0 utsourcing

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Comparative Advantage

- Let's consider India and the United States
- Indian productivity:
 - English-language data entry: 10
 - Biotech research: 1
- U.S. productivity:
 - English-language data entry: 20
 - Biotech research: 5
- Price of biotech in term sofdata entry: 5

Comparative Advantage II

- Suppose India m oves 5 w orkers from biotech into data entry
- Suppose U S.m oves 1 w orker from data entry into biotech
- Total world production of biotech is unchanged...
- Total world production of data entry is up by 30...
- Conclusion: even though the U, S, is more
 productive than India at every job, it should—
 where possible—move people out of jobs where
 India has a comparative advantage.
 - It should get those products via trade.

W hat Has This to Dow ith Outsourcing?

- Outsourcing of IT Jobs Is Now Becoming Possible
 - Restricted by language com petence
- Outsourcing of IT Jobs Creates Enormous Gains from Trade
 - Buthow will these gains be distributed?
- Outsourcing of IT Jobs W ill Com e
 - Itw on'thave much of an effection the level of employment in the U ${\it S}$.
 - It is likely to have big effects on relative wages.

Say's Law

- Supply creates its own dem and?
- Nottrue in theory
- Job of the Federal Reserve to make Say's law true in practice.
- Nevertheless, outsourcing will lower the level of wages of those who find them selves in competition with workers in Bangalore or Beijing.

Downward Pressure on American Waqes

- In the 1970s, Japan began to export manufactures to the U.S. on a large scale.
- \bullet The then salary differential between the U S . and Japan was on the order of 2-1.
- That, plus bold innovations that gave Japanese firms higher efficiency, was enough to cause a substantial hollowing-out of American midwestern manufacturing.
- Realwages did not grow for a decade (while they had been growing at 3% peryear beforehand).

Comparing Japan to India

- Now consider the decade in the future—whenever it comes—when Indians and Chinese begin to export white-collar service work to America on a large scale.
- The salary differential between America and these "outsourcing" countries will be on the order of 51
- If a 2-1 differential can cause a reduction in wages relative to trend of 30% over a decade, a 5-1 differential might cause a reduction relative to trend of 60% over a decade. That's a big deal.

H istorical A nalogies

- Som eday—perhaps at the start of the next decade, perhaps at the start of the decade after that—it will become clear that computer and communications technologies have triggered as big a shift in the set of commodifies that can be traded across oceans as did the coming of the ironhulled ocean-going steam ship a century and a half ago.
- The iron-hulled ocean-going steam ship meant that for the first time not just precious goods but staple agricultural and industrial commodities—wheat, wool, furniture, rubber, machinery, and so forth—could be made on one continent and profitably shipped to another.

Historical Analogies II

- Certainly within fifteen years it will be clear that computer-and-communications technologies have done the same thing for a very large chunk of largely white-collar service-sector occupations.
- In fact, the "outsourcing" of white-collarwork is likely to have a larger relative in pacton the twenty-first century economy than the coming of the iron-hulled ocean-going steam ship had on the late nineteenth.