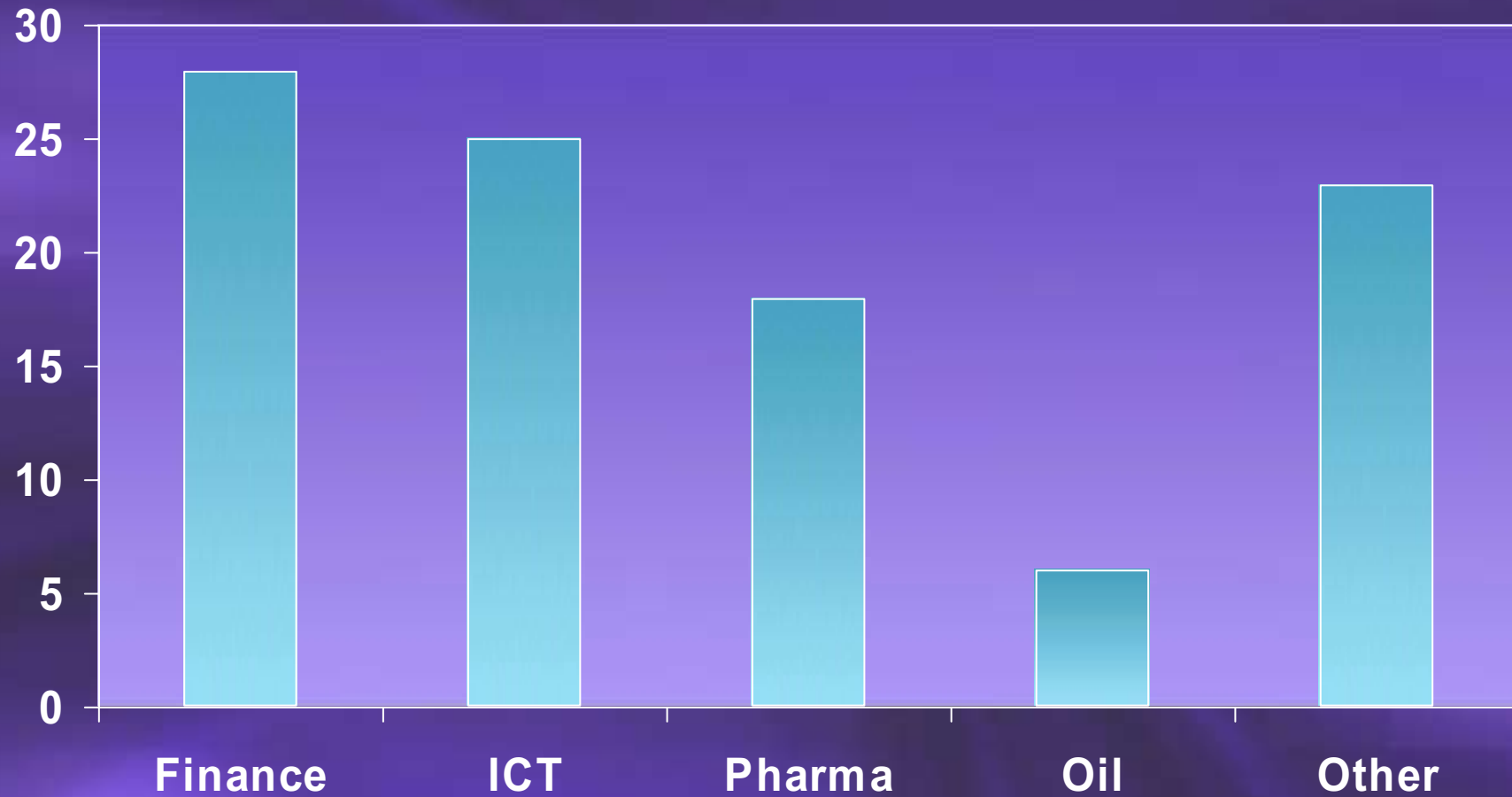
# Proportion of workforce using computers



Source: MGI

# Top 100 global companies, by sector

Ranked by market capitalization, 2001, FTSE 500 list



# Conclusions

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- what *has* changed?
- what we might like to know
- still seeking the new paradigm