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## **Job Loss: Causes and Policy Implications**

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# Job Loss: Causes and Policy Implications

## Summary

Total non-farm private employment fell from 111.6 million in February 2001 to a trough of 108.4 million in July 2003. Job loss — declines in employment — is one of the most important macroeconomic problems facing policymakers, both in terms of its economic and social cost. But what is often missing from the policy debate is a distinction between net job loss and gross job loss. Gross job loss is the total number of jobs eliminated in a given period, while net job loss is the result of greater gross job loss than gross job gains in a given period. Economists view net job loss as a detrimental phenomenon, and most recommend that fiscal and monetary policy be used to mitigate it. However, they view gross job loss, as long as it is offset by gross job gains, as a healthy and normal part of a functioning market economy, although it may have social costs and will not affect all regions or industries equally.

The U.S. Bureau of Labor Statistics provides data that help to put the distinction between gross and net job loss into perspective. Gross job loss and job gains are each, on average, twenty times higher than net job loss (or gains) in any given quarter. This is true in both expansions and recessions. Gross job gains increased steadily from the beginning of the data series in 1992 until the end of 1999; at the same time, job losses increased steadily from 1992 to 2001. Clearly, gross job loss is not incompatible with a healthy labor market: during an expansion in which the unemployment rate was lower than it had been in three decades, gross job losses steadily increased as the expansion progressed. Even during the recent recession and “jobless recovery,” gross job gains continued to average about 8 million per quarter; but these gross job gains were more than offset by gross job losses. In addition, earlier data for manufacturers show that small businesses have both higher gross job gains and losses, and are no better than large firms at net job creation.

Many causes of job loss have been offered, including imports, trade deficits, offshore outsourcing, direct investment abroad, and restructuring. But economic theory suggests that all of these cause gross job loss, not net job loss. Historical experience is supportive: neither imports, the trade deficit, nor the implementation of trade liberalization agreements are correlated with net job loss. Theory suggests, and empirical evidence confirms, that only recessions cause net job loss.

Policies that impede gross job loss may seem to be a desirable way to limit net job loss at first blush. But such policies could make firms reluctant to hire new workers, since a firm would not be able to subsequently reduce its workforce easily if the need for the newly hired workers proved to be only temporary. As a result, gross job gains could decline; if gross job gains declined by more than gross job loss declined, net job creation would decline. International comparison confirms this view: Germany, France, Italy, and Spain all have high barriers to job loss and unemployment rates that are typically twice as high as low barrier countries like the United States. While attempts to impede gross job loss may reduce economic efficiency, policy can (and does) assist some of those affected by gross job loss through unemployment insurance and other parts of the social safety net. Whether the existing social safety net is adequate as gross job loss increases is the subject of policy debate. This report will be updated as events warrant.

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# Job Loss: Causes and Policy Implications

Total private non-farm employment fell from a peak of 111.6 million in February 2001 to a trough of 108.4 million in July 2003.<sup>1</sup> Job loss — declines in employment — is one of the most important macroeconomic problems facing policymakers, both in terms of its economic cost and the social toll it takes on our society. But what is often missing from the policy debate is a distinction between net job loss and gross job loss. Gross job loss is the total number of jobs eliminated in a given period, while net job loss is the result of greater gross job loss than gross job gains in a given period. In expansions, the labor market is characterized by net job creation amidst gross job loss. This is required to maintain steady employment rates with a growing population. It is only during recessions that the overall labor market experiences persistent net job loss. Economists view net job loss as a detrimental phenomenon and most recommend that policy be used to mitigate it. However, they view gross job loss, as long as it is offset by gross job gains, as a healthy and normal part of a functioning market economy, although it may have social costs.

## The Facts

A recently released quarterly data series from the U.S. Bureau of Labor Statistics (BLS), shown in **Figure 1**, provides data that help to put the distinction between gross and net job loss into perspective.<sup>2</sup> These data are measured from the firm's perspective — changes in the size of the firm's workforce — not the employee's perspective. For this reason, the data, in a sense, undercount the amount of change in the workforce since they do not account for movements of individual workers to and from any given firm if the firm remains the same size (e.g., a worker quits and is quickly replaced by a new hire). The gross job loss figures, from the employee's perspective, could be involuntary (layoff, firing) or voluntary (quitting, retirement).<sup>3</sup>

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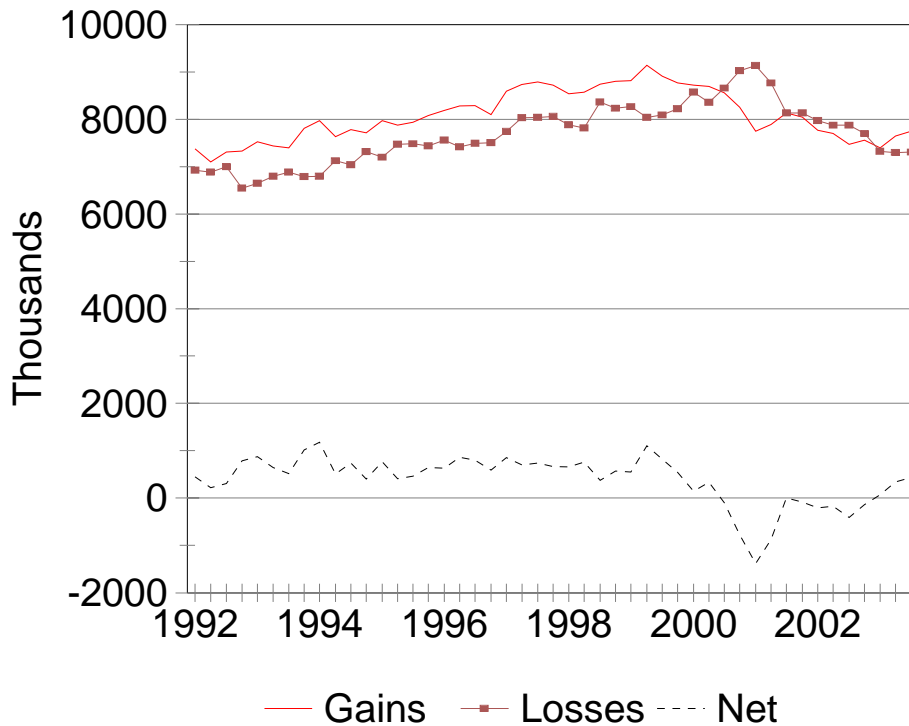
<sup>1</sup> Total employment is measured in two different BLS surveys, the household survey and the establishment survey. Data on total employment cited in this report come from the establishment survey, which queries employers about the number of jobs on their payrolls, unless otherwise noted.

<sup>2</sup> The new series is discussed in Timothy Pivetz, Michael Searson, and James Spletzer, "Measuring Job and Establishment Flows with BLS Longitudinal Microdata," *Monthly Labor Review*, Apr. 2001, p. 13.

<sup>3</sup> Data on layoffs/discharges and quits can be found in a separate, non-comparable data series from BLS which was started in Dec. 2000. In 2001, layoffs/discharges averaged 1,705 per month and quits averaged 2,566 per month. In 2002, layoffs/discharges averaged 1,614 per month and quits averaged 2,219 per month. This data are collected in the Job Opening and Labor Turnover Survey.

In the first quarter of 2004, gross job loss and gains equaled 7.3 and 7.7 million per quarter, respectively, about 7% of total employment. As can be seen in **Figure 1**, gross job loss and job gains are each, on average, twenty times higher than net job loss (or gains) in any given quarter. This is true in both expansions and recessions. The rate of job gains increased steadily from the beginning of the series in 1992 until the end of 1999; at the same time the rate of time job losses increased steadily from 1992 to 2001. Some, but not all, of the long run increase in gross job gains and losses can be attributed to a growing labor force. The rest of the increase indicates that the U.S. labor force is becoming more mobile over time, but the data cannot tell us if this is the worker's or the firm's decision, or both. Clearly, gross job loss is not incompatible with a healthy labor market: during an expansion in which the unemployment rate was lower than it had been in three decades, gross job losses steadily increased as the expansion progressed. And even during the recent recession and "jobless recovery," gross job gains continued to average about 8 million per quarter; but gross job gains in this period were more than offset by gross job losses.<sup>4</sup>

**Figure 1: Gross Job Gains, Gross Job Loss, and Net Job Gains**



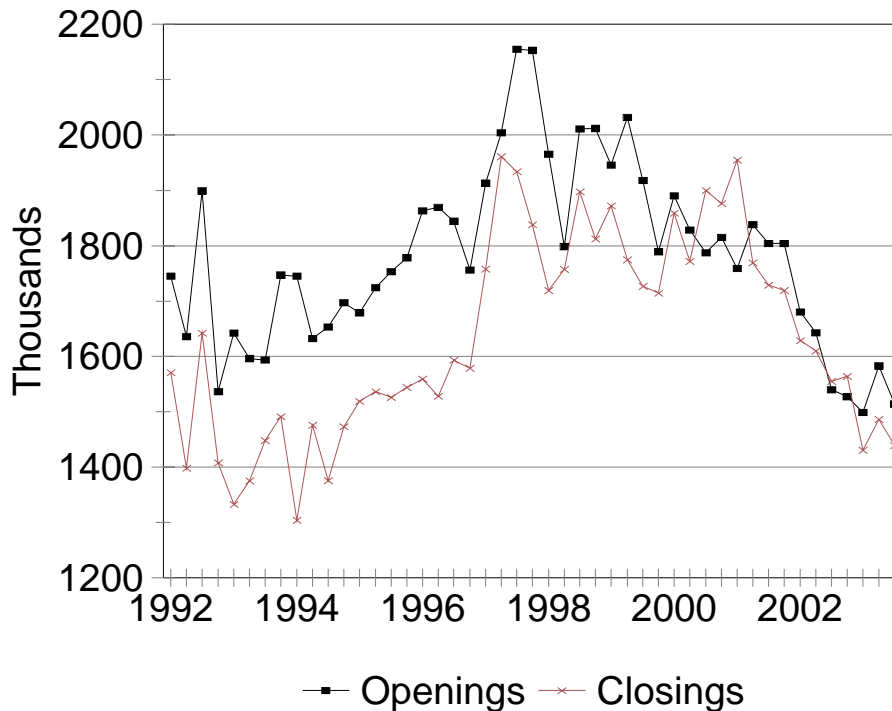
Source: BLS

Other data from the same survey measure how much of the gross job gains and losses are caused by firm openings or closings. (Mergers are not counted as openings or closings.) On average, about one-fifth of gross job gains and losses are attributable to firm openings or closings. These data also tell a story that may be at

<sup>4</sup> For more information, see CRS Report RL32047, *The 'Jobless Recovery' from the 2001 Recession*, by Marc Labonte and Linda Levine.

odds with popular perception. As shown in **Figure 2**, gross job losses due to firm closings steadily increased during the employment boom of the 1990s. Gross job loss was not significantly higher during the 2001 recession than in the late 1990s, suggesting firm closings were not the driving force behind heightened unemployment during the latest recession. Losses due to firm closings began to fall after the end of the recession (the ‘jobless recovery’ period), and actually reached their lowest levels since the mid-1990s in 2002 and 2003. Gross job gains attributable to firm openings declined steadily from 2000 onward; nevertheless, they averaged 1.7 million during the recession and subsequent recovery.

**Figure 2: Gross Job Gains Attributable to Firm Openings and Gross Job Loss Attributable to Firm Closings**



Source: BLS

These data provide a picture, during expansions, of a highly dynamic U.S. labor market in which labor rapidly shifts from firm to firm to its most efficient use. This vitality is the essence of economic growth and rising living standards for society as a whole in a market economy.<sup>5</sup> It is caused both by output shifting from some firms

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<sup>5</sup> To judge the benefits of gross job loss from the perspective of a nation’s economic development, consider the counterexample: if the U.S. had experienced no gross job loss in the 20<sup>th</sup> century. At the beginning of the 20<sup>th</sup> century, much of the U.S. population worked in the farming sector. If gross job loss in the farming sector had not occurred, those workers would not have been available to work in the growing manufacturing and service sector. Today, farms account for about 1.5% of the total employment and 1% of the nation’s output. If gross job loss had not occurred in the last century, much of today’s labor force would not  
(continued...)

to more efficient ones within an industry and by shifts in spending from one industry to another, due to factors such as changing consumer tastes, technology, or comparative advantage. Of course, there will always be winners and losers in a market economy. While significant gross job loss is consistent with net job creation (because it is offset by gross job gains) for the nation as a whole, gross job loss can translate into net job loss at the local level even when national employment is rising because the losses and gains may not occur in the same geographic area. Six mid-western and two southern states have experienced net job loss<sup>6</sup> from 1998 to 2003; the other 42 states experienced net job gains.

Furthermore, while steady net employment gains are unambiguously good for society as a whole, the data do not necessarily indicate that the same individuals who lose jobs also gain jobs. The data also do not tell us if the job loss is voluntary or involuntary, nor how many of the individuals who involuntarily changed jobs were forced to take new jobs that were less desirable or paid less. A separate (and non-comparable) data series on worker displacement from BLS can help to answer these questions.<sup>7</sup> BLS classifies workers as displaced if they lost their job because their plant closed down or moved, their positions or shifts were abolished, or there was insufficient work. From 2001 to 2003, 5.3 million workers with tenure of three years or more were displaced (another 6.1 million short-tenured workers were displaced during that period). Although the two data series cannot be compared directly, gross job loss equaled 94 million over that three-year period. Displacement is significantly lower during expansions; for example, from 1997 to 1998, 1.9 million long-tenured workers were displaced.

Of the displaced workers, about 65% were reemployed, 20% were unemployed, and 15% had left the labor force at the beginning of 2004. Of those reemployed full-time, about 40% were now earning more than they had at the displaced job, and one-third were now earning significantly lower wages (at least 20% lower). Workers 55 years of age and over had lower reemployment rates than younger workers.<sup>8</sup> Displaced workers fared better during expansions. For example, in 1997-1998, 80% of displaced workers were reemployed, and of those reemployed full-time, their median wage was about the same as it had been at the displaced job and 60% were making more than at their displaced job.

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<sup>5</sup> (...continued)

be available to produce the other 99% of U.S. output.

<sup>6</sup> The states experiencing job loss are: Illinois, Indiana, Iowa, Michigan, Mississippi, Missouri, Ohio, and South Carolina.

<sup>7</sup> BLS, "Worker Displacement, 2001-2003," press release USDL 04-1381, July 30, 2004. The newest available data in this series are from 2003. All of the following data refer to workers with three years of tenure or more. See also Ryan Helwig, "Worker Displacement in a Strong Labor Market," *Monthly Labor Review*, Bureau of Labor Statistics, June 2001.

<sup>8</sup> Farber finds that older displaced workers were more likely to suffer a significant loss of earnings than younger workers. Henry Farber, *Job Loss in the United States, 1981-2001*, National Bureau of Economic Research, Working Paper 9707, May 2003.

Although the government does not provide official data on gross job loss and gains before 1992, private research suggests that gross job loss and gains on a large scale are not new. Using government data, Davis, Haltiwanger, and Schuh estimated that gross job gains averaged 5.2% and gross job loss averaged 5.5% of total employment per quarter in the manufacturing sector from 1972 to 1988. (The manufacturing sector experienced net job loss of 0.3% per quarter in these years, but the economy as a whole experienced net job creation.) The authors found that gross job loss and gains were persistent (jobs lost from a plant were not quickly regained) and concentrated at the plant level (most job losses occurred at a small number of plants). They also found that the lowest wage workers had the highest rates of gross job loss and gross job gains, but the highest wage workers had the highest rate of net job loss. They found that the smaller the business, the higher the rate of gross job gains. But smaller businesses had even higher rates of gross job loss, and their rates of net job creation were no better than large firms. They observed that about three quarters of all gross job loss and gains occur at firms with 100 employees or more.<sup>9</sup>

Some gross job loss takes the form of mass layoffs, during both expansions and recessions. In another non-comparable survey from BLS, more than 2 million workers lost their jobs from extended mass layoffs from 2003:4 to 2004:3. This figure undercounts workers affected by mass layoffs since it does not include mass layoffs of less than 50 workers or layoffs that lasted less than 30 days. Mass layoffs tend to be cyclical: workers separated by mass layoffs rose from 1.2 million in 2000 to 1.5 million in 2002. Since unemployment totaled 8.4 million in 2002, mass layoffs are an important but not primary cause of unemployment. BLS has not kept a continuous data series long enough to determine if there has been a long-term upward trend in mass layoffs.<sup>10</sup>

## What Causes Gross Job Loss and Net Job Loss?

Several economic phenomena have been identified in popular discussion as purportedly causing job loss. While all of these phenomena cause gross job loss, most have a much smaller effect on net job loss than popularly perceived. The exception is the business cycle: in each instance, recessions have been the cause of persistent net job loss in the post-war period.

**Trade.** When trade expands, greater imports cause gross job loss, as products that were previously produced in the United States are now produced by workers in other countries, rendering those U.S. workers redundant. However, economic theory states that expansions in trade have no effect on net employment. As foreign countries increasingly exchange their goods for U.S. exports, more workers are needed in U.S. export industries. In addition, because trade is based on comparative advantage, trade increases the purchasing power of U.S. incomes in the aggregate.

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<sup>9</sup> Steven Davis, John Haltiwanger, and Scott Schuh, *Job Creation and Destruction* (Cambridge, MA: MIT Press, 1996).

<sup>10</sup> For more information, see CRS Report RL30799, *Corporate Downsizing and Other Mass Layoffs*, by Linda Levine.



Thus, trade allows the U.S. economy as a whole to produce and consume more domestic goods, requiring more workers to produce them.<sup>11</sup> It is possible that there could be some transitional loss in net employment if workers cannot easily be reallocated into other sectors of the economy, causing net employment to temporarily be greater than zero. For example, workers who have lost their jobs in the import-competing industries may not have the skills needed by export industries. But this transitional effect would disappear once markets had adjusted.<sup>12</sup>

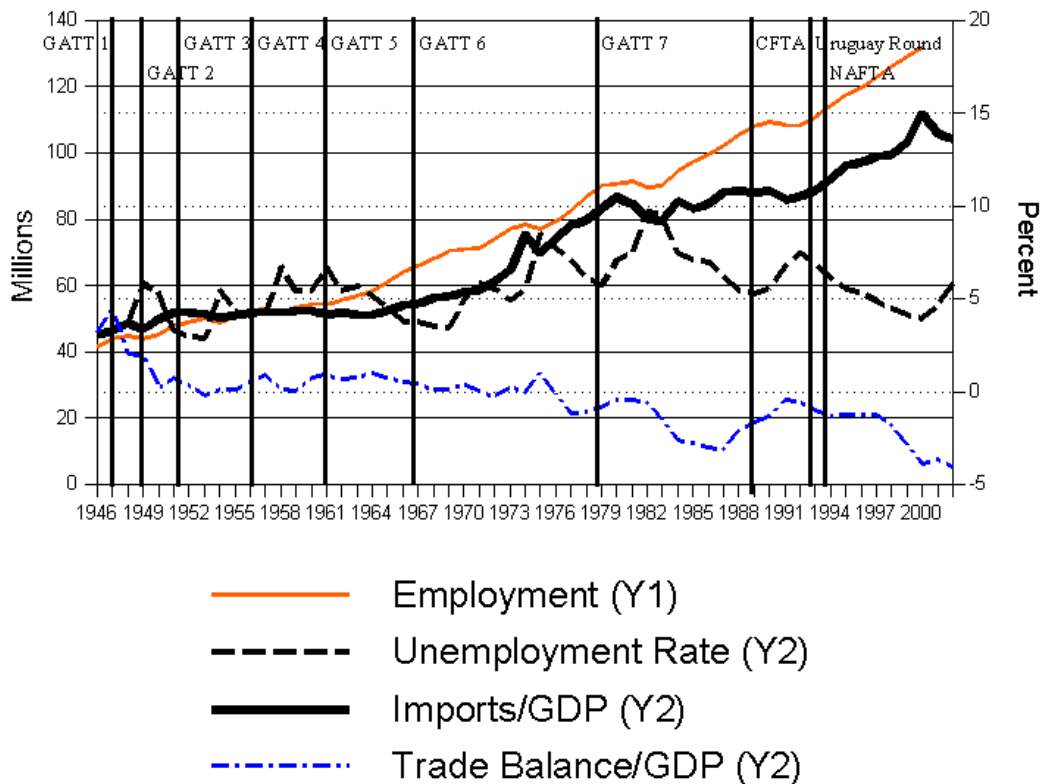
U.S. history offers persuasive evidence that trade liberalization has no effect on net employment, as can be seen in **Figure 3**. During the post-war period, U.S. trade has become progressively liberalized, with eight rounds of world trade liberalization negotiated between 1947 and 1993 through the General Agreements on Tariffs and Trade (GATT, later became World Trade Organization), as well as the Canadian Free Trade Agreement in 1989 and North American Free Trade Agreement (NAFTA) in 1994. Imports have increased steadily as a percentage of GDP throughout the post-war period, from about 4% of GDP in the 1940s to about 14% of GDP in recent years. If trade caused net job loss, employment would have declined and unemployment risen throughout the post-war period. The opposite is the case: employment has steadily increased during the post-war period, and the unemployment rate has mirrored the business cycle, not trade patterns. Indeed, trade liberalization does not appear to have strong effects on even transitional unemployment. For example, NAFTA was implemented at a time when aggregate employment was rising and unemployment was falling. GATT Rounds 1, 3, 4, 6, 7, and 8 were completed at times when unemployment was low, and unemployment, though high, fell subsequent to GATT Rounds 2 and 5. The most recent example the United States has with significantly increasing the restrictions on trade was the Smoot-Hawley tariffs, which did not stem the loss of employment during the Great Depression.<sup>13</sup>

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<sup>11</sup> For more information, see CRS Report RL32059, *Trade, Trade Barriers, and Trade Deficits: Implications for U.S. Economic Welfare*, by Craig Elwell.

<sup>12</sup> Even if U.S. workers could not compete with foreign workers, the floating exchange rate system would prevent imports from leading to net job loss. Since dollars must be sold in the foreign exchange market to purchase imports, if foreign firms became more “competitive” at producing goods than U.S. firms such that imports rose, the dollar exchange rate would depreciate through the purchase of imports until U.S. firms were “competitive” again.

<sup>13</sup> Using plant-level data, Davis et al. demonstrate that trade has little effect on *gross* job loss either. Although they found that industries with the highest degree of import penetration had the highest gross job loss rates, they had the second highest gross job gain rate, and firms with the second highest degree of import penetration had the lowest gross job loss rates. After controlling for wages (as a proxy for comparative advantage), the relationship between gross job loss and import penetration became statistically insignificant. As the authors point out, theory suggests that the effect of trade liberalization on gross job flows is ambiguous. Liberalization could increase gross job flows by exposing the U.S. economy to more shocks from abroad or decrease gross job flows by diversifying the economy so that the effects of domestic shocks are reduced. Davis et al., *op. cit.*

**Figure 3: Effects of Trade on Employment**

**Source:** Bureau of Economic Analysis, Bureau of Labor Statistics

**Note:** Import and Trade Balance data expressed in real 2000 dollars. The first seven rounds of GATT negotiations are labeled GATT 1-7; the eighth round is labeled the Uruguay Round. The Canadian Free Trade Agreement is labeled CFTA.

While regression analysis, which allows other factors to be held constant, is beyond the scope of this report, informal quantitative evidence on the relationships portrayed in **Figure 3** can be gleaned using correlation analysis. The results are presented in **Table 1**.<sup>14</sup> It shows that between 1946 and 2002, changes in employment are highly correlated with changes in imports. Thus, the historical experience is the opposite of the typically claimed relationship: when imports increased, employment typically also increased. While this is not evidence that higher imports cause higher employment — the two variables are correlated because both usually increase — it is evidence that higher imports do not cause lower employment. The table also demonstrates that the implementation of trade liberalization agreements has virtually no relationship historically to changes in net employment in the same or following year (in case there is a lagged effect), as

<sup>14</sup> Correlation is measured on a scale of 1 to -1, where correlation=1 if two variables are perfectly correlated (always move together), correlation=0 if two variables are not correlated (do not move together), and correlation=-1 if the two variables are perfectly negatively correlated (always move in opposite directions).

economic theory would suggest. In sum, the results suggest that trade either has no negative effect on employment, or the effect is swamped by other factors.

**Table 1: Historical Correlation between Trade and Employment**

Correlation between employment growth and...	Correlation Coefficient
...change in imports (as a % of GDP)	0.47
...major trade agreement in same or previous year	0.10
...change in trade balance (as a % of GDP)	-0.02
...GDP growth	0.53

**Source:** CRS calculations based on BLS, BEA data

**Note:** Correlation based on annual data 1946-2002; major trade agreements include GATT rounds 1 to 8, Canadian Free Trade Agreement and North American Free Trade Agreement.

**Trade Deficits.** Some who concede that trade has no effect on net employment when higher imports are matched by higher exports argue that trade still reduces net employment when higher imports are matched instead by a larger trade deficit. They reason that higher imports cause gross job loss, but are not offset by gross job gains in the export sector if they lead to a trade deficit. While this is true, trade deficits do lead to gross job gains in other ways. When the United States runs a trade deficit, it exchanges foreign imports for U.S. assets. This puts downward pressure on U.S. interest rates, stimulating spending on physical investment (plant and equipment). Lower interest rates also stimulate spending on housing and interest-sensitive goods, such as automobiles and appliances. As a result, the trade deficit causes gross job gains in the sectors that produce plant, equipment, housing, and interest-sensitive goods, all else equal. These gross job gains may not occur instantaneously — so there could be transitional net job loss — but when they do occur, they will offset the gross job loss caused by higher imports so that the trade deficit causes no net job loss.

As can be seen in **Figure 3**, the historical experience confirms this conclusion: the large increase in the trade deficit in the 1980s and 1990s took place at a time of rising employment and falling unemployment. **Table 1** demonstrates that there was almost no correlation between changes in the trade balance and changes in employment.<sup>15</sup>

**Offshore Outsourcing.** The term offshore outsourcing or offshoring is frequently used in several different ways.<sup>16</sup> It can refer to U.S. multinational firms

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<sup>15</sup> For more information, see CRS Report RL30534, *America's Growing Current Account Deficit: Its Cause and What It Means for the U.S. Economy*, by Marc Labonte and Gail Makinen.

<sup>16</sup> For more information, see CRS Report RL32292, *Offshoring (a.k.a. Offshore)* (continued...)

shifting production from the United States to an overseas subsidiary, U.S. firms importing intermediate goods from foreign companies, importing services, or U.S. firms making overseas investments. Economists view the first three phenomena similarly to trade (the latter phenomenon will be discussed separately in the next section). When U.S. firms outsource production to foreign firms, gross job loss occurs since goods and services that were being produced by U.S. workers are now being produced by workers in other nations. But when outsourcing occurs, those foreign firms must be paid using U.S. dollars. The foreign firms, in turn, can use those dollars in three ways. First, they can buy U.S. exports, resulting in gross job gains in the export sector. Second, they can buy U.S. assets (increase the trade deficit), resulting in gross job gains in the interest-sensitive sectors that produce plant, equipment, housing, and interest-sensitive goods, as explained in the previous section. Third, they can sell their U.S. dollars for another currency, causing the dollar to depreciate; as a result, the output of U.S. exporting firms and U.S. import-competing firms would increase as U.S. goods become more price competitive internationally. Thus, in all three scenarios, gross job loss is offset by gross job gains so that there is no net job loss, although there may be for a transitional period.

Quality data on outsourcing is hard to come by because the term has only recently been coined, there is not yet any consensus as to how it should be defined, and the concept cannot easily be measured accurately. It is popularly used to mean net job loss, but only gross job loss could be measured. For example, it would be difficult for BLS to measure gross job gains caused by foreign firms outsourcing to the United States, and impossible to trace the rise in employment caused by the spending on U.S. goods of foreign firms that U.S. firms have engaged in outsourcing. Changes in imports of services suggests that outsourcing, by that definition, is a minor phenomenon relative to total gross job loss. The one official data source on outsourcing comes from the BLS mass layoffs series, and this only includes one type of outsourcing, U.S. firms relocating work abroad. In the first three quarters of 2004, only 3% of mass layoffs were caused by relocation abroad.<sup>17</sup>

**Overseas Investment.** The argument is sometimes made that when U.S. firms decide to undertake direct investment abroad, it reduces U.S. employment. According to the argument, if the U.S. firm had not, say, built the new factory abroad that employs foreign workers, it would have built a factory in the United States that employed U.S. workers. As a result, net employment is lower than it would have been.

Economic theory states that capital investment determines the wages of employees, not the level of employment. That is because capital investment increases the productivity of existing workers, and in a competitive market wages are

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<sup>16</sup> (...continued)

*Outsourcing) and Job Insecurity Among U.S. Workers*, by Linda Levine; and CRS Report RL32484, *Foreign Outsourcing: Economic Implications and Policy Responses*, by Craig Elwell.

<sup>17</sup> Since the survey question is new, it is difficult to judge its accuracy; for example, the response could be biased in favor of over-reporting if outsourcing is being used as a scapegoat for other reasons for layoffs.

determined by productivity. If the level of employment was based on the amount of capital available per worker, then the United States would not have been able to achieve full employment in the past since capital per worker has increased steadily over time. Yet throughout its history, the United States has achieved full employment most of the time.

Even if U.S. investment abroad did lead to net job loss, the data do not suggest that this explanation is possible since the United States is a net recipient of foreign capital, and has been for the past few decades. In other words, any jobs lost by U.S. investment abroad have been more than offset by the jobs created by greater foreign investment in the United States. Although U.S. direct investment abroad exceeds foreign direct investment in the United States, overall foreign investment in the U.S. (direct, portfolio, and official) is greater than U.S. investment abroad.<sup>18</sup> Ultimately, foreign investment has the same effect on the economy regardless of the form it takes.

Net foreign investment in the United States is, by identity, equal to the U.S. current account deficit (trade deficit plus net transfers). That is because capital cannot flow into the country on net (net borrowing cannot occur) unless the United States imports more than it exports. Any time U.S. investment abroad increases, all else equal, the trade deficit must fall. Thus, explanations of net job loss attributed to the trade deficit and explanations of net job loss attributed to U.S. investment abroad are mutually exclusive — *both stories cannot be correct*. This can be proven by considering the foreign exchange market. If U.S. direct investment in the euro area increased, dollars must be exchanged for euros. This causes the dollar to depreciate against the euro, causing U.S. exports to the euro area to rise and euro imports to the U.S. to fall. As a result, the trade deficit narrows.

Data on employment at U.S. multinational companies domestically and abroad indicate that both have tended to rise over time, which belies the notion that a job gained abroad will be offset by a job lost domestically. The newest data available in this series is for 2001, before the popular interest in offshore outsourcing emerged.<sup>19</sup>

**Economic Restructuring.** Declines in aggregate employment are often blamed on restructuring in the economy. For example, the decline in employment since 2001 is often attributed to the collapse of the “dot-com” industry. According to this argument, resources had been overinvested in the dot-com industry in the late 1990s. When this situation was rectified in the late 1990s, workers in that industry were no longer needed, causing overall employment to decline.

The reallocation of resources in the economy is probably the primary reason that gross job loss occurs. Changes in tastes, technology, and comparative advantage continually cause labor and capital to be shifted from one industry to another in a market economy. As this report has demonstrated, sizeable reallocations of labor

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<sup>18</sup> Portfolio investment refers to the purchase of financial securities. Official investment refers to the purchase of assets by government treasuries or central banks.

<sup>19</sup> See CRS Report RL32461, *Outsourcing and Insourcing Jobs in the U.S. Economy*, by James Jackson.

across industries has been a constant in the United States for as long as data has been collected. But in most years, the economy has not had any problem offsetting gross job loss with a greater number of gross job gains. Thus, economic restructuring typically is not accompanied by net job loss overall, even though it often results in net job loss at the local level. It is possible that if restructuring were unusually large at any given time, perhaps like the dot-com collapse, the economy could be unable to absorb that many workers in new jobs fast enough to prevent net job loss. Unfortunately, there is no way to systematically identify which restructuring events are large enough and separate their effects on net job loss from other economic phenomena occurring simultaneously. For example, the net job loss associated with the 2001 recession could be caused by nothing more than an unrelated decline in aggregate spending, as is typical of other historical recessions. In the absence of this decline in aggregate spending, it is possible that the dot-com collapse would not have had any effect on aggregate employment.

Even if restructuring does not cause net job loss, there is debate as to whether recessions have the beneficial effect of hastening restructuring. Some argue that when times are tough, firms are forced to innovate to survive and during booms weak firms are propped up by prosperity.<sup>20</sup> If correct, this points to an economic benefit from recessions, in contrast to the mainstream economic view that recessions are economically wasteful because they cause productive labor and capital to lay idle. But it is difficult to evaluate this argument quantitatively.

**Economic Downturns.** Unlike the other factors described above, economic downturns are the only factor that causes both gross and net job loss according to economic theory. This theory is borne out by historical experience, as illustrated in **Figure 4** and **Table 2**, which show the high correlation between contemporaneous GDP growth and employment growth. Economic downturns are characterized by insufficient aggregate spending to support existing labor and capital resources. As a result, capital goes idle and workers are laid off until spending revives.<sup>21</sup> The government can boost aggregate spending back to “full employment” through expansionary fiscal policy (a larger government budget deficit) or monetary policy (lower short term interest rates by the Federal Reserve). Net job loss caused by economic downturns is temporary because insufficient aggregate spending is only a temporary phenomenon — in the long run, markets adjust to bring spending back into line with potential production. Since 1947, net job loss lasting more than one quarter has only occurred during or immediately following a recession. There have only been two recoveries in which net job loss has continued for more than one quarter after the recession had ended, the recoveries beginning in 1991 and 2001.<sup>22</sup>

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<sup>20</sup> By contrast, Caballero and Hamour argue that recessions actually retard restructuring because historically they have been followed by periods of lower rates of gross job loss, rather than higher rates of gross job gains. Richard Caballero and Mohamed Hamour, *The Costs of Recessions Revisited: A Reverse-Liquidationist View*, National Bureau of Economic Research, Working Paper 7355, Sept. 1999.

<sup>21</sup> For more information, see CRS Report RL31237, *The 2001 Economic Recession*, by Marc Labonte and Gail Makinen.

<sup>22</sup> For more information, see CRS Report RL32047, *The “Jobless Recovery” from the 2001* (continued...)

**Figure 4: Effects of Recessions on Employment**

**Source:** National Bureau of Economic Research; Bureau of Labor Statistics

**Labor Market Conditions.** In the long run, the effects of business cycle changes on net job creation cancel out — net job loss in downturns is offset by net job gains in booms. Thus, in the long run net job creation is determined by the characteristics of the labor market. Over time, a growing population leads to rising employment, or net job creation. In 1950, the U.S. population equaled 151.3 million and non-farm employment equaled 45.3 million; in 2000, the U.S. population equaled 281.4 million and employment equaled 131.8 million.

But the question of how much of the population is employed — both the labor force participation rate and what economists refer to as the “natural rate” of unemployment or NAIRU (non-accelerating inflation rate of unemployment) — is determined in the long run by demography (e.g., younger workers have higher unemployment rates), social norms (e.g., the large scale entrance of wives into the working force), and policy (e.g., welfare reform).<sup>23</sup> In the long run, the rate of net job creation will equal the rate needed to keep the economy at the natural rate of unemployment. Beginning in the 1970s and lasting until the 1990s expansion, the

<sup>22</sup> (...continued)

*Recession*, by Marc Labonte and Linda Levine. After slightly rising for a few months in 2002, employment began falling again in 2003. It is not clear if the employment decline in 2003 should be counted as part of the post-recession decline or a separate phenomenon.

<sup>23</sup> For more information on the NAIRU, see CRS Report RL30931, *Unemployment and Inflation: What Is The Connection?*, by Brian Cashell.

unemployment rate rose to unusually and persistently high levels for reasons that cannot be explained by the business cycle alone. Changes in demography, social norms, and policy, as well as the coinciding productivity slowdown, all played a role in the increase, but there is little consensus among economists on the relative importance of each factor. Could part of the recent labor market sluggishness be due to an upward shift in the natural rate, or a return to the natural rate after unemployment was held below it in the late 1990s? Either is possible, but it is too soon to tell. But because changes in the natural rate are gradual, an increase in the natural rate is more likely to be associated with a slower rate of net job creation than net job loss, all else equal.

## Policy Implications

Most economists agree that net job loss is an undesirable phenomenon, and recommend that public policy be used to offset it. Policymakers can use expansionary monetary policy (lower short term interest rates by the Federal Reserve) or expansionary fiscal policy (an increase in the budget deficit) to stimulate aggregate spending and offset net job loss.<sup>24</sup> If used properly and prudently, these policy tools can theoretically minimize net job loss. Unfortunately because of policy lags in recognition, implementation, and effectiveness, fiscal and monetary policy will probably never be conducted effectively enough to eliminate recessionary periods of net job loss. Direct job creation programs have been used by the government in past recessions to stem net job loss, but from an economic perspective, these policies have a similar effect to any expansionary fiscal policy, and they also are prone to implementation lags.<sup>25</sup>

Policies that impede gross job loss (e.g., regulatory restrictions on dismissal or layoffs) may seem to be a desirable way to limit net job loss at first blush. But such policies could have the unintended effect of making firms reluctant to take on new workers, since a firm would not be able to subsequently reduce its workforce easily if the need for the newly hired workers proved to be only temporary. As a result, gross job gains could decline; if gross job gains declined by more than gross job loss declined, net job creation would decline. This suggests that attempts to limit gross job loss could be counterproductive. Since gross job flows are, on the whole, caused by the reallocation of resources to their most efficient use, policies to impede gross job loss would also likely have adverse consequences for growth and efficiency. Helping the “losers” in the labor market make the transition into a new employment situation is a less costly alternative, and one that is compatible with an efficient, dynamic labor market.

International comparison confirms this view. The Organization of Economic Cooperation and Development (OECD) ranked countries on a scale of zero to six

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<sup>24</sup> For more information, see CRS Report RL30354, *Monetary Policy: Current Policy and Conditions*, by Marc Labonte and Gail Makinen; and CRS Report RL31235, *The Economics of the Budget Deficit*, by Brian Cashell.

<sup>25</sup> For a history of job creation programs, see CRS Report RL31138, *Countercyclical Job Creation Programs of the Post World War II Era*, by Linda Levine.



based on restrictions on dismissal from regular employment, restrictions on temporary employment, and restrictions on mass layoffs. As seen in **Table 2**, countries with little protection such as Switzerland, Denmark, New Zealand, and the United States had their unemployment rate fall to between 1.9% and 5.2% at the peak of the 1990s expansion. Countries with greater protection had a mixed experience: some small countries like Portugal kept unemployment low, but the four large countries with the most protection (Germany, France, Italy, and Spain) had the highest unemployment rates of any country.<sup>26</sup> The unemployment rate in the United States has been lower at the trough of the recession than the lowest level many of these countries attained at the peak of their business cycles, and had half the unemployment rate of these countries at its peak.

**Table 2: International Comparison of Employment Protection Policies**

	Regular Employment	Temporary Employment	Mass Layoffs	Unemployment Rate - 1990s Business Cycle Peak
<b>Low Unemployment Countries</b>				
Switzerland	1.2	0.9	3.9	1.9%
Netherlands	3.1	1.2	2.8	2.0%
Japan	2.7	2.1	1.5	2.1%
Norway	2.4	2.8	2.8	3.2%
Austria	2.6	1.8	3.3	3.6%
United States	0.2	0.3	2.9	4.0%
Portugal	4.3	3	3.6	4.0%
Sweden	2.8	1.6	4.5	4.0%
Denmark	1.6	0.9	3.1	4.9%
United Kingdom	0.8	0.3	2.9	5.1%
New Zealand	1.7	0.4	0.4	5.2%
<b>Moderate Unemployment Countries</b>				
Australia	1	0.9	2.6	6.3%
Belgium	1.5	2.8	4.1	6.7%
Canada	0.9	0.3	3.4	6.8%
<b>High Unemployment Countries</b>				
Germany	2.8	2.3	3.1	7.8%
France	2.3	3.6	2.1	8.5%
Italy	2.8	3.8	4.1	9.0%
Spain	2.6	3.5	3.1	10.5%

**Source:** OECD, *Employment Outlook*, 1999.

**Note:** Measured on a scale of 0 to 6, with 0 equal to the least employment protection.

<sup>26</sup> See CRS Report RL30765, *Causes of Unemployment: A Cross-Country Analysis*, by Marc Labonte.

If policies to forestall gross job loss are deemed to have too high an efficiency cost, what role can policy play? There are two perspectives that can be used to answer that question. One perspective would view the labor reallocation issue as a purely social problem. That is, allowing gross job loss to occur with no impediment from the government may be an economically desirable outcome as long as it is cancelled out by job creation, but the situation creates social problems that government can legitimately tackle on non-economic grounds. These social problems include poverty, psychological problems, crime, alcoholism and substance abuse, the undermining of families and communities, and so on that reportedly increase when gross job loss occurs. Economic analysis provides little guidance on the best role for the government to play in tackling these non-economic problems.

Alternatively, an economic perspective would ask if any market failure is associated with gross job loss, and what role the government can play in potentially rectifying that market failure. While it can be argued that gross job loss poses no market failure in and of itself, a persuasive argument can be made that there are market failures that prevent individuals from efficiently insuring themselves in the private market against the risks posed by gross job loss.<sup>27</sup> To a considerable extent, the possibility of gross job loss is a risky event beyond a worker's control, such as adverse changes in the business cycle, tastes, technology, or trade patterns. One would expect a worker to be willing to use some of his income to privately purchase insurance against those risks, just as individuals insure against the risk of death, fire, health problems, and so on. Yet the limited use of private unemployment insurance to supplement government-provided insurance suggests that market failures may significantly hamper the functioning of the private market.

All insurance markets are hampered by two important market failures — adverse selection and moral hazard. A persuasive argument can be made that unemployment insurance may be more adversely affected by both types of market failure than most other types of insurance. Adverse selection is caused by asymmetric information: buyers of insurance know more about their riskiness than sellers. As a result, only buyers with higher risks will tend to purchase insurance because they are more certain that the benefit of the insurance will exceed the cost. This pushes up the price of insurance and hampers insurers' efforts to pool risk. Adverse selection hampers efficiency in the market for unemployment insurance because some causes of unemployment are beyond the worker's control, and some are not. Since insurance firms cannot identify which workers have a greater chance of losing their jobs because of the factors within their control, they cannot efficiently pool the risks that workers do not control. Moral hazard occurs when an individual's behavior becomes more risky once he is insured. Moral hazard also drives the cost of insurance above its efficient level. Moral hazard can occur in the unemployment insurance market in two ways: it can cause insured workers to engage in behavior that is more likely to lead to job loss, and once job loss has occurred it can make an insured worker less willing to take a new job (because the worker can subsist on the income provided by the insurance).

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<sup>27</sup> For a more in-depth discussion of the following argument, see, for example, Robin Boadway and David Wildasin, *Public Sector Economics* (Boston: Little, Brown, and Co., 1984), pp.477-487.

Government provision of unemployment insurance solves the adverse selection problem by making participation universal. As long as all workers are participating, insurance can be priced at its efficient level, even though benefit will exceed cost, or vice versa, for any given worker. Government mitigates, but does not eliminate, the moral hazard problem by making the insurance temporary (normally 26 weeks in most states) and imposing eligibility restrictions (e.g., not providing insurance when the worker has quit or been fired). The government has also tended to extend the duration of insurance during economic downturns, since events beyond the worker's control are a greater source of job loss then. The private sector could use the same methods as the government to mitigate moral hazard, but it could not prevent adverse selection.

If one accepts that government provision of unemployment insurance is more efficient than private provision, then the policy issue is whether or not insurance is adequate or excessive at current levels.<sup>28</sup> Are workers adequately protected against the risk of gross job loss at existing benefit levels? Should benefit levels or duration be increased or coverage be expanded since gross job loss seems to be following an upward trend? (The unemployment benefit exhaustion rate, which is counter-cyclical, increased from an expansion low of 31.4% in 1999 to 42.5% in 2002; average exhaustion rates in the 1990s were higher than in the previous two decades.)<sup>29</sup> Would more generous insurance reduce the social problems associated with gross job loss? The tradeoff here is between both benefit and cost to the individual (more generous insurance would require higher premiums) and cost to the economy because of the moral hazard problem: as the insurance becomes more generous, disincentives to maintain employment or seek new employment among the unemployed increase.

Government's role in insuring workers against the risks associated with gross job loss can also be viewed through a broader prism than the unemployment insurance program.<sup>30</sup> Disability insurance insures against the risk of job loss due to physical incapacity. Trade Adjustment Assistance (TAA), which offers extended unemployment benefits and job training, reduces the risk that workers adversely affected by trade will be unable to find re-employment. (Some policymakers have suggested that TAA be extended to workers in the service industry, given the growing concern with offshore outsourcing.) Government programs such as COBRA (named after Title X of the Consolidated Omnibus Budget Reconciliation Act of 1985) reduce the loss of health care associated with job loss. Some would argue that income redistribution, in general, is a form of income insurance, whether it takes the form of progressive taxation, the Earned Income Tax Credit, the food stamps program, the Supplemental Security Income program, and so on.

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<sup>28</sup> For current UI reform proposals, see CRS Report 95-742, *Unemployment Benefits: Legislative Issues in the 108<sup>th</sup> Congress*, by Celinda Franco.

<sup>29</sup> CRS Report RL32111, *Unemployment Compensation (UC)/ Unemployment Insurance (UI): Trends and Contributing Factors in UC Benefit Exhaustion*, by Julie Whittaker.

<sup>30</sup> The theoretical underpinnings of this view are laid out in Edgar Browning and Jacqueline Browning, *Public Finance and the Price System* (New York: Macmillan Publishing, 1979), p. 188.

Kletzer and Litan have argued that the government should implement a “wage insurance” program so that workers who lose their jobs and are forced to take lower paid employment are directly compensated by the government.<sup>31</sup> Along these lines, the Alternative Trade Adjustment Assistance Program for Older Workers was introduced in 2002. An eligible worker (over 50 years old, earning less than \$50,000, and meeting other criteria) can receive half the difference between the wages received from reemployment and the wages received at the displaced job for up to two years and payments up to \$10,000.

At the community level, fiscal transfers (differences between outlays received and taxes paid) which change with economic conditions and government programs such as the Empowerment Zone/Enterprise Communities Program provide what could be characterized as “insurance” for the community as a whole against the economic effects of significant job loss.

## Summary

Drawing a distinction between net job loss and gross job loss can help to inform the policy debate. Net job loss is a serious economic problem that fiscal and monetary policy can be used to mitigate. Although it has social costs, gross job loss is part of the normal functioning of a market economy, and has the beneficial role of reallocating resources to their most efficient use when tastes, technology, or comparative advantage changes. Even in expansions, gross job loss is sizeable, between 6.5 million and 8.5 million per quarter from 1992 to 2000, but it is more than offset by gross job gains.

Trade, trade deficits, offshore outsourcing, overseas investment, and economic restructuring all cause gross job loss. But in normal economic conditions, none typically causes net job loss, according to theory and evidence. To see why, consider that they all have the same effect on employment as technological advances. For example, the advent of the automobile caused gross job loss in the horse buggy industry, but was more than offset by gross job gains in the rest of the economy.

As the buggy example suggests, policies that impede gross job loss can have high efficiency costs. The difference in the unemployment experience of countries with high barriers to job loss, such as the high unemployment countries of Western Europe, and countries with low barriers, such as the United States, offers some evidence that barriers to gross job loss can lead to lower gross job gains, making such barriers ultimately self-defeating. However, public policies to protect workers against the risks posed by gross job loss can be justified on both social and economic grounds. If crafted properly, they have been shown not to reduce gross job gains, and they can arguably raise efficiency by addressing market failures. For example, public provision of unemployment insurance helps overcome moral hazard and adverse selection problems in that market. The challenge for policymakers going forward is to find the right balance between mitigating risk and maintaining market dynamism in an increasingly fluid labor market

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<sup>31</sup> Lori Kletzer and Robert Litan, “A Prescription to Relieve Worker Anxiety,” *Institute for International Economics*, Policy Brief 01-2, Feb. 2001.