



A look at outsourcing offshore

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Abstract

Purpose – Most debates concerning outsourcing offshore in recent years have been politically oriented and based on casual observations. The purpose of this paper is to provide a clear economic understanding of the subject and to present offshoring in the context of globalization and in a more integrated world economy.

Design/methodology/approach – This paper is designed in a coherent way to provide the reader with an overview, scope, benefits, and costs of outsourcing offshore and suggest some appropriate policies to navigate in a globally interdependent and competitive environment.

Findings – Outsourcing offshore is largely irreversible and the USA or other countries must invest heavily in ways to boost domestic workers' productivity and to manage workers' transitions to more competitive employment. This paper also provides evidence that, in the long run, outsourcing offshore is beneficial for the economy as a whole.

Originality/value – This paper delineates that outsourcing offshore is consistent with the theory of comparative advantage and value maximizing objectives of firms. It also provides insights for politicians and casual observers about critical aspects of outsourcing offshore.

Keywords Outsourcing, Globalization, Competitive advantage

Paper type General review

1. Introduction

Outsourcing is conducting certain business functions at a different location or contracting those functions out to another firm. When those business functions are done overseas, it is called outsourcing offshore. A firm can either move a function or facility to an overseas location or it can contract with an overseas firm. In either case, jobs are shifted to the offshore location.

Outsourcing, to a large extent, is an irreversible change, largely a natural result of market forces, and may intensify in the future. Regulatory attempts to curtail outsourcing may have a limited, short-term impact and could be counter-productive. Regulatory attempts also may put the US companies at a competitive disadvantage *vis-à-vis* companies in other countries that are pursuing outsourcing. Hence, outsourcing offshore by the US companies allows these organizations to compete with foreign businesses.

Historically, any major technological advance brings about structural changes in the economy. These changes can be painful for certain segments of the population, especially during the short run adjustment period. In the long run, these technological changes normally result in more and better paying jobs, which are beneficial for the economy as a whole. For example, the improvement of transportation and the birth of the railway in the nineteenth century changed the scope of the product market from local to national. The consequences of this change were increased competition and elimination of many small, local businesses that could not compete with large companies. This, in turn, led to the creation and expansion of national labor unions to defend workers against unilateral wage reduction and other labor related issues (Marshall and Briggs, 1989).



In the same way, the rapid expansion of globalization is largely the result of advances in computer and communications technologies. These technologies led to the creation of the internet and other telecommunication networks which blur national boundaries when it comes to the production of certain goods and services.

The information revolution, by changing the structure of the economy, makes more global and integrated operations possible. Multinational corporations are gradually replacing domestic companies. Advancements in information technology change the geographic landscape of business by making it possible for organizations to create virtual offices in strategic locations anywhere in the world where a large pool of lower cost, skilled labor is available, the business environment is friendly, and production and supply networks are present. Availability of lower cost labor and other less expensive inputs, such as land, make the relocation of labor-intensive products and services to other countries attractive and consistent with the theory of comparative advantage. Trade liberalization, declining foreign direct investment barriers, and the 1990s deregulation of financial services, transportation, telecommunications, and professional services by developed and some developing countries lowered telecommunications and transportation costs, enabled the growth of outsourcing offshore (Garner, 2004). Widespread commoditization of many products and services, such as customer services, programming, some accounting services, financial services, and some medical services has also promoted growth of offshoring (Tarbouni, 2004). Increased competition, stockholder pressure for higher returns, and outsourcing by the US competitors are other stimuli for the US companies to outsource, driving down production costs and improving product quality to compete effectively in the world markets (Prola, 2004). The sharp decline in the real costs of information processing and communications in the past 20 years also make it economically feasible for a firm to create and manage a globally dispersed production system, further increasing offshoring and globalization of production and services (Hill, 2007).

Although formal and informal barriers to trade and foreign direct investment persist and companies are subject to transportation costs and economic and political risks, all evidence indicates globalization and outsourcing has been increasing and will continue to do so in the future. Hence, many firms and multinational corporations are merely responding in an efficient manner to changing conditions in their operating environment and are basing a portion of production at the optimal location for certain activities (Hill, 2007).

2. Scope of outsourcing offshore

Historically, offshoring was primarily confined to jobs in the manufacturing sector. For example, some textile jobs moved to Latin America in the 1970s and 1980s, and then to China in the 1990s (Gray, 2004). Also, beginning in the 1970s many US computer and telecommunication equipment businesses started outsourcing manufacturing of electronic components such as circuit boards and semiconductors across southeast Asia (Malaysia, Thailand, and Singapore) to take advantage of low production cost, favorable tax conditions, and adequate infrastructure in those countries (Hill, 2007; Ferdows, 1997).

In recent years, as a result of technological advances, lower transportation costs, increased availability of skilled workers, and favorable reforms in developing nations, the scope of offshoring has increased considerably, especially in the service areas, and it now includes large functional areas of business in both skilled and professional occupations.

Computer and electronic manufacturing, information industries, and professional and business services are the most affected sectors of the economy. Some examples of outsourced functions are finance, accounting (tax preparation), administration, human resources, sales, supply chain management, customer service, information technology, health care services, research and development, design and engineering, telephone call centers, insurance claim processing, and legal transcription services.

Information technology projects are leading the way for outsourcing. Most of these projects are performed in India, Russia, China, Eastern European countries, Israel, Ireland, Malaysia, and the Philippines, among others (Prola, 2004). Four types of jobs are the most vulnerable for outsourcing:

- (1) Labor-intensive jobs, like telephone call centers and legal transcription services.
- (2) Information-related jobs, such as collecting, manipulating, and organizing information like accounting, billing, and payrolls that technological advances make outsourcing feasible and cost effective.
- (3) Codifiable jobs, when jobs can be reduced to a routine set of instruction and require less training, like answering routine customer inquiries.
- (4) High transparency jobs, when information to be exchanged between the service provider and the customers is easy to measure and to verify, like a company's financial ratio analysis (Garner, 2004).

In terms of the number of jobs moved offshore, many predictions are based on experts' judgments and vary depending on underlying assumptions. In 2003, the estimated number of US service jobs moved offshore was 315,300, and for 2004 it was 536,500 (Cummins, 2004). According to Forrester Research Predictions, about 3,314,000 workers are expected to lose their jobs to offshoring by the year 2015 (Tarbouni, 2004). McCarthy (2004) believes the pace of outsourcing will increase. He estimates job losses of over 300,000 per year and a cumulative loss of 3.4 million jobs by 2015, representing \$151 billion in wages. Fortune 500 companies like Amazon.com, General Motors, Dell, American Express, General Electric, and many others, as well as a range of more moderately sized firms, have already offshored millions of jobs overseas. It is estimated that up to 25 percent of traditional information technology jobs will be outsourced to developing countries by 2010 (Ball *et al.*, 2006). According to Bardhan and Kroll (2003), about 14 million white-collar US jobs are at risk of outsourcing.

The USA is not the only country faced with outsourcing issues. By 2008, it is estimated that 730,000 jobs will be outsourced from Western Europe, and 400,000 jobs from Japan will be moved overseas (Garner, 2004). In 2005, about 400,000 US individual and corporate tax returns were done in India. This number was 200,000 in 2004 and only about 1,000 in 2002 (Hill, 2007; Ball *et al.*, 2006). Today Asian contract manufacturers and independent design houses have become part of the production process almost in every technological device, from cell phones, laptops, and high-definition televisions to music players and digital cameras. Companies like Dell, Motorola, Philips, and many others are purchasing complete designs of some digital devices from these Asian developers (Engardio *et al.*, 2006). Pharmaceutical companies such as Glaxo Smith Kline, and Eli Lilly are partnering with Asian biotech research companies to cut the cost of bringing new drugs to market. Boeing is teaming up with India's HCL Technologies to co-develop software for its 7E7 Dreamliner jet, which

includes everything from the navigation systems and landing gear to the cockpit controls. Most of the leading western companies are adapting a new model of innovation that employs global networks of partners. These may include US chipmakers, Taiwanese engineers, Indian software developers, and Chinese factories (Engardio *et al.*, 2006). The main purpose of this effort is to stay competitive by cutting costs, improving quality, and getting new products to market faster. Development of these foreign factories is now viewed as globally dispersed strategic centers, consistent with the concept of transnational strategy theory. This theory states a firm must have a plan that exploits experience-based cost and location economies. The heart of this strategy is the notion that valuable knowledge does not reside just in a firm's domestic operation; it may also be found in its foreign subsidiaries and partners (Hill, 2007).

3. Benefits of outsourcing offshore

Producers benefit from outsourcing by gains in productivity, in a greater ability to focus on core business by letting support functions be done in other countries, in better quality products at lower costs, and in a larger skilled labor pool, especially in the information technology areas (Prola, 2004).

In the long run, outsourcing may increase the US productivity by shifting domestic resources from less productive to more productive lines of production, where real output per hour is higher. International trade also improves the US economy because foreign competition will compel US firms to innovate, develop new products, and improve their management techniques (Edwards, 1998). For example, for most services, India provides excellent quality combined with 25-50 percent savings after assessing all relevant constraints of outsourcing. For many projects, a programmer in Bangalore, India, paid \$10,000 per year, can perform the same or better work as a programmer paid \$60,000 per year in Silicon Valley (Peng, 2006). In addition to lower labor and land costs, US firms, by offshoring proportions of their business functions, avoid paying higher health care insurance and other job-related benefits. Therefore, shifting labor-intensive services to other countries is consistent with comparative advantage theory.

Outsourcing offshore allows firms to realize location economies by dispersing individual value creation activities to those locations around the world where they can be performed most efficiently and effectively. Firms that pursue this strategy can lower their costs of production and achieve a low-cost market position. They can also differentiate their product offerings from their competitors. In theory, when a firm realizes location economies by dispersing each of its value creation activities to its optimal location, it should have a competitive advantage *vis-à-vis* a firm that bases all of its value creation activities at a single location. Therefore, in today's highly competitive environment, this kind of strategy is an imperative and a matter of survival (Hill, 2007). Mann estimated the impact of trade and global production on lower prices and higher productivity in the hardware industry alone added \$230 billion to the US gross domestic product between 1995 and 2002 (Mann, 2003).

Outsourcing will provide opportunities for firms to become familiar with cultures and consumption patterns of people in other countries and to establish networks with businesses in those countries, which can provide comparative advantages for these firms to expand their exports to other countries. Outsourcing also helps other countries grow and become customers of US goods and services. For example, India, with a large

and rapidly growing middle class population, can be a great opportunity for US firms to enter or expand their exports (Malik, 2004). US firms are also tapping into a new knowledge base, one that may provide ideas and opportunities to improve business processes (Poole, 2004). Hence, outsourcing offshore, in some cases, can enhance the quality of products and improve competitiveness due to availability of specialized talents in other countries. Consider the Boeing Company, for example, which outsources the production of parts for the fuselage, doors, and wings to Japanese suppliers; the doors for the nose landing gears to a supplier in Singapore; and wing flaps to suppliers in Italy. One of Boeing's main rationale for outsourcing so much production to foreign suppliers is these suppliers are the best in the world at their particular activity. Hence, because of the high quality of their parts, a global web of suppliers leads to a better final product which enhances the chances of Boeing to be more competitive relative to its rival Airbus industries. Boeing's action is consistent with the competitive strategy and rivalry theory of international investment (Hill, 2007).

Outsourcing to reduce costs of production leads to higher profits for shareholders and reduces companies' costs. This allows firms to expand their business or invest in new lines of production. These investments may create new jobs and goods and services for consumers. These savings also may be invested in R&D and training of employees that can increase the pace of innovation and productivity growth. In the long run, this improves the standard of living for Americans and US competitiveness in the world markets.

Offshoring also reduces the shortage of certain skills in the United States. For instance, demand for radiologists is reported to be growing twice as fast as the supply of radiologists from US medical schools. To overcome this shortage, some hospitals in the USA (Massachusetts General is one example) are beaming images over the internet to India where radiologists interpret these images. Because an Indian radiologist is paid about one-tenth of his or her US counterpart, this also reduces costs of procedures (Hill, 2007). Although regulations, personal preferences, and practical considerations may prevent widespread offshoring of health care services, most experts believe the trends will continue and a large percentage of medical services will be offshored overseas. About 170,000 foreigners visited India in 2004 for different treatments and this trend is predicted to increase by 15 percent per year for the next several years (Hill, 2007).

Time zone differences are other benefits for American firms, making the workday a 24-hour schedule. For example, Lucent Technologies has established a laboratory in India that allows Lucent's employees to work around the clock. When employees in the USA finish their shift in the evening, co-workers in India start work on projects. As their workday ends, those projects return to USA co-workers in a continuous daily cycle (Gray, 2004).

Because of the lower offshore production costs, prices of goods and services will be lower. Lower prices may help to moderate inflationary pressures and lead to more consumption by American consumers. Lower prices also make US goods and services more competitive in world markets, thereby increasing US exports. Increasing consumption and exports, in turn, will stimulate the USA's economy and will create new and better jobs. This is consistent with the economic theory that outsourcing, like any other increases in international trade, can improve the average purchasing power of Americans (Garner, 2004).

An example of the benefits of outsourcing is Apollo Hospitals, India's inpatient care and other medical service provider that treated over 60,000 foreign patients in 2003. Apollo also provided clinical trial services for companies such as Pfizer, and Eli Lilly and Co. and remotely evaluated X-rays and CAT scans for many outlets. Apollo's relatively inexpensive medical services have benefited patients from numerous countries. For example, Apollo offers cardiac surgery for about \$4,000, compared to at least \$30,000 in the USA (Solomon, 2004).

The US economy benefits from "insourcing" by foreign-owned companies that outsource jobs to the USA. US subsidiaries of foreign companies employ over 6.4 million workers nationwide and, on average, pay 19 percent higher wages than US companies (McIernon, 2004). Some examples of companies insourcing jobs to the USA are Sodexho, Nestle, Siemens, Turck, Permanc, BMW, among about a thousand others.

Another benefit of outsourcing is that costs savings by offshoring allow many companies to expand their operations within the USA. As Feinberg and Phillips state:

There's an assumption that there is a substitution effect – that more jobs overseas means fewer jobs in the United States, in fact we find just the opposite. When US-based multi-national corporations have more attractive growth opportunities in their overseas subsidiaries, they experience higher growth in the parent company in the US (Feinberg and Phillips, 2004, p. 2).

Therefore, outsourcing is not necessarily a net loss game, in the sense that when an American company hires a worker abroad, one American worker loses a job. Evidence shows that when firms expand their operation abroad they may hire other workers at home to complement the increased level of foreign labor.

Companies in the USA, also modify the scope of their domestic activities placing more emphasis on higher value-added activities at home and offshoring lower skill positions overseas. By shifting some of their production to lower cost locations overseas, firms can lower prices in the USA. This will increase the purchasing power of the American consumer, enhancing their spending and creating more and better paying jobs (Ball *et al.*, 2006). Therefore, globalization and outsourcing changes the world economy into more integrated and dynamic enterprise which will result in more competition, efficiency, and better and more jobs. At the same time, such an economy should result in a greater quantity and variety of goods and services for consumers with lower prices and better quality (Letizia, 2004).

4. Negative effects of outsourcing offshore

One of the undesirable consequences of outsourcing is that American workers may need retraining to stay in the labor pool. In fact, popular sentiment is that when corporations such as IBM, Dell, City Group, and hundreds of others are offshoring services and other operational activities to lower cost countries, they are exporting American jobs and contributing to higher job loss and lower standards of living in the USA (Hill, 2007). Recent outsourcing of jobs includes a large number of both blue and white-collar jobs. Although economic theory suggests that international trade, which includes outsourcing, will not reduce the USA's production and employment in the long run, in the short run those workers losing their jobs to offshoring may have to relocate to other states or move to other industries where jobs are available. They also often require retraining to be suitable for jobs. This retraining and retooling can be difficult for less skilled, less educated or older workers. This group of workers, even when reemployed, may lose more than 30 percent of their earnings. Earnings losses

rise with previous job tenure and age but are less for more educated workers (Kletzer, 2001). In fact, outsourcing may force many American workers into frequent career changes and retraining in order to compete in a global marketplace.

Outsourcing will also put downward pressures on domestic wages, especially in the sectors of the economy subject to competition from foreign labor. This depressing effect of outsourcing on wages will reduce workers' earnings, but it may benefit businesses and consumers through increased profits and lower prices. Critics of outsourcing argue that the decline in the wage rates of unskilled workers relative to more educated and highly skilled workers in the USA has been caused by offshoring of manufacturing and service jobs to lower cost countries. Consequently, the reduced demand for less skilled workers in the labor market puts downward pressures on these workers' compensations.

According to the standard models of international trade, international capital mobility and globalization will narrow the wage differences between the USA and the rest of the world. It also will widen the difference between wages of skilled and unskilled workers within the USA. These theories also predict that US manufacturing sectors, which are heavily dependent on low-skilled workers, will shrink as a result of increased integration with developing countries that have abundant low-skilled labor force (Sacks and Shatz, 1994).

Yet many economists do not accept conclusions of standard theories and believe that economies of scale due to globalization and the dynamic gains in productivity from competition and innovation because of a more integrated world economy could more than compensate for the wage-reducing effects of trade liberalization predicted in the standard models (Bhagwati and Dehejia, 1994). At the same time, research in recent years has indicated the apparent decline in real wage rates of unskilled workers has mainly been caused by a technology-driven shift within advanced economies like the USA toward jobs that demand highly educated and skilled workers. This increased demand for highly skilled workers has increased their wages relative to the wages of less skilled workers (Cairneross, 1999). Furthermore, the researchers argue that international trade, which includes outsourcing, is too small relative to the aggregate economy of the USA to possibly account for any dramatic changes in employment, wages, or income distribution (Krugman, 1994). Finally, Belman and Lee (1996), after evaluating the research concerning the increasing wage gap between skilled and less skilled workers and declining employment in the US manufacturing sector concluded that multiple factors such as technological change, increasing flow of foreign direct investment to developing countries with abundant cheap resources, and movement of jobs out of manufacturing into lower-wage service sectors all have contributed to an increasing real wage gap between highly skilled and less skilled workers. The erosion of trade-union power and competition from the large influx of immigrants, many of them unskilled, might also, in a small way, have contributed to the increasing real wage gap (Cairneross, 1999).

Because of outsourcing, some older workers may not be able to find alternative jobs and, since acquiring appropriate training might be difficult for those workers, they may be discouraged and leave the labor force. These discouraged workers may then become a financial burden on society, another cost of outsourcing offshore.

Some opponents of outsourcing argue that some companies are risking the loss of their core competency by outsourcing design and engineering functions. They also

argue that these companies might risk losing their intellectual property rights, due to the lack of global law or enforcement, consequently losing one source of growth and prosperity (Tarbouni, 2004).

Raynor (2003) argues outsourcing of high technology and other professional jobs may erode our position as the economic power in the world. He also argues outsourcing may help some companies in the short term, but for long-term growth and competitiveness these companies must protect their workers (their knowledge assets). He believes the real strategic advantage comes from maximizing knowledge and leveraging ideas over the long run rather than minimizing costs of employees for short-term gain (Raynor, 2003). Since, in recent years, a majority of offshoring has occurred in the service sector that primarily affects white-collar middle class jobs in the USA, the cost of outsourcing may be greater, as indicated by Bardhan and Kroll (2003). They believe service sector offshoring may prove to be more costly to the American economy. As centers of skilled high-tech professional jobs move to other parts of the world, the USA may no longer dominate the next wave of invention and innovation. This may result in lower productivity and economic growth, declining numbers of high-wage jobs within the US economy, and a downward adjustment of salaries and wages. If this happens, incentives for outsourcing may moderate.

Free trade and outsourcing may encourage firms from developed nations to relocate their polluting industries to less developed nations that lack stringent regulations and standards to safeguard labor and the environment. These actions may, in turn, increase global pollution and have a negative effect on environmental policy, because countries will be reluctant to tighten environmental regulations due to their concerns over international competitiveness (Copeland and Taylor, 2004). This is a debatable issue, since research indicates that as an economy grows and the level of income increases, environmental pollution levels also increase initially. However, after some point, economic growth and increasing levels of income induce demands for greater environmental protection, leading to improvement in pollution levels. An important study by Grossman and Krueger found that the turning point for different pollutants varies, but in most cases they occur before a country reaches a per capita income of about \$8,000 (Grossman and Krueger, 1995).

Another potential risk of outsourcing is the danger of fostering new competitors for American firms by contracting design and manufacturing of products to foreign companies. For example, Motorola signed a contract with Taiwan's Ben Q Corp. to design and manufacture mobile phones. Ben Q Corp. began selling phones in the vast China market under its own brand in 2004. Another risk is when companies outsource the innovation to suppliers in foreign countries, they may be setting themselves up for obsolescence (Engardio and Einhorn, 2005).

5. Policy options

Outsourcing offshore is likely to increase because of ongoing improvements in computer and communications technology and the increasing trend of globalization. To maintain and further improve the standard of living in the USA, the country must increase productivity growth through:

- increasing investment in new productive capital stock;
- spending more on research and development to stimulate invention and innovation;

- enhancing the quality of human capital of American work force;
- improving organization and management of industry; and
- fostering a business environment that encourages entrepreneurship and creativity.

Levine (1996) has also suggested specializing in the production of goods and services for which wage differentials do not matter much. This approach requires a capital intensive production system for which the proportion of labor costs is low relative to total production expenditures. These are prerequisites for the creation of new industries and new products that are essential for competitiveness and job creation.

In today's world, new ideas and knowledge are the main sources of new wealth and prosperity. The USA still has considerable potential competitive and comparative advantages to stimulate new ideas and encourage entrepreneurship leading to invention, innovation, and creation of new enterprises. The USA has the best financial markets and the best educated workforce in the world, with 30 percent of the 25-34-year-old age group having a college degree, compared with 24 percent for Japan and 14 percent for Germany (Mandel, 2003). A highly educated workforce can adjust to changes and can be more rapidly retrained. A highly educated workforce can also be more entrepreneurial and can develop new products and strategies that lead to the creation of new jobs and prosperity.

The US economy is more market driven than many of our competitors, making it more conducive for an efficient allocation of resources. Effective competition in an interdependent global economy requires engineers and scientists able to create new products and new production technologies, innovative managers able to lead effectively in complex organizations, and a highly skilled and trained workforce able to adapt and perform in different jobs with minimum retraining. This requires a long-term perspective toward competitiveness, improving education and skills of the American workforce, and considerable investment in education and skill building by governments, communities, and businesses. Since the pace of inventions and innovations is positively correlated with educational achievements, in the long run, higher educational achievements can lead to more innovations, increased productivity, new products, and better paying jobs. The results of higher productivity are an improved standard of living for American people, better competitiveness of US industries in the world markets, and a reduced inflation rate in our economy. All of these improvements mutually lead to higher investments, more jobs, and better economic security.

Investments in education and skill building are becoming more important. Some developing countries are building their human capital and are able to move into higher value-added services at the same time American children are falling behind their Asian peers in science and mathematics, which can push more white-collar jobs overseas as the next generation graduates (Prystay, 2004). In order for US companies to innovate and compete globally, they need a workforce with imagination and creativity that comes from superior human capital.

Equally important is the pace of spending for research and development. This spending must emphasize not only applied research and development (applications of existing knowledge), but more importantly, basic research and development (creation of new knowledge). Investments in research and development are critical to sustain

the flow of inventions, innovation, productivity growth, and new products and businesses. These are also essential factors for reducing production costs, improving competitiveness, and creating of new and better paying jobs.

The federal government can play a crucial role in investing and encouraging investments in basic research and development. Tax incentives or direct subsidies for businesses investing in research and development and federal grants for universities and research institutions engaged in basic research and development are two examples of the federal government's role in increasing inventions and innovation in this country.

Government must be proactive in international trade negotiations to provide a level playing field for American businesses and reduce foreign trade barriers for services provided by American companies. Government also needs to protect the intellectual property rights of US companies to encourage development of new technologies and ideas that are sources of the US comparative advantage (Garner, 2004). It is also desirable to tie free trade agreements to the stricter enforcement of environmental protection regulations. Government must provide an environment conducive to the efficient operation of the economy by providing appropriate infrastructure, incentives to invest, and stable and responsible fiscal and monetary policies that ensure financing for private investment with minimum uncertainty. Such an environment is crucial for economic growth and long-term job creation.

In the short run, some workers will lose their jobs, especially in the forefront of outsourcing. Restricting imports and outsourcing has been advocated by some government officials and politicians to protect these jobs (Levine, 1996; Peng, 2006). In fact, a number of US states have recently passed laws that ban foreign firms from being awarded official contracts. Many politicians, union activists, and displaced employees in advanced economies are discontented by publicized job losses because of outsourcing, and are demanding appropriate restrictive actions by their governments (Peng, 2006). Although restrictive policies may be popular among politicians, from an economic view point, these policies can restrict the mobility of resources and trade around the world, leading to the reduction of competition. Less competition may result in higher prices, lower quality products, and, in the long run, lower productivity and the creation of fewer jobs. A large majority of economists believe outsourcing will not lead to job loss in the long run, but to a shuffling of jobs and a new composition of occupations in the economy (Bardhan and Kroll, 2003). To deal with these major changes in the industrial and employment structure in the economy, workers require adequate and appropriate human capital to adapt to the new reality. Meanwhile, in the short run, to help those workers who lose their jobs to outsourcing, government could increase its budget for retraining and make retraining of unemployed workers a top priority. The *Trade Adjustment Act of 1974* (amended 2002) also must be further expanded to include the service sector and increase the scope and coverage beyond retraining, health coverage, job search, and relocation allowances. Only one-third of Americans who have been displaced in the past two decades have found new jobs that paid the same or higher wages, and one-fourth found their incomes fall by about one-third (Poole, 2004). Poole suggests that incomes of displaced workers should be supplemented for a transitional period of time. There have also been suggestions that companies that outsource jobs to other countries should spend a proportion of their savings from outsourcing for training and compensation of those who lose their jobs.

Offering interest-free loans and other assistance to individuals who want to start their business may also be helpful.

6. Conclusion

In the short run, it may be painful for workers and communities who are losing jobs because of outsourcing, but this structural transformation of the labor market due to globalization and the highly competitive nature of the product market is inevitable. In the long run, innovation, technological advances, and development of a highly educated and skilled workforce will lead to the emergence of new industries and new products and the creation of more and better paying jobs. Hence, outsourcing may lead to further efficiency and the increased well-being of the overall population. Outsourcing is part of the structural transformation in the world economy and is largely an irreversible change. It will be to the US advantage to exploit the benefits of outsourcing, rather than legislate against the shortcomings.

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