Work and Wealth

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based on slides by Bill Hurd
CS 225
How do Information Technologies change work?

- Globalization
  - Work moving to other countries
- Productivity and Automation
- Telework
- Paying for College
- Programmers: Hourly or salaried?
Where do our tax dollars go

- State of New Mexico wants to create a web-based system to automate the filing and filling of unemployment claims.
- No software companies in New Mexico bid to complete the job.
- A large number of US companies bid but outside the state of New Mexico.
New Mexico to India?

- Tata Consultancy Services (TCS), bid the job. Promised to complete the design and analysis in New Mexico, all coding the testing would be completed in India.
  - See: http://www.informationweek.com/story/IWK20030316S0003
- Tata would be lower cost than the US bidders
- Tata has experience doing these types systems for other states
- US and New Mexico unemployment rate is fairly high at the time of the bid
Who should get the job?

- New Mexico awarded the job to TCS
  - Justified as being the most efficient use of New Mexico tax dollars

- Is this the right decision?

- Would the answer be different if it was a private company awarding the contract instead of a government?
H1-B Visa’s

- Three year work permit.
- Allows citizens of foreign countries to work in the United States.
- Typically, a large number of these Visa’s given to technology workers.
- 65,000 H1-B’s given out in 2003 and 2004.
- Tech sector unemployment remains.
- Should we dissolve this program?
Productivity and Automation

- In 1947, 35% of American workers were in manufacturing. In 2002, 12%.
- Manufacturing output has doubled since 1970.
- Inflation adjusted household income feel slightly between 1979 and 1994
- Between 1970 and 1990 the average work per year increased by 163 hours
- From 1980 to 2003 ratio of CEO to production worker pay rose from 40:1 to 400:1
Telework

- Technology enabled:
  - Option open for more kinds of jobs

- Why?
  - Easier on employees
  - Reduce company overhead

- Why not?
  - Workers are isolated
  - Work longer hours for same pay
Telework

- HP’s internal IT division recently announced it was stopping telework
- Rationale: 85 data centers being consolidated into 6
  - Processes and policies will be “fluid” while consolidation is underway
- Other CIOs agreed this is appropriate action
  - See: http://www.computerworld.com/action/article.do?command=viewArticleBasic&articleId=111535
Should we work less?

- Many companies supply workers with cell phones, pagers and laptop computers
- Workers can be productive when they are away from the office
- Should we “disconnect” more?
- Can unemployment be lessened if we do?
CS: Expensive major

- Cost per student in a computer science major is much higher than the University at large
- Why?
- Should CS students pay a higher tuition?
Salaried/Hourly employees

- How are you paid:
  - Hourly: Paid for hours worked
  - Salaried: Fixed weekly pay

- Historical distinction based on type of work people are doing

- Production workers (hourly) versus management/decision workers (salaried)

- Each state has own rules regarding classification
Overlap has always existed with professions

- Lawyers has traditionally billed by the hour
- Lawyers also take cases in civil trials based on a percentage of the damage awarded
- Lawyers work for the State of Washington and a paid an annual salary
Software development

- Management and programmers have traditionally been paid as salaried employees.
- Some state and local governments pay programmers by the hour.
- Some companies pay software testers by the hour, some pay them a salary.
- Computer operations people have often been paid by the hour but not always.
Software development

- Do developers lose or gain as salaried employees?
- Do companies take advantages of salaried developers?
- Should developers unionize?
Futures?

- My own guesses:
  - Globalization
    - Probably unavoidable
    - Things tend to even out in long run
  - Issues: Transition, Fairness

- Productivity and Automation
  - More or fewer jobs?
  - How do we use the benefits?
More Futures

- Paying for college
  - A better educated populace is good
  - Public pays for universal education through high school
  - How much additional education should public pay for?
  - What is best use of tax dollars?
    - E.g. Education vs Roads vs National Defense vs …
  - What is the best strategy for allocating public education dollars?
And more futures

- Software development?
  - A professional? (Like a lawyer)
  - A factory worker?
  - Hollywood model?
    - Everyone is an independent contractor
    - New teams formed for each production