



Chapter 8

Work and Wealth



Chapter Overview

- Introduction
- Automation and unemployment
- Workplace changes
- Globalization
- The digital divide
- The “winner-take-all society”
- Access to public colleges

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Introduction

- Information technology and automation affecting workplace
 - Increases in productivity
 - Globalization of job market
 - Organization of companies
 - Telework
 - Workplace monitoring
- Impacts of information technology on society
 - Digital divide
 - Winner-take-all effects

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Automation and Unemployment

- Automation and job destruction
- Automation and job creation
- Effects of increase in productivity

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Automation and Job Destruction

- Lost manufacturing jobs
 - 43 million jobs lost between 1979 and 1994
 - Manufacturing workers: 35% (1947) → 12% (2002)
- Lost white-collar jobs
 - Secretarial and clerical positions
 - Accountants and bookkeepers
 - Middle managers
- Juliet Schor: Work week got longer between 1979 and 1990

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Automation and Job Creation

- Automation lowers prices
- That increases demand for product
- It also increases real incomes
- Increasing demand for other products
- Increased demand → more jobs
- Number of manufacturing jobs worldwide is increasing
- Martin Carnoy: Workers today work less than workers 100 years ago

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Effects of Increase in Productivity

- Higher productivity → higher material standard of living
- Hours worked per year high in United States
 - Fewer hours worked in France or Germany
 - Fewer hours worked by ancient Greeks, Romans
 - Fewer hours worked by “stone age” societies
- Protestant work ethic
- Time versus possessions

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Rise of the Robots?

- Some experts suggest most jobs will be taken over by machines
- Artificial intelligence: field of computer science focusing on intelligent behavior by machines
- Rapid increases in microprocessor speeds have led to various successes in AI
- What will happen as computers continue to increase in speed?

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Notable Achievements in AI since 1995

- Minivan “drove” across USA in 1995
- Deep Blue defeated chess champion Gary Kasparov in 1997
- Honda’s ASIMO android can climb and descend stairs and respond to human gestures and postures
- Electrolux introduced robotic vacuum cleaner in 2001

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Moral Question Related to Robotics

- Is it wrong to create machines capable of making human labor obsolete?
- Will intelligent robots demoralize humanity?
- Is it wrong to work on an intelligent machine if it can't be guaranteed the machine will be benevolent toward humans?
- What if a malevolent human puts intelligent machines to an evil use?
- How will creative computers change our ideas about intellectual property?

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Workplace Changes

- Organizational changes
- Telework
- Temporary work
- Monitoring
- Multinational teams

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Organizational Changes

- Information technology integration into firms
 - Automating back office functions (e.g., payroll)
 - Improving manufacturing
 - Improving communication among business units
- Results
 - Flattened organizational structures
 - Eliminating transactional middlemen (supply-chain automation)

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Telework

- Employees work away from traditional place of work
- Examples
 - Home office
 - Commuting to a telecenter
 - Salespersons with no office
- About 20% of Americans do some telework

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Advantages of Telework

- Increases productivity
- Reduces absenteeism
- Improves morale
- Helps recruitment and retention of top employees
- Saves overhead
- Improves company resilience
- Helps environment
- Saves employees money

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Disadvantages of Telework

- Threatens managers' control and authority
- Makes face-to-face meetings impossible
- Sensitive information less secure
- Team meetings more difficult
- Teleworkers less visible
- Teleworkers "out of the loop"
- Isolation of teleworkers
- Teleworkers work longer hours for same pay

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Temporary Work

- Companies less committed to employees
- Lay-offs not taboo as they once were
- Companies hiring more temporary employees
 - Saves money on benefits
 - Makes it easier to downsize
- Long-term employment for one firm less common

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Monitoring

- 82% of companies monitor employees in some way
 - Purpose: Identify inappropriate use of company resources
 - Can also detect illegal activities
- Other uses of monitoring
 - Gauge productivity (10% of firms)
 - Improve productivity
 - Improve security

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Multinational Teams

- Software development teams in India since 1980s
- Advantages of multinational teams
 - Company has people on duty more hours per day
 - Cost savings
- Disadvantage of multinational teams
 - Poorer infrastructure in less developed countries

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Globalization

- Arguments for globalization
- Arguments against globalization
- Dot-com bust increases IT sector unemployment
- Foreign workers in the IT industry
- Foreign competition

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Arguments for Globalization

- Increases competition
- People in poorer countries deserve jobs, too
- It is a tried-and-true route for a poor country to become prosperous
- Global jobs reduce unrest and increase stability

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Arguments against Globalization

- Makes the United States subordinate to the World Trade Organization
- Forces American workers to compete with foreigners who do not get decent wages and benefits
- Accelerates exodus of manufacturing and white-collar jobs from United States
- Hurts workers in foreign countries

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Dot-Com Bust Increases IT Sector Unemployment

- Dot-com: Internet-related start-up company
- Early 2000: stock prices of dot-coms fell sharply
- Hundreds of dot-coms went out of business
- Half a million high-tech jobs lost

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Foreign Workers in the IT Industry

- Visas allow foreigners to work inside U.S.
- H1-B
 - Right to work up to six years
 - Company must show no qualified Americans available
 - Tens of thousands of H1-B visas issued despite dot-com bust
- L-1
 - Allows a company to transfer a worker from an overseas facility to the United States
 - Workers do not need to be paid the prevailing wage
 - Tens of thousands issued every year

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Foreign Competition

- IT companies in developing countries, particularly India and China, are increasingly capable
- IBM sold its PC division to Chinese company Lenovo in 2004
- IT outsourcing to India is growing rapidly
- Number of college students in China increasing rapidly
- ACM Collegiate Programming Contest provides evidence of global competition

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The Digital Divide

- Digital divide: some people have access to modern information technology while others do not
- Evidence of the digital divide
- Models of technological diffusion
- Critiques of the digital divide

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Evidence of the Digital Divide

- Global divide
 - Access higher in wealthy countries
 - Access higher where IT infrastructure good
 - Access higher where literacy higher
 - Access higher in English-speaking countries
 - Access higher where it is culturally valued
- Social divide
 - Access higher for young people
 - Access higher for well-educated people

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Models of Technological Diffusion

- Technological diffusion: rate at which a new technology is assimilated
 - Group A: highest socioeconomic status
 - Group B: middle socioeconomic status
 - Group C: lowest socioeconomic status
- Normalization model
 - Group A adopts first, then Group B, finally Group C
 - Eventually A use = B use = C use
- Stratification model
 - Group A adopts first, then Group B, finally Group C
 - A use > B use > C use forever

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Critiques of the Digital Divide

- DD talk suggests the difference between “haves” and “have nots” is simply about access
- DD talk puts everyone in two categories, but reality is a continuum
- DD implies lack of access leads to less advantaged social position, but maybe it is the other way around
- Internet is not the pinnacle of information technology

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The “Winner-Take-All Society”

- The winner-take-all phenomenon
- Harmful effects of winner-take-all
- Reducing winner-take-all effects

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The Winner-Take-All Phenomenon

- Winner-take-all: a few top performers have disproportionate share of wealth
- Causes
 - IT and efficient transportation systems
 - Network economies
 - Dominance of English language
 - Changing business norms

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Harmful Effects of Winner-Take-All

- Drawing some of most talented people into socially unproductive work
- Creating wasteful investment, consumption
- Concentrating a disproportionate share of best students in a few elite institutions
- Unfairly compensating those with just slightly inferior performance
- Harming our culture

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Reducing Winner-Take-All Effects

- Enacting laws limiting number of hours stores can remain open
- Allowing cooperative agreements among businesses
- Creating more progressive tax structures
- Implementing campaign finance reform

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Access to Public Colleges

- Effects of tuition increases
- Moral question
- Ethical analyses
 - Utilitarian
 - Kantian
 - Rawls's Principles of Justice

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Effects of Tuition Increases

- Tuition at public colleges rising much faster than inflation
- Tuition rising at faster rate than family incomes
- Smaller percentage of low-income families sending children to four-year colleges

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Moral Question

Should a state make a public college education available to all of its qualified high school graduates by funding the difference between the cost of the education and the financial resources of that person and his or her family?

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Utilitarian Analysis

- Cost
 - \$40,000 per student (est.)
- Benefits
 - Receive additional \$84,000 in taxes (est.)
 - Less likely to pay unemployment
 - Less likely to pay for incarceration
- Other factors
 - As more grads attend college, benefits less
 - Other good programs ask for state support
 - Social programs may have higher priority

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Kantian Analysis

- Perfect duty: duty you are obliged to fulfill in each instance
- Imperfect duty: duty you ought to fulfill in general, but not in every instance
- A state can do many good things with tax revenue
- It is not wrong for a state to prioritize and fund most important programs
- Providing universal access to a public college education is a good action, but not mandatory

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Analysis Using Rawls's Principles of Justice

- High degree of correlation between education level and annual salary
- Higher-paying jobs associated with positions of greater responsibility
- Without attending college, students from poorer families do not have fair and equal opportunity to achieve positions of responsibility in society
- Society ought to ensure that less well-off members have access to a public higher education

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