

A Butterfly Answers Customer Service Calls in China: The Tempestuous Response to Service Offshoring Across the Globe and Why It's Irrational

Joseph Hogan College of Arts and Science, Vanderbilt University

This paper will discuss the current and future status of service offshoring, and will argue primarily that owing to certain natural constraints on offshoring, there is limited prospect for future growth in this field. In particular service offshoring will not be the cause of massive job dislocations as was the case with manufactures offshoring. The paper will examine both empirical and theoretical reasons why this is the case, and will synthesize the two when appropriate. Particular attention is paid to diverse reasons for the rise of offshoring, including those resulting from economic, political, historical and managerial rationales. The interplay of factors that gave rise to manufactures offshoring is examined, as is its relation to future growth in service offshoring. The paper will then entertain arguments against service offshoring and its continued growth, and will argue that such growth is likely to be mild and short-lived, and that benefits redound to all participants in offshoring, but especially to developed Anglophone nations. Finally, the associated issue of the particular effects of offshoring on developing-country participants is discussed, as are possible political and economic remedies for those minor adverse effects of increased offshoring, both for developed and developing countries.

Introduction

In February, 2004, a distinguished economic advisor to President Bush, Greg Mankiw, suggested in a speech that the outsourcing of US jobs overseas would prove to be “a plus for the economy in the long run.” Within days, representatives from every wavelength of the political spectrum had pounced on Mankiw’s indiscretion, forcing him to write a letter of apology and retract his statement. Yet he was not wrong, and nearly every serious economist agreed with his claim. The rise of offshoring, or the movement of domestic jobs overseas, will indeed have tremendous benefits for the developed countries, benefits that will accrue to people of all social classes. This paper will focus on the specific effects of service industry offshoring and explain what the phenomenon is, why people are so wary of it, to what extent it will develop and where the potential gains lie, with particular reference to economic policy entailments.

While offshoring has a long history, its expansion into the service industry has only taken off since the mid 1990s. Despite the exponential growth of sensational media coverage since then, service offshoring is still in its infancy, representing only a tiny fraction of jobs and trade flows. Yet it is on the rise, and analysts disagree as to its potential. This paper will argue that the growth of service offshoring is a positive development that, like any other trade activity, will produce net benefits to all participants in the long run, with a few important but relatively subdued dislocations in the short run. The original contribution of this essay will be the conclusion that service offshoring as it currently

stands has a low ceiling for continued growth, and service employment will not be subject to the dramatic migrations already witnessed in manufactures. Consequently, service offshoring implies a unique set of benefits, challenges, and attendant policy choices for developing countries, developed countries, and especially the Anglophone nations. The structure is broken down as follows: in section 1, I define and explain offshoring; in sections 2 and 3, I explore in turn the managerial and sociopolitical rationales for outsourcing; in sections 4 and 5 I consider arguments for and against offshoring on a national level; section 6 highlights winners and losers from offshoring; and sections 7, 8 and 9 treat the special issues of the future of offshoring, its impact on the developing world, and its political implications.

I: What Is Offshoring

The terms “offshoring” and “outsourcing” are often used interchangeably, but they are in fact very distinct phenomenon with different causes and effects. Outsourcing is the process of contracting out all or part of a business process to a third-part company; by contrast, offshoring is the process of moving a business process to a foreign country (Amiti 2004). As an example, if Oracle were to contract PWC, another US firm, to file its tax documents, that would be outsourcing; but if it were to invest in a new coding facility in Bangalore, that would be offshoring. It is possible for the two to coincide, for example if a certain manufacturing input, rather than being produced domestically, is purchased via arms-length transaction from a foreign firm. Yet

neither implies the other, and when US media pundits refer to outsourcing as the movement of domestic jobs overseas, they typically mean offshoring; many such jobs continue to be performed by employees of multinational corporations based in the US. In this paper, the term “offshoring” will almost always be used in the sense of “service offshoring” (SO) to refer specifically to the trade of business services across national borders; the term “insourcing” will be used on occasion with reference to a nation’s exports of business services.

While the popular media tend to portray offshoring as a one-way movement of jobs from the developed to the developing world, in reality the process is far more balanced. While it is true that the largest importers of business

services are all large industrial economies (US, Germany, Japan, etc.), these numbers reflect more on the size of those economies than anything else (Amiti 2004). As a percentage of GDP, the largest service offshorers are Angola, Congo, and Mozambique, all small developing economies, while the US, Japan, and the UK place 117th, 103rd, and 85th respectively (Amiti 2004). Moreover, offshoring is hardly unidirectional; India and China both rank in the top 20 for business service imports (11th and 18th respectively), and measured as a percentage of GDP India imports far more business services than the US or UK (2.4% relative to .39% and 1.03%, respectively) (Amiti 2004).

Also noteworthy is the fact that service offshoring is relatively minor in comparison with other trade flows. In

Largest Business Service Importers, 2002

Largest Surplus and Deficit Countries, 2002

Rank	Country	Ratio to Local GDP, %
1	Angola	35.01
2	Congo	22.33
3	Mozambique	17.41
4	Ireland	15.44
5	Vanuatu	14.22
44	India	2.40
57	Germany	1.96
74	France	1.33
75	Russia	1.33
85	UK	1.03
103	Japan	.62
117	US	.39

Rank	Country	Surplus/Deficit, \$ Millions
1	UK	23,628
2	US	21,748
3	Hong Kong	15,663
4	India	6,813
5	Singapore	3,826
139	Italy	-4,001
140	Korea	-4,555
141	Indonesia	-7,985
142	Japan	-8,321
143	Germany	-12,144

the US, for instance, trade in business services is a miniscule percentage of GDP, with services as whole composing 13% of total imports, of which only 16% are business services (Grossman 2006). Though growth has been rapid in the past few years, the relative size of SO is understandable given its novelty, having developed only in the last decade or so (Liu 2008). Finally, net flows of business services do not always extend from the developing to the developed world; in fact, the UK and US have the largest export surpluses of business services of any countries (Amiti 2004). Despite protests to the contrary from US dogmatists, no countries have more to lose from curtailing SO than the US and UK. When the data are confronted, intuitive explanations present themselves in abundance. The US and UK have highly educated populations, technological advantages, and service-based economies; it would come as something of a shock if they did not manage to become top insourcers. When we develop theories of relative advantage and factor intensity in the context of offshoring it will become increasingly clear why these trade patterns must be so.

In analyzing what sort of development SO really represents, it will be useful to consider it as a form of advanced technology. To borrow an example from Paul Krugman, imagine the public response to an entrepreneur who devised a machine that converted tax documents and insurance policies into clothes, cars, and electronics; such a person would be surely be a captain of industry. Yet this is just what SO: a new form of international trade that will enrich every country that participates. Like any other advanced technology, the more offshoring develops the greater will be its effects on labor productivity, though there may be some dislocations as a result (Grossman 2006). Nonetheless, however much we may wish for unlimited SO (and not all of us share this wish), there are serious limits to how far it can develop. One key barrier is the requirement that, for many offshorable jobs at least, the person performing the task speak English fluently (Agrawal 2003). One of the reasons why countries like the US and UK have much more service trade with India and other countries with large English-speaking populations than do Japan and Germany is because of language; it would be very difficult to place a customer service call center in India servicing clients that speak only Japanese. More fundamentally, only a small percentage of service industry jobs are suitable for offshoring, due to restrictions on location, duties, and necessary skills (Blinder 2009). While estimates vary, credible studies predict that only about 11% of US jobs are even capable of be-

ing offshored, let alone destined for it (Blinder 2009), and that the proportion of US jobs that are unsuitable for offshoring increases each year (Grossman 2006). Thus, while SO may be demonized in the American popular press, it is comforting to know that it is a positive development for the US that is limited by its very nature, and that its total welfare benefits and localized losses will be similar to those experienced from technological change.

II: Managerial Rationales for Offshoring

Setting aside the larger economic picture for a moment, it is clear that the driving force behind SO is labor costs. Given that economic outcomes are the net effects of all decisions made by individuals and firms, and that firms seek to maximize profit, then there are obvious managerial incentives for SO, from both a cost and a revenue perspective, that shape economic trends. To begin with, workers in countries such as India and the Philippines will often work for as little as 1/10th the hourly wage of a US worker performing the same task (Agrawal 2003). The potential cost savings here are enormous, and studies suggest that with the proper global reorganization of business processes, firms can reduce costs as much as 50-70% (Edwards 2004). These cost savings have been facilitated by dramatic improvements in communications technology that allow firms to make effective use of foreign labor (Edwards 2004). With the computerization of most business services and the instantaneous communication enabled by the internet, foreign and domestic labor have become much nearer substitutes than they were even two decades ago. Just as importantly, foreign workers are often much more highly motivated than their domestic counterparts, because business service jobs that Americans and Europeans typically think of as demeaning, such as data entry, are considered prestigious in developing countries with fewer quality job prospects (Agrawal 2003). This productivity effect is not some sort of sociological hypothesis either; there are measurable differences between, for instance, how often Indian and American call-center agents answer phone calls (GCC 2007). In addition to cost savings, cheaper labor costs allows firms to pursue additional revenue streams that would incur prohibitive costs were they reliant on expensive domestic labor. Examples include using Indian call centers as “hounds” to track down past-due receivables (a kind of nonperforming credit) which would have to be abandoned were the “hounds” being paid \$20 an hour (Agrawal 2003). Also, although our focus is on international trade in business services, an important reason for moving service jobs

overseas is to locate them near a market the firm hopes to penetrate and develop. Historically, 87% of foreign direct investment has been made in an effort to develop local markets (Edwards 2004). While the speed of modern communication may reduce the importance of proximity to markets in the long-run, increased demand for services in developing markets is likely to make this an important factor in the near-term. Thus technology and labor supply have converged to present managers with irresistible cost- and revenue-based incentives to offshore.

At the same time, there are significant costs associated with SO that must be taken into account. Most importantly, if managers are located at a significant distance from low-level workers, their ability to monitor and effectively manage are seriously curtailed (Grossman 2008). Empirically, problems with long-distance management tend to lower cost savings from 90% based on pure labor costs to about 45-55% overall, with additional benefits resulting from redesigned management techniques to optimize foreign labor productivity (Agrawal 2003). From a theoretical standpoint, several models have been developed to explain these potential costs and determine job location in equilibrium. Pol Antras and others introduce a model wherein the competency and availability of skilled local middle-managers determines where and whether jobs can be offshored (Antras 2006). As noted previously, language skills are an important consideration for domestic firms seeking to offshore, and Antras highlights the availability of English-speakers in determining where American firms locate (Antras 2006). Moreover, both the model and the supporting data suggest that good local communication networks and talented local middle-managers are in some sense substitutes for one another, in that the availability of skilled managers is a far more decisive factor when communications are poor (Antras 2006). Intuitively, this makes sense, as offshore workers can be monitored much more closely from afar if information about their productivity can be transmitted quickly to managers in the home country. Additional factors that might increase the costs of SO include low levels of secondary education and low levels of foreign direct investment, which are in some sense proxies for management skill and communication networks (Antras 2006). Gene Grossman, on the other hand, explores a North-South model of trade (a common two-country transport cost model in which North is developed and South is developing) that hinges on the probability of finding a competent offshoring partner in a given country. The key costs incurred in this model deal with searching, contracting, and investing in an offshoring partner in order to maximize the specific pro-

ductivity of their bilateral relationship (Grossman 2002). In this model, offshoring increases in response to improved search technology, larger populations or “thicker” markets in South, verifiable contracting environments, and better technical expertise in South (Grossman 2002). We may infer then that the cost of SO increases when foreign countries and markets are small and dispersed, or when political conditions provide for poor legal and physical infrastructure on which offshoring relies. Interestingly, the network effects inherent in this dependence on “thick” markets and concentrations of talent and infrastructure lead to multiple equilibria in which producers and suppliers cluster within one small area (Grossman 2002). This is exactly the path that SO has taken, with offshore services developing extensively in places like Hong Kong that have favorable legal systems and business environments, and virtually ignoring areas like Sub-Saharan Africa that have cheap labor but few of the other supporting conditions that encourage service export sectors. Therefore, while labor costs and technological advances have made SO more attractive for firms in developed countries, there are a host of necessary preconditions like oversight capability, population density, educated and skilled labor, business infrastructure and stable legal codes that preclude the possibility of offshoring in many locations and reduce its effectiveness elsewhere.

III: Economic and Political Rationales for Offshoring

Despite the consternation of experts like Lou Dobbs, with his concern for US unemployment and current account deficits, there are economic justifications for SO that are as strong as the managerial incentives. Recall that as a trade activity, offshoring is akin to a technology that converts inputs in which we are relatively productive (like business services) into outputs in which we are relatively deficient (like electronics). These gains from trade can be easily seen using the simplest of models, the Ricardian model. Trade in this model is of two goods between two countries, with the theoretical result that both countries specialize in the good in which they are relatively productive and enjoy lower prices and enhanced consumption possibilities through trade. In the case of SO, we may think of developed countries as specializing in technical expertise and of developing countries as specializing in routine tasks. Note that the model predicts that even if the developed world is more productive in both, and empirically we have reason to believe that it is, there will still be potential gains from trade, and thus economic justifications for SO. Other simplified theoretical frameworks, like the Heckscher-Ohlin model, suggest similar rationales for offshoring. In the H-O

model, there are two countries, two factors of production, and two goods; production technology and preferences are identical across countries, which differ only with respect to their relative factor endowments. For our purposes, we may assume that developed countries are relatively abundant in skilled labor, and that developing countries are relatively abundant in unskilled labor. The H-O model predicts that countries will specialize in producing the good that uses their relatively abundant factor intensively, and will trade to obtain the other good. This effect, then, provides yet another reason for SO: developed countries are relatively deficient in the factors employed intensively in routine business services, particularly unskilled labor. The kind of trade resulting from the H-O model can be thought of as analogous to importing the factor in which one's trade partner is relatively abundant. Therefore, when Mr. Dobbs complains of US jobs being sent overseas, all he is really guilty of is a failure of imagination, for the US is not so much exporting jobs as it is importing labor. As populations age in developed countries and working populations shrink, the importance of this imported-labor surrogate will only become more valuable (Agrawal 2003). Though the results of the Heckscher-Ohlin model are disputed on empirical grounds, in theory we should expect that SO, as the equivalent of trade in services, will benefit all countries involved by supplying needed factors of production and expanding consumption possibilities.

Yet because international trade theory dates back to the early 19th Century, while SO is a child of the 1990s, no serious analysis could conclude that its growth was not strongly influenced by the tandem developments of ICT (information and communication technologies) and market liberalization abroad. The early 1990s witnessed a host of political developments that contributed greatly to the rise of SO, most notably the Indian balance of payments crisis in 1991 and Deng Xiaoping's Southern Tour in 1992 (Liu 2008). Inspired in part by the dramatic collapse and subsequent liberalization of the USSR, Deng, then head of the Communist Party in China, toured the coastal areas of southern China in an effort to draw attention to the pervasive indigence and inefficient industry that characterized the region (Wang 2003). What followed was a transformation known as "Deng's Hurricane" in which restrictions on free movement of labor, goods, and capital dissolved almost overnight; suddenly southern China bore a strong resemblance to Gene Grossman's ideal "South" (Wang 2003). Similarly in India, a severe balance of payments crisis, due in a large part to tight restrictions on capital mobility, forced a debilitating currency devaluation that in turn

led to labor and capital market liberalization (Cerra 2002). The combined results of these events were that within just a few years, two huge pools of cheap, relatively well-educated labor, with attendant rapidly growing markets in need of advanced business services, presented themselves to firms in developed countries (Liu 2008). At roughly the same time, advances in ICT enabled the instantaneous, nearly costless delivery of information services and the instructions required to produce them, without which China and India's market growth might have taken a decidedly more analog path (Liu 2008). The boom in computer technology also led to two crucial yet seemingly unimportant phenomena: the massive over-investment in fiber-optic cable and the huge demand for Y2K reprogramming (Friedman 2005). With the production of thousands of miles of surplus fiber-optic cable, Indian companies were able to purchase the cable at pennies on the dollar and lay a communications network linking India both internally and with huge markets in Europe and America. The subsequent Y2K panic gave those markets a reason to employ India's pool of competent programmers, fresh from one of the state-run Institutes of Technology, to patch up their computer data (Friedman 2005). Caught up as they were in the dotcom boom, firms in developed countries quickly realized the possibilities inherent in using Indian programmers, and SO took wing (Friedman 2005). So while economic models can provide a theoretical framework for why offshoring is beneficial, current patterns of SO are the result of a convergence of multiple unforeseen exogenous factors in technology, politics and business.

IV: The Argument Against Offshoring

SO comes complete with a host of attendant problems for developed countries, problems which economic models reveal them as capable of ameliorating. To truly understand why this is so, we must examine the arguments against SO on a national level, refute them, and consider instead the effects on certain special interests. Setting aside problems in developing countries for a moment, the case against offshoring is typically based on three assertions: that it causes unemployment, that it reduces wages in developed countries, and that it drives the current account deficit. Lou Dobbs, for example, points to a widening current account deficit, and the fact that the US has not run a trade surplus since 1991, as evidence against offshoring (Dobbs 2009). This line of reasoning is the most misguided of the three. Recall from section one that in 2002 the US ran a trade surplus of \$23 Billion in the business services sector, and it is clear that the US current account deficit

would be even larger were it not for the global trade in services. Simply put, with regard to trade the US and other developed countries have far more to gain from insourcing than they could possibly lose from SO.

Complaints of downward wage pressures rest on similarly unsure footing, the theory being that when jobs move overseas, domestic workers are forced into lower quality, lower income occupations than before (Brainard 2004). What this analysis ignores is the second-line impact of offshoring as firms use their cost savings on labor to expand total production, eventually creating more high-quality jobs in the home country than before (Grossman 2006). Econometric analysis has separated the wage effects of offshoring into three components, from which we may empirically confirm the dominance of productivity gains over potential wage losses, as predicted by the theory. These three are the productivity effect, by which cost savings improve the wages of domestic skilled workers; the relative price effect, where expansion of high-skill sectors causes the price of skill-intensive products to fall, reducing wages; and the labor supply effect, in which access to the vast pool of workers available overseas pushes down domestic wages (Grossman 2006). Summing the three opposing effects leaves a residual effect which can be thought of as the net effect of offshoring on wages, all other influences aside. Over the period from 1998 to 2004, this residual had a positive effect on wages of around .25% growth per year, and was a countervailing force in propping up service sector wages in the US, despite downward pressures owing to labor-supply effects (Grossman 2006). While certain highly-exposed sectors may experience net negative wage pressures from SO, in the aggregate we should expect workers in developed countries to experience increasing wages as a result of SO.

Of the three criticisms, only unemployment is in any way substantive. In a straightforward pattern of deductive logic, critics assert that because offshoring moves jobs formerly performed in developed countries to developing countries, unemployment will rise in developed countries (Brainard 2004). Certain analysts predict that the number of US jobs lost to SO will increase from 400,000 in 2004 to 3.3 Million by 2015 (Brainard 2004). Yet there are many issues at work here; most prominently, while we should not trivialize job loss, the fact remains that nearly 70% of US workers who lose their jobs due to imports are re-employed, recapturing an average of 95% of their former wages (Agrawal 2003). Moreover, the number of jobs lost due to offshoring, as a percentage of the 15 Million unemployed Americans, is minor, and offshoring is unlikely

to become the principal or even a significant contributor to unemployment (Brainard 2004). Since 2000, the pace of SO has accounted for about 0.1% of total US service employment lost overseas annually, with most of the losses clustered in high-risk sectors and predominantly low-wage jobs (Garner 2008). In theory, rising productivity should lower costs, increase production, and thus cause an increased demand for labor from any firm that offshores, which would increase employment in the long run. This result depends on perfect competition (i.e. the firm maximizes revenue at the zero-profit level in the long-term), and in the absence of perfect competition that characterize the markets in which most multinationals operate it is possible that productivity gains will manifest themselves less in lower prices and higher employment than in higher profits disbursed to shareholders. Yet the real issue here is not aggregate effects but distributive effects, for if labor markets allowed for free mobility, then the productivity gains from offshoring would soon regenerate any lost jobs. While most models assume away any labor market imperfections, in reality these imperfections do exist, and workers caught in a downsizing industry may not be able to switch costlessly to another more productive sector (Amiti 2004). Certain evidence suggests that productivity effects will dominate labor market imperfections; the IT industry, which makes perhaps the most extensive use of SO, saw rapid job growth in the US concurrent with rapid offshoring (Amiti 2004). In general, however, studies typically conclude that SO will have a very small negative net effect on US employment, the burden of which will fall almost entirely on unskilled labor as low-skill jobs are replaced at just below a 1-to-1 ratio with high-skill jobs (Amiti 2004). Thus when critics point to the perils of offshoring, what they are observing are outsized effects on small sub-populations, rather than dispersed benefits to nations at large.

V: National Benefits of Offshoring

On a nationwide level, developed countries reap limited but still significant benefits from SO in nearly every economic indicator. The theoretical argument works as follows: firms improve efficiency through cost savings from SO, allowing them in turn to expand production, lower prices, and generate additional jobs in all countries (Grossman 2006). The downward pressure these productivity gains place on prices help control inflation, allowing central banks to run a looser, more expansionary monetary policy, which leads to faster GDP growth and thus more income and consumption in the long run. Since the late 1990s this effect has accounted for an additional .3% GDP growth

per year, and is an important but by no means primary contributor to growth (Brainard 2004). We have already seen how the long-run productivity effects of offshoring tend to increase wages in developed countries. In addition, studies in the UK have shown that the rate of job creation in any given sector is insensitive to the amount of offshoring in that sector, suggesting that SO is not correlated with job loss in any statistically significant way (Amiti 2004). Moreover, as SO contributes to the growth of foreign markets, developed nations with large, competitive business service sectors will reap additional benefits from insourcing as a response to greater demand for such services abroad (Garner 2008). Thus at the aggregate level SO has positive effects on every major sign of overall economic vitality, be it productivity, growth, price levels, wages, or employment, with relatively minor negative effects on certain sectors. Indeed the primary concern for a large-scale insourcer like the US is becoming too productive in business service provision, as this could potentially flood the market for business services and weaken our terms of trade (Krugman 2008). This effect is predicated upon rapid growth in SO sectors, which as will see later is unlikely given the natural constraints on the industry. Thus the challenges facing developed countries do not stem from the aggregate effects of SO on the economy at large, but rather from the need to distribute the benefits efficiently while promoting steady, sustainable growth in international service trade.

VI: *Winners and Losers*

While nations as a whole tend to benefit from service trade, monopolistic competition and labor market imperfections tend to create pockets of outsized gains and losses. Theoretical results from the Ricardian and Heckscher-Ohlin models avoid the problem of losers and winners by assuming a homogenous population, but in reality it is understood that SO will increase national welfare only if the benefits are distributed equitably. In the H-O model, factors which are used intensively in the export sector, such as skilled workers, benefit from increasing trade (Grossman 2006). Yet this explains only the presence of winners and bigger winners; to develop a theoretical framework for losers, we must introduce the Ricardo-Viner model, also called the Specific Factors model. In this framework, two goods are produced using one mobile factor in conjunction with another factor specific to the industry, which can be visualized as skilled service workers or unskilled service workers. Treat the mobile factor as capital and assume decreasing returns to capital; then the market-clearing condition for the distribution of capital between skilled and

unskilled services is that $p_s MP_s = p_u MP_u$, or the price of unskilled services times the marginal product of unskilled workers must equal the price of skilled services times the marginal product of skilled workers. The figure above shows the p^*MP curve for a factor k ; in this diagram, the benefits accruing to specific factor k are measured as the integral of the $p_k MP_k$ curve less K^*r , which is the benefits accruing to capital (note K is distinct from k). If we let k be skilled labor, then what the figure depicts is an increase in the price of skilled services p_s resulting from increasing trade in that sector, as has recently occurred; this raises the equilibrium return to capital from r to r' . The diagram fails to show the attendant increase in capital devoted to skilled services as that sector increases, which the model predicts, but just assume it's there. Then the result is that benefits accruing to skilled workers, the specific factor for skilled services, increase; a reversal of this diagram would show the benefits accruing to unskilled workers shrinking, as they would lose approximately the area labeled "increment" while experiencing a net capital outflow from the unskilled sector. Thus the Ricardo-Viner model predicts that there will be losers from opening up to trade, and that the losers will be stakeholders of some kind in the specific factor used in the import sector.

The Ricardo-Viner model is most robust in its prediction that there will be winners and losers, but less so in predicting who they may be. Empirically, however, it is clear that in the US in the case of offshoring the losers are a small group of skill-deficient workers. In particular, econometric analysis has shown that offshoring increases the probabilities of both industry and occupation switching for US workers lacking college degrees, but lowers these same probabilities for all other workers (Liu 2008). These dislocations signal problems for such workers, and the same study similarly predicts longer periods spent unemployed on average for uneducated US workers and shorter times for skilled workers (Liu 2008). These effects on more vulnerable sectors of the labor market are important, and both the R-V model and the supporting data indicate that the source of the trouble is lack of mobility and substitutability, as low-skill workers are often incapable of switching to high-skill sectors. Thus developed countries face the challenge of converting low-skill stakeholders into high-skill stakeholders, providing an economic justification for educational and job retraining programs such as Trade Adjustment Assistance.

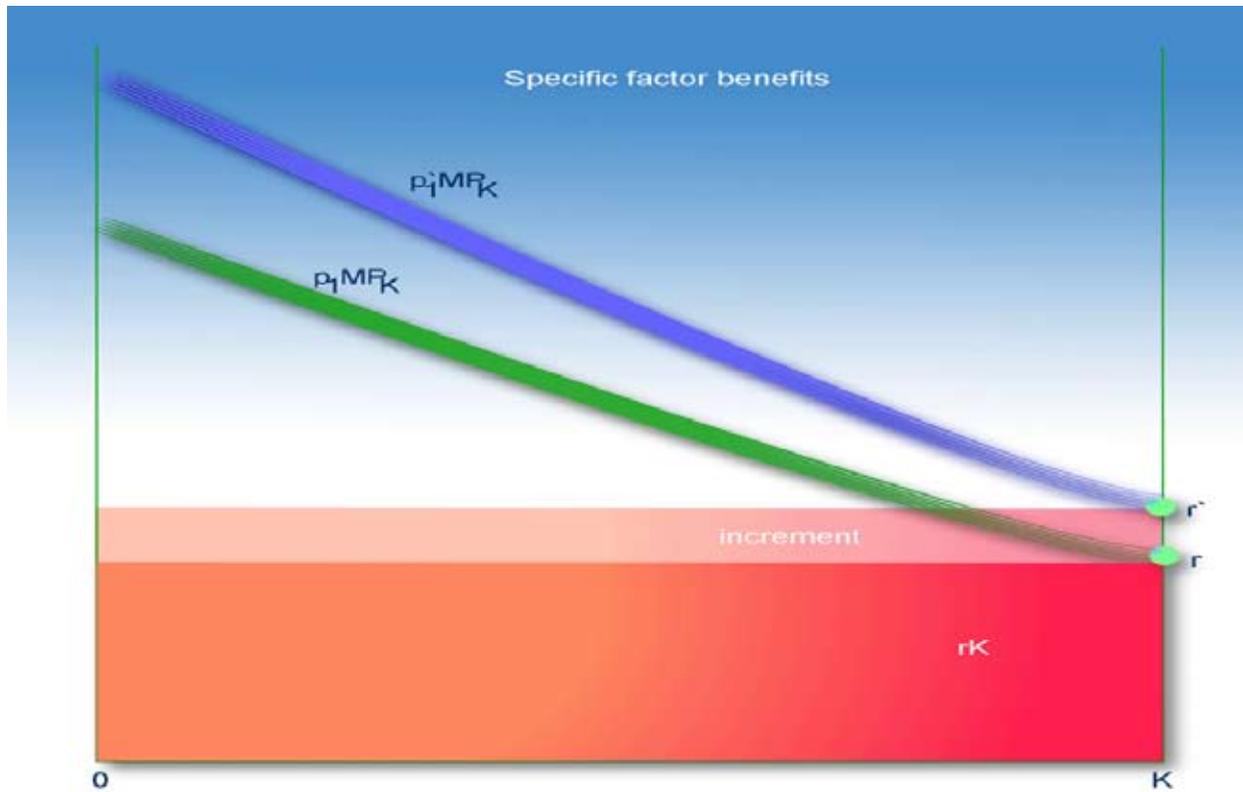
SO also makes winners and losers out of countries and demographic sectors. As noted in section one, two of the biggest winners on a global level are the US and UK,

in that these two countries dominate the business services export market (Amiti 2004). In the case of the US, for instance, every dollar spent offshore returns \$1.47 to the global economy, of which \$1.12 accrues to the US and \$.33 to foreigners (Agrawal 2003). This is a substantial return for the US, which breaks down as follows: \$.62 accrues to consumers and firm shareholders, \$.47 to labor, and \$.05 goes to increased exports (Brainard 2004). The real winners, clearly, are consumers, who enjoy lower prices on everything, not just services, as a result of increased productivity, and to whom substantial benefits accrue. Note however that this does not imply that domestic labor loses \$.53 for each dollar spent offshore, because obviously less than 100% of every dollar spent domestically accrues to labor; in fact, US corporate income relative to worker income is at almost the exact same level, about 18%, as it was in 1960, indicating little in the way of adverse effects on US workers (Brainard 2004). Therefore the underlying theme of offshoring is that while there are winners and losers, most people in developed nations are winners, and the losers are few in number and lose only marginally.

VII: The Impact of Offshoring on Developing Countries

Because offshoring is a form of international trade,

the expectation is that it benefits all countries involved, as indeed it does. Yet relative to the almost uniform benefits for developed countries, SO's impact on developing countries has been much more a mixed bag, even without accounting for cultural effects outside the scope of this essay. SO clearly has some positive effect on the developing world, in that it generates employment, increases GDP, and diversifies the export sector, mitigating the risk of a balance of payments crisis (te Velde 2004). As discussed previously, countries like India and China run large export surpluses in business services, and of every dollar spent offshore, \$.33 accrues to factors in developing nations (Amiti 2004, Agrawal 2003). The issue then is whether or not this income is distributed in a way that benefits the nation at large, or merely the elites who are well positioned to take advantage of SO. While quality of life has improved over the last two decades for many workers in the developing world, at the same time there have also been nearly uniform increases in measures of inequality (Goldberg 2007). Between 1987 and 1999, the skill premium, a measure of wage inequality by educational attainment, increased 13% in India, with some of the effect almost certainly due to SO (Goldberg 2007). Across the developing world, trade reforms over the last two decades coincide exactly with ris-



ing skill premia (Goldberg 2007). This trend is consistent with theoretical arguments that trade liberalization should widen skill premia in all countries, and, by introducing advanced technologies, encourage skill-biased technological growth that will further widen the gap (Acemoglu 2003). Moreover, we have seen that skilled managers are almost a necessary prerequisite for SO to develop; thus as firms increase their reliance on developing country labor, the demand for skilled labor is pushed up against supply, while the supply of unskilled labor remains inexhaustible. This effect causes SO to contribute to rising inequality in developing countries. Although income inequality measures like the Gini coefficient are, for logistical reasons, difficult to use in developing nations, the evidence here suggests that income inequality has risen in China, India and Latin America over the same period, with much of the effect owing to rising skill premia (Goldberg 2007). These results should be taken with a grain of salt, as there are several caveats. First, service trade liberalization is likely to make developing economies more globally competitive, which not only increases welfare in the aggregate but also helps limit corruption, rent-seeking, and other behaviors that promote inequality (Birdsall 1999). At the same time, by generating a host of new labor-intensive jobs, SO can also increase demand for unskilled labor and thus benefit low-income workers in developing countries (Birdsall 1999). The key distinction, then, is that SO may increase relative inequality within a nation while benefitting the welfare of those at the bottom absolutely. Because many developing countries instituted trade liberalization in conjunction with a host of other market reforms, it is difficult to isolate the effects of offshoring on inequality. Nevertheless, it is reasonable to conclude that SO has promoted relative income inequality between high- and low-skilled workers in developing countries, while at the same time having positive welfare effects on both groups.

As such, developing nations have much room for public policy reform that would both encourage long-term growth through offshoring and distribute the benefits more evenly. Grossman and Helpman highlight the importance of education, communication and transport infrastructure, and property rights as preconditions of offshoring, which provides a basis for policy in many developing countries (Grossman 2002). The experience of India provides a useful case study for such policies. Investment in education and a history of English colonization have created a pool of labor with many of the skills desired by firms with offshore operations; yet India's education system is far from perfect, and in particular, requires much stronger links between in-

dustry and academy at the secondary level (Dossani 2005). Moreover, even countries with relatively advanced education systems often do a poor job of preparing their graduates for the tasks required by multinationals; only about 10% of engineers trained in China and 25% of those in India are really capable of contributing meaningfully at a multinational engineering firm (Farrell 2006). In addition, while India has an advanced judicial system and has fostered an ethic of independent entrepreneurship, it lags behind less-open neighbors like China with regard to business infrastructure (Dossani 2005). While India has liberalized, it has yet to take the necessary steps in order to benefit from its liberal environment, including expanding the availability and quality of education and investing in infrastructure. In the future, the low skill level of many Indian offshore services will make them especially susceptible to automation, barring further reform to promote export quality and quantity (Dossani 2005). Other countries, particularly those in Sub-Saharan Africa, face equally significant problems as they attempt to liberalize trade and provide a stable contracting environment. Leaving aside the issue of maintaining a strong central government and rule of law, many such countries must contend with entrenched opposition to market liberalization from special interest groups, particularly with regard to agricultural and labor market reform (IMF 2001). While each developing country faces unique challenges in adapting to the requirements of offshoring, in general the prescriptions center around eliminating protections or restrictions on offshore investment and providing the key factors multinational firms covet in an offshore partner.

VIII: How Far Can Offshoring Go?

Opinions on the future of SO vary wildly, but this paper will argue that regardless of how we may wish SO to develop, it is most likely to settle down to a steady, low-level growth period within the next decade. The most critical aspect of this prediction is the fact that unlike in the case of manufactures in the 1970s and 80s, most service jobs are qualitatively unsuitable for movement overseas, and firms will soon exhaust their most obvious cost savings and press up against the limits of profitable offshoring. Although trade in services is growing rapidly, it still lags far behind the level of offshoring witnessed in manufacturing (Grossman 2006). Thus in theory, SO might eventually exhibit a pattern similar to blue-collar outsourcing, with a variety of factors including international trade, immigration, and skill-biased technological change combining to drive jobs out of developed countries and reduce the wages of

low-skilled workers (Brainard 2004). On a superficial level this theory has some appeal; of the \$19 Trillion spent globally on business administration each year, only \$1.4 Trillion is offshored, which leaves plenty of room for further cost savings (Edwards 2004). What this analysis ignores is the fact that not all jobs are equally offshorable; in fact, service work can be seen as lying along a continuum of offshorability, in which movement overseas can either reduce or increase costs in variable amounts. Grossman identifies the “routinization” of tasks as determining the suitability of work for offshoring, and while the use of the term “routine” may seem clumsy, insensitive or pejorative, his analysis is quite appealing (Grossman 2006). He introduces a strict dichotomy between tasks which are codifiable, or describable by a rules-based logic, and those which require creative thinking, and thus high training costs (Grossman 2006). Because work of the former variety is more likely to be automated in the future, two conclusions follow. First, developed countries should not worry about routine service jobs moving overseas, as the work would disappear one way or another; and second, it is likely that many of the jobs currently being offshored will one day no longer be jobs at all, in the same way that switchboard operator is no longer an occupation. The data provide some support for these conclusions, as the distribution of US workers between routine and non-routine tasks has fallen from a high of over 53% routine in 1970 to about 44% today (Grossman 2006). Yet most occupations cannot so easily be described as either routine or not, and it is helpful to consider other factors that contribute to offshorability. Perhaps the most obvious are tasks which require a physical presence on-site, or which cannot be delivered remotely; such services include restaurants, hotels, and repair or construction of large or unmovable objects. More subtly, much service work (in the US at least) requires English skills, public speaking, cultural sensitivity, and close interaction with clients, making it less than suitable for SO (Blinder 2009). On the other end of the continuum lies work that uses primarily telephones and computers, and which involves processing data with little face-to-face interaction. These characteristics define a ranking of jobs based on offshorability, and survey data have revealed the distribution of such jobs in the US economy. A full 72% of all US jobs, not just service jobs, cannot be offshored at all, while only 12% of jobs are easily offshorable, with the remaining 16% falling somewhere in between (Blinder 2009). Moreover, the distribution of non-offshorable jobs does not cluster in less-desirable positions like waiter and teller, as the chart indicates; a wide variety of occupations are immobile, as are high percentage of top-

quality jobs in management and the professions (Blinder 2009). Moreover, the data indicate that the positions most easily offshored, production and office administration, have already been identified and substantially moved abroad, suggesting that the current wave of offshoring has nearly exhausted the lowest-hanging fruit. Because the costs of SO will increase as it extends into less and less suitable occupations, it is reasonable to predict a drop-off in the rate of growth of service exports as SO approaches its marginally profitable level.

There are several other factors unrelated to employment, both economic and cultural, which indicate that SO will slow down in the near future. A key economic reality is that the so-called “death of distance” has been over-exaggerated. While it is true that communication has advanced tremendously over the past two decades, physical transportation has lagged behind; although transport shipping rates declined 50% between 1870 and 1913, they have remained roughly flat over the last 30 years, with delivery times declining only modestly (Jacks 2008). In addition, while companies are beginning to adopt videoconferencing technology, business travel is still the cornerstone of global management, and will likely remain so for some time; until the 2009 recession, the number of business trips taken annually had increased every year since 1998 (Center for Hospitality Research). What is clear from these results is that proximity and face-to-face interaction are still critically important in determining trade flows, and while ICT is certainly a flattener, it is at best an imperfect substitute for proximity. Indeed, even today the vast preponderance of all international trade is between geographically neighboring countries, and international trade is relatively minor compared with domestic economic activity (Grossman 2006). Further, there are hints that the abnormal growth in certain key SO industries, most notably telecoms, has reached its peak and is about to slow dramatically, further decelerating the movement of service jobs (Liu 2008). Finally, it is possible that sometime in the near future there will be powerful exchange-rate valuations in key developing-world currencies like the yuan and the rupee that will reduce the attraction of foreign service imports. These economic effects are likely to contain the growth of SO in the long run and prevent it from swallowing completely even those jobs which are structurally suitable.

Setting aside our economic focus for a minute, intuition suggests that there are cultural barriers to SO as well. For example, trade is greatest between nearby countries not only due to shipping costs, but also due to cultural differences across regions that reduce the likelihood that they

Offshorability In Major Occupational Groups

Occupation	% of All Jobs	% Offshorable
Management, business, and financial occupations	14.1	16.4
Professional and related occupations	23.6	20.5
Service occupations	15.9	0.7
Sales and related occupations	10.1	17.8
Office and administrative support occupations	13.3	41.2
Farming, fishing, and forestry occupations	1.1	0.0
Construction and extraction occupations	3.9	0.0
Installation, maintenance, and repair occupations	4.3	1.3
Production occupations	6.9	80.7
Transportation and material moving occupations	6.4	0.0

will prefer similar products. Additionally, there are certain intangible values associated with key service sectors which are unlikely to disappear. Direct, face-to-face interaction, for instance, is very important in a number of industries, which makes it unlikely that videoconferencing and SO will ever come to dominate them completely. Moreover, there are prestige values associated with some service sectors in the US, including law, banking, and secondary education, that will make managers unwilling to offshore despite the temptation of cost savings. In the case of secondary education, it is almost impossible to think of a university president offshoring adjunct positions, even though they could probably be performed remotely, because of the intangible value of campus atmosphere and student-teacher relationships. These cultural effects, although not technically rigorous, are not to be laughed at, and will likely play an important role in determining patterns of offshoring in the future.

IX: Political Realities in an Age of Offshoring

The current and future economic effects of offshoring entail a host of policies for developed nations which are more or less familiar. Regardless of what path service offshoring may take in years to come, for right now it is a relatively minor phenomenon with positive but mild effects. Thus it is in the interest of developed nations to design their

policy with the goal of fostering offshoring and spreading its benefits equally. Some of these policies will seem familiar; support for education and research in order to augment the supply of skilled labor is key, as are social safety net programs to mitigate the effects of dislocations from job movement. Additional unilateral strategies include removing tax code distortions that shape patterns of offshoring, enforcing trade agreements, reforming visa policies that encourage US-educated foreigners to return home, and rallying support for offshoring among professional organizations in order to expand licensing and maintain professional standards overseas. International protection of intellectual property will likely become a more significant challenge as SO extends into areas with less efficient patent protection. Developed countries will need to be especially vigilant in creating and enforcing these protections, as their relatively robust markets for innovative products incentivize longer and more restrictive patents relative to small developing countries (Grossman 2002). There is also some scope for redistributive taxation, since the benefits of international trade and offshoring in particular tend to find their way into the hands of a wealthy few (Wessel 2007). By spreading the benefits from offshoring more evenly, dislocations from offshoring are minimized, and popular support for pro-offshoring programs is augmented. From a multilateral perspective, there is a clear need for a World Services Organi-

zation to oversee the global trade in services; the WTO has not done enough to adjust to emerging patterns of trade. In particular, cyber security, trade data collection and international property rights will become much more problematic in future, and international regulation is required to keep these issues from impeding the offshoring process. Though SO is unlikely to encompass more than a small fraction of the global service sector, because developed and developing world labor are essentially complements for one another it is in the interests of all nations to cooperate on agreements that foster service trade.

Two crucial developments in an age of SO, both of which are largely ignored by the economic establishment, are the globalization of English and the endogeneity of technological progress. Regarding the latter, offshoring is not only a response to ICT, efficient transportation, and market reform, but also a determining factor as well. In the case of shipping and outsourced manufacturing, the result of reduced freight costs was to incentivize outsourcing, in turn increasing the demand for shipping in a cyclical fashion. Something similar is at work with SO, centered primarily on ICT; the last decade has witnessed an astonishing boom in ICT products, many of which cater specifically to global trade in business services. It is therefore likely that SO and technological development will have cyclical effects on one another, providing additional dynamic gains over time that are unaccounted for in estimates of SO's effect on factor productivity. The global spread of English is also likely to have unregistered positive effects for the US and UK in particular. Empirical evidence has shown that share language is a significant factor in trade patterns, with two countries united by common language enjoying 65% more trade than purely demographic factors would predict (Choi 2003). Because workers in developing countries stand to gain more from SO if they speak the language of global business, there is a strong incentive for them to learn English (Choi 2003). Over time, if Anglophone countries continue to enjoy high wages and factor productivity and to respond positively to SO, network effects will make English-speaking more and more prevalent for business in all countries (Choi 2003). Thus from the perspective of the US, national gains from SO are almost certainly understated, as measures of growth in wages and factor productivity fail to account for two important long-term effects of SO that benefit the US particularly.

Conclusion

In this paper, I explained what service offshoring is, provided a history of its development, considered both managerial and national incentives for offshoring, and explained why it has benefits for everyone despite claims to the contrary. I also examined the future of SO, placing particular emphasis on the original conclusion that for a variety of reasons, services would be very unlikely to globalize to the extent that manufactures have, and that white-collar jobs will not leave developed nations to the same extent as blue-collar jobs. Finally I offered several original policy recommendations for decision-makers in developed countries, and explained why the unrealized yet endogenous effects of offshoring on universal language and technological progress will yield special benefits for the countries that stand to benefit the most from SO, the US and UK. Now that the myths about SO have been debunked, the terror that surrounds it is revealed as patently ridiculous. Offshoring is a trade activity that behaves like a piece of advanced technology, and functions through a mechanism akin to importing a labor supply that complements our own. I want to stress also that SO has a human face; while some may envision a world in which dispersed workers communicate via telepresence for all business activities, in reality there are immeasurable human values to working with people of a common cause in a central location. Though some analysts predict that banking, consulting, law and even medicine may someday be supplied in Asia and consumed at the end of a fiber optic cable, it is clear to any observer that people in these professions are extremely satisfied with the current arrangement, and would be very reluctant to trade the prestige and culture of the developed world's great business cities for a modest effect on the bottom line. Though the world may change greatly in an age of offshoring, the real story, and that which is largely ignored, is how much will remain just as it is.

References

- Acemoglu, Daron. "Patterns of Skill Premia." *Review of Economic Studies* Vol. 70, No. 2 (2003): Pgs. 199-230.
- Agrawal, Vivek. "Offshoring: Is It a Win-Win Game?" *The McKinsey Global Institute* (2003). www.mckinsey.com/mgi Accessed 9/12/2009
- Amiti, Mary and Shang-Jin Wei. "Service Offshoring and Productivity: Evidence from the United States." *National Bureau of Economic Research Working Paper Series No. 11926* (2006).
- Amiti, Mary and Shang-Jin Wei. "Fear of Service Outsourcing: Is It Justified?" *National Bureau of Economic Research Working Paper Series No. 10808* (2004).
- Antras, Pol, Luis Garicano, and Esteban Rossi-Hansberg. "Organizing Offshoring: Middle Managers and Communication Costs." *National Bureau of Economic Research Working Paper Series No. 12196* (2006).
- Bergstrand, Jonas. "Operating Profit: Globalisation and Health Care." *The Economist* August 14, 2008
- Birdsall, Nancy. "Globalization and the Developing Countries: The Inequality Risk." Address at Overseas Development Council Conference. International Trade Center, Washington, D.C. March 18, 1999.
- Blinder, Alan S. and Alan B. Krueger. "Alternative Measures of Offshorability: A Survey Approach." *National Bureau of Economic Research Working Paper Series No. 15287* (2009).
- Brainard, Lael and Robert E. Litan (2004) "Offshoring Service Jobs: Bane or Boon and What To Do?" *The Brookings Institution Policy Brief No. 132* (2004).
- Center for Hospitality Research. "New Research Explores Link Between Business Travel and Profit." *Cornell University School of Hotel Administration* www.hotelschool.cornell.edu Accessed 9/12/2009.
- Cerra, Valerie, and Sweta Chaman Saxena. "What Caused the 1991 Currency Crisis in India?" *IMF Staff Papers* Vol. 49, No. 3 (2002): Pgs. 395-425.
- Choi, E. Kwan. "Trade and the Adoption of a Universal Language." *International Review of Economics and Finance* Vol. 11, No. 3 (2003): Pgs. 265-275.
- Dobbs, Lou. "Exporting America: False Choices." *CNN Money* <money.cnn.com> Accessed 9/12/2009.
- Dossani, Rafiq. "Globalization and the Offshoring of Services: The Case of India." *Brookings Trade Forum* (2005): Pgs. 241-267.
- Edwards, Ben. "World of Work." *The Economist* November 11, 2004.
- Farrell, Diana. "Don't Be Afraid of Offshoring." *Business Week* March 22, 2006.
- Friedman, Thomas. *The World Is Flat: A Brief History of the 21st Century*. New York, NY: Farrar, Straus and Giroux, 2005.
- Garner, Alan C. "Offshoring in the Service Sector: Economic Impact and Policy Issues." *Federal Reserve Bank of Kansas City Economic Review* QIII (2004): Pgs. 5-37.
- Goldberg, Penelopi, and Nina Pavcnik, "Distributional Effects of Globalization in Developing Countries." *National Bureau of Economic Research Working Paper Series No. 12885* (2007).
- Grossman, Gene, and Edwin Lai, "International Protection of Intellectual Property." *National Bureau of Economic Research Working Paper Series No. 8704* (2002).
- Grossman, Gene, and Esteban Rossi-Hansberg. "Trading Tasks: A Simple Theory of Offshoring." *American Economic Review* Vol. 98, No. 5 (2008): Pgs. 1978-1997.
- Grossman, Gene, and Esteban Rossi-Hansberg (2006); "It's Not Wine For Cloth Any More." *The New Economic Geography: Effects and Policy Implications*. Ed. Federal Reserve Bank of Kansas City\ (2006).
- Grossman, G.M. and Ethan Helpman. "Outsourcing in a Global Economy." *National Bureau of Economic Research Working Paper Series No. 8728* (2002).
- Holman, David, Rosemary Blatt, and Ursula Holtgrewe. "The Global Call Center Report: International Perspectives on Management and Employment." *Global Call Center Network* <www.ilr.cornell.edu/globalcallcenter> Accessed 9/21/09 .
- International Monetary Fund. "Global Trade Liberalization

and the Developing Countries.” November, 2001
www.imf.org Accessed 9/22/09.

Jacks, David S. and Krishna Pendakur. “Global Trade and the Maritime Transport Revolution.” *National Bureau of Economic Research Working Paper Series* No. 14139 (2008).

Karabay, Bilgehan and John McLaren. “Trade, Offshoring, and the Invisible Handshake.” *National Bureau of Economic Research Working Paper Series* No. 14061 (2009).

Krugman, Paul, and Maurice Obstfeld. *International Economics: Theory and Policy (8th Edition)*. Thrali, WA: Prentice Hall, 2008.

Lawrence, Robert Z. and Matthew J. Slaughter. “International Trade and American Wages in the 1980s: Giant Sucking Sound or Small Hiccup?” *Brookings Papers on Economic Activity* (1993): Pgs. 161-226.

Liu, Runjuan and Daniel Trefler. “Much Ado About Nothing: American Jobs and the Rise of Service Outsourcing to China and India.” *National Bureau of Economic Research Working Paper Series* No. 14061 (2008).

te Velde, Dirk Willem. “Offshoring: Opportunities and Threats as Services go Global.” *Overseas Development Institute Briefing Paper* (2004).

Wang, Yanlai. *China’s Economic Development and Democratization*. Burlington, VT: Ashgate, 2003.

Wessel, David. “The Case For Taxing Globalization’s Big Winners.” *The Wall Street Journal* June 14, 2007.