

Outsourcing: Is the Third Industrial Revolution Really Around the Corner?

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Introduction

- ☛ The Employment Argument for Protection
 - Goods Imports and Job Losses
 - Traditional Services Imports and No Job Losses
 - “Outsourcing” and Job Losses
- ☛ The Gains from Trade
 - Is Outsourcing Different than Traditional Goods and Services Trade?
 - Does it Justify protection?

The Phenomenon and Terminology

☛ The phenomenon at issue

- Importing goods previously produced at home?
- Shift in manufacturing activity from home to abroad to serve home or foreign markets?
- Importing new goods from abroad?
- Locating new manufacturing abroad to serve home or foreign markets?
- Buying services abroad at arm's length?

It is the Buying of Services Abroad at Arm's Length: WTO Mode 1 Services

"One facet of increased services trade is the increased use of *offshore outsourcing* in which a company relocates labor-intensive service industry functions to another country. For example, a U.S. firm might use a call center in India to handle customer service-related questions. The principal novelty of outsourcing services is the means by which foreign purchases are delivered. Whereas imported goods might arrive by ship, outsourced services are often delivered using telephone lines or the Internet. The basic economic forces behind the transactions are the same, however. When a good or service is produced more cheaply abroad, it makes more sense to import it than to make or provide it domestically." (*Economic Report of the President, 2004, p. 229*)

The Famous Press Statement by Gregory Mankiw, Chair, President's Economic Council

"When we talk about outsourcing, outsourcing is just a new way of doing international trade. We're very used to goods being produced abroad and being shipped here on ships or planes. What we're not used to is services being produced abroad and being sent here over the Internet or telephone wires.

"But does it matter from an economic standpoint whether values of items produced abroad come on planes and ships or over fiber optic cables? Well, no, the economics is basically the same. More things are tradable than were tradable in the past, and that's a good thing."

Trade Economics and WTO Define Services Trade by Mode of Delivery

- Mode 1: The provider and the recipient remain in their respective locations (arm's length provision)
- Mode 2: The recipient moves to the location of the provider (tourism, study abroad)
- Mode 3: The provider moves to the location of the recipient through commercial presence (banking, insurance)
- Mode 4: The provider moves to the location of the recipient through the movement of the natural persons (computer programmers, construction workers)

So what is outsourcing about?

- Services trade via Mode 1—this is the definition used in the present paper
- Some prefer to call the phenomenon “offshoring”—I use the two terms interchangeably in the paper
- Some prefer to include in the definition all trade in services (regardless of the mode)
- Some include in the definition all transactions *by firms* that imply a *loss of jobs* (directly or indirectly, to a foreign country (National Academy of Public Administration))

Jobs Outsourced To-date: John McCarthy (2004) of Forrester Research, Inc.

- ☛ 315,000 jobs offshored in 2003 and predicted to cumulatively rise to 830,000 in 2005 and 3.4 million in 2015.
- ☛ In contrast, the U.S. economy destroyed and created 30 million jobs in 2003.
- ☛ Total number of jobs in the nine categories McCarthy identified as subject to offshoring were 56.7 million in 2002.

Jobs Outsourced To-date: Other Sources

- Bhagwati, Panagariya and Srinivasan (JEP 2004): Using supply side data from India, Philippines and other outsourcing locations, the figure is less than 100,000 a year
- Mankiw and Swagel (2006): Business, Professional, and Technical Services (BPT) imports were \$40.7 billion and exports \$75 billion

Additional Evidence/Reasons why the Numbers are Small

- The Bureau of Labor Statistics (BLS) identifies firms that layoff more than 50 workers for more than 30 days. In the six quarters beginning January 2004, only 1.6% of these layoffs were due to relocation abroad. These relocations included manufacturing as well as services
- Mode 1 services imports help preserve or create jobs in the United States. Some years ago, the Information Management Consultants of Reston, Virginia considered undertaking a specialized software project. It concluded that the project was viable only if its Indian subsidiary did the coding work. By doing so, it was able to employ six engineers in the United States for each engineer in India.

Alan Blinder: Three Industrial Revolutions in the United States

- First Industrial Revolution. In 1810: 84% of the U.S. labor force in agriculture and 3% in industry. By 1960: share of industry up to 25% and of agriculture down to 8%.
- Second Industrial Revolution. By 2004, the share of services up to 82% and of industry and agriculture down to 16% and 2%, respectively.
- Third Industrial Revolution (currently under way, according to Blinder): Massive shift from impersonal (Mode 1) to personal (Modes 2-4) services predicted.

The Third Industrial Revolution

- Massive offshoring of “‘impersonal services’—that is, services that can be delivered electronically over long distances with little or no degradation in quality.”
- Shift of the U.S. workforce into “personal services”—that is, services that cannot be delivered electronically without significant deterioration in quality and require face-to-face contact
- “Americans will experience a nasty transition, lasting for decades, in which not just millions but tens of millions of jobs are lost to offshoring.”

Three Steps in Blinder's Alarmist Thesis—Step 1

Continued Expansion of Offshoring

- Advances in the ICT to continue turning personal services into impersonal services
- India & China to continue expanding the supply of impersonal services
- Baumol's Disease to drive the demand away from personal to impersonal services (low or no productivity growth in personal relative to impersonal services will make the former progressively expensive and cause demand to shift in favor of the latter)

Three Steps in Blinder's Alarmist Thesis—Step 2

- Eventually the number of jobs offshored will be huge.
 - Based on the characteristics of jobs of approximately 800 occupations in the Bureau of Labor Statistics (BLS) Standard Occupational Classification (SOC) description, Blinder develops a subjective ranking of most offshorable to least offshorable jobs.
 - From this ranking, he concludes that as many as 30 to 40 million of the current jobs will eventually become capable of being offshored.
 - Blinder admits that there is no way of knowing the actual number of jobs that will be offshored.

Three Steps in Blinder's Alarmist Thesis—Step 3

- Major adjustment problems likely.
 - Offshoring will lead to greater increase in the gross job destruction rate than job creation rate. This will raise the natural rate of unemployment during the transition.
 - Job mismatch will lead to structural unemployment. Many million Americans may be forced out of their impersonal services employment into something else
 - Offshoring will raise imports in relation to exports and lead to deficient aggregate demand and Keynesian unemployment.
 - Skilled wages will suffer due to competition from India and China

Critique of Blinder: 1

- ☛ Numbers do not add up to a tempest
 - “I am not—repeat, *not*—claiming that 30-40 million Americans will lose their jobs because of offshoring. Rather, this is my rough estimate of the number of jobs that will face *potential* foreign competition. Only a fraction of them will actually be moved offshore. In addition, this transition will take some time—perhaps decades.” [Emphasis in the original.]
 - So what fraction of the 30 to 40 million jobs he expects to be actually offshored: 4/5ths, 1/2 or just 1/4th?
 - How long will be the transition: three decades or 15?
 - If we are talking about half of the 30 to 40 million jobs offshored over 60 years, we get approximately 250,000 to 340,000 jobs offshored per year on the average. This is not beyond business as usual for the United States

Critique of Blinder: 2

- Are Large Numbers Likely? Going by Blinder's (2007, p. 14) own description, technological change in the ICT has progressed at a "dizzying" pace in recent years. Yet, the realized level of offshoring has been tiny. factors that have inhibited a rapid expansion of offshoring to-date will continue to inhibit it in the future:
 - Buyer-seller contact
 - Regulatory regime
 - Supply side constraint

Buyer-seller contact

- Once we get past customized computer programming and consider more sophisticated services such as systems integration, managed services, R&D and product development, the buyer-seller contact becomes crucial.
- Since the buyers of these services are in the rich countries, this gives an immediate advantage to rich country producers
- Amar Bhide's forthcoming book that interviews CEOs of 105 Venture Capital backed firms. One CEO says:
"All of our customers are now based in the US, and it's very important that the people who are developing our software are in regular communication with our customers, and not just by talking with them on the telephone. They need to be visiting the customer's physical locations, see how the software is being used, talk with the end users, take that knowledge back to the company, and use it to design new features and capabilities. I just didn't see how that could be effectively done overseas."

Regulatory Barriers

- The outsourcing of X-ray readings: Levy and Goelman (2005) find that the phenomenon is confined to the so-called “nighthawk” radiology services sought during night by hospitals that need a small number of X-Rays read.
- All large hospitals providing nighthawk services are located in the United States. All non-hospital firms providing nighthawk services are also headquartered in the United States but have radiologists offshore in Bangalore, Barcelona, Sydney and Tel Aviv.
- They must be board-certified, licensed to practice in the state in which the hospital seeking the service is located and credentialed in the hospital.

Supply-side Constraints

- ☛ India is able to offer some low-end services cheaply
- ☛ Skills for high-end services not easily available
- ☛ Economics as an example: Very difficult to find collaborators at the top end. The same names appear repeatedly on all lists.

Critique of Blinder: 3

What about onshoring?

- The U.S. cannot end up with comparative disadvantage in everything
- The United States has continued to be highly competitive in high-end manufacturing and has emerged as a large exporter of services, both personal and impersonal. Why will this not remain the case in the future?
- As personal services turn into impersonal services, at the high end of quality spectrum, the U.S. will be an exporter of them.

Critique of Blinder: 4

- A Quibble on the Application of Baumol's Disease
 - It was originally stated with respect to manufacturing being traded and subject to high productivity growth
 - But many services do exhibit high-productivity growth while many are traded
 - Likewise, where is the evidence that personal services are systematically subject to lower productivity growth than impersonal services? Banking, insurance, medical and educational services are all subject to high productivity growth
 - With personal services continuously turning into impersonal services, how can we be sure that the former are subject to low productivity growth relative to the latter?

Critique of Blinder: 5

- ☛ In a long transition, India and China will themselves become rich
 - This will turn trade in services also intra-industry type rather than inter-industry type. Two-way trade in similar quality impersonal services will emerge
 - Pressure on the wages will disappear over time since the wages in India and China will catch up with those in the rich countries

India as an Offshore Source of Skilled Services

- Table 1 shows software exports of India. growth rate of total software exports has averaged 31.1 percent between 2001-02 and 2006-07.
- But absolute level is still small. Even counting the entire value of exports as value added, they represented only 2.9% of the GDP in 2005-06.
- Employment: 1.6 million of which 1.2 million serve the export market.

Year	IT Services	ITES-BPO	Total Software
1	2	3	4 (=2+3)
1995-96	0.8		0.8
1996-97	1.1		1.1
1997-98	1.8		1.8
1998-99	2.6		2.6
1999-00	3.4	0.6	4.0
2000-01	5.3	0.9	6.2
2001-02	6.2	1.5	7.6
2002-03	7.0	2.5	9.5
2003-04	9.2	3.6	12.8
2004-05	13.1	4.6	17.7
2005-06	17.3	6.3	23.6
2006-07	22.9	8.4	31.3

Table 1: Software Exports of India (\$Billion)

Rapid Salary Increases by Occupation

Employee group	2004	2005	2006
Senior/Top Management	11.3	13.90%	13.90%
Middle Management	11.9	14.50%	15%
Professional/Supervisor/Technical	12.2	15.40%	16%
Clerical/Support	11.1	13.30%	13.50%
Manual	9.5	11.40%	11.90%

Annual Salary increases by Industry

Industry	2006
Insurance	17.10%
Banking & Financial Services	17%
IT Enabled Services	15.60%
Information Technology	15.40%
Telecommunication	15.10%
Healthcare and Medical Products	12%
Not-for-Profit	11%

Very High Turnover Rates of Employees in the IT Industry

- A story in the *Economist* (2004) notes, "Even the best call-center operators in India lose about half their employees each year (but then turnover in British call-centers is about 70%). One Convergys job advertisement in the *Times of India* promises to make prospective call-center employees 'a prime target of all the dons of the industry. You will be hunted down, with almost a king's ransom on your head.'"

Woes of the Higher Education System in India

- Gross enrolment ratio in higher education rose from 10 in 2000 to 12 in 2004 in India. In China, this ratio rose from 6 percent in 1999 to 13 percent in 2002 and to 19 percent in 2004.
- Once we get past the top educational institutions such as the Indian Institutes of Technology (IITs) and Indian Institutes of Management (IIMs), the quality of education available declines rapidly.
- A highly centralized system under the UGC
- Public expenditure on higher education is 0.6% of the GDP
- Entry of private universities virtually impossible
- Only private colleges are keeping the system going
- Students rapidly exiting the system to the U.S., U.K., Canada and Australia

Concluding Remarks

- ☛ The number of jobs outsourced to-date is small
- ☛ The thesis advanced by Blinder of a tempest about to hit the United States is less than credible
- ☛ On the supply side, India faces serious challenges in sustaining the growth of its IT industry.