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**JOBS, JOBS, JOBS: Where Do Jobs Come From?**

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## **1. INTRODUCTION**

In December 2010, the Bureau of Labor Statistics (BLS) reported there were 131 million Americans employed on business payrolls (Bureau of Labor Statistics, 2011). Some 14.5 million Americans were counted unemployed. Of those unemployed, 6.4 million had been without work for 27 weeks or more. The December unemployment rate had turned down a bit to 9.4 percent. Job prospects were bleak. There was a small silver lining in the dark announcement: the BLS noted that some 1.1 million private-sector jobs were added in 2010.

Celebrating the good news on job growth, President Obama made clear that he was not satisfied. He noted “our mission has to be to accelerate hiring and to accelerate growth. And that depends on making our economy more competitive so that we’re fostering new jobs in new industries, and training workers to fill them. It depends on keeping up the fight for every job and every business and every opportunity to spur growth” (Office of the Press Secretary, 2011). On an earlier occasion, Mr. Obama had emphasized that government could not on its own create jobs when he said, “Now, government can't create jobs, but it can help create the conditions for small businesses to grow and thrive and hire more workers” (Fernholtz, 2010).

Job availability, according to the Gallup organization, was the number one worry plaguing the U.S. population in January 2011 (Said, 2011).

Apparently, a number of newly elected governors got the message. On his first day on the job, John Hickenlooper, Colorado’s new governor, pledged, “Our first task, our highest priority, is jobs” (Hoover, 2011). On being sworn in as governor of Oklahoma, Mary Fallin said, “Too many Oklahomans are either unemployed or underemployed. That's why my administration along with the legislature will focus on policies that create jobs” (McNutt, 2011). And newly elected Florida Governor Rick Scott promised, “First off, I'm going to build jobs. The only way we're going to turn around the mortgage crisis is we got to get more jobs in the state” (Governor Rick Scott Lays Out His Plan For Florida, 2011).

Can political leaders create and build jobs, as Governor Scott implies? Out of thin air? Sustainable jobs that will continue on their own once the government’s job-building efforts have ended? Is it direct hiring by government, such as funding construction projects that will lift the level of permanent employment? And if so, what is the opportunity cost, which is to say, where does the real purchasing power come from to fund the government jobs? Will other jobs be lost when taxpayers reduce their private spending to fund the public

works? Or is it, as President Obama and Governor Fallin suggest, forming market friendly government policies that will inspire economic growth, bringing with it more jobs? And what about people who hire themselves? Start their own businesses? Are there enough of them to matter?

So where do jobs come from? Real jobs that can be sustained by normal economic activity? Is there a role for government in the process? How do government policies enhance or reduce the long-run pace of job creation?

This paper addresses these questions. The next section focuses on the where and how of job creation by exploring the decision making process made by employers engaged in adding workers to their payrolls. Incentives faced by employers and employees enter the process in important ways; these are discussed in the section. Attention is also devoted to the huge number of one-person firms in the America, those people who create their own jobs. In every case, large and small, in a free society, jobs are ultimately created by consumers and citizens who are willing to pay for goods and services that they value.

Section two concludes with a summary of policy actions governments can take to improve the job creation climate. Section three closely examines the dynamics of the U.S. labor market where the economy is described as a massive churn that produces goods, services, and along with this, jobs. As the churn turns, jobs are destroyed in some sectors and locations and expanded in others. The net result can be job growth. The section also discusses the rise of the knowledge economy and describes major forces that explain migration to jobs across America, which is another way of identifying where jobs come from. Finally, the paper's last section offers final thoughts on the changing world of work.

## **2. WHERE AND HOW ARE PRIVATE-SECTOR JOBS CREATED?**

Even though the recession officially ended in June 2009, there is still growing concern about jobs. Journalists and others remind President Obama about unfulfilled promises that U.S. unemployment would not exceed 8.8 percent if the administration's 2009 stimulus package was enacted into law (Malcolm, 2011). The package was passed, yet the unemployment rate broke 10 percent for the first time since 1982 and has not fallen below 9 percent (Malcolm, 2011). Obama administration economists had indicated that without the stimulus, at the very worst, the economy would see 9 percent unemployment.

People are worried about jobs.

The experience of the Great Depression teaches us that federally funded public works projects can put unemployed people to work, even if they produce little in the way of real benefits. As a child, I vividly recall watching workers turning over the paving bricks in the streets of Wilmington, NC, in the 1930s. At the time, I was puzzled about the purpose of the enterprise. I recall major CCC construction projects that provided expanded parks and

improved highways. To a young child, those activities seemed to make more sense than turning over bricks. But I learned later that the projects came to a screeching halt when the government put brakes on its program. Unemployment surged. The jobs were not sustained.

As a child, I did not understand that all public works jobs had to be paid for with tax money, eventually. This meant that job growth in the private sector that could have been is forfeited when job-creating public works are expanded.

My lack of understanding had to do with what is seen and not seen. I could see the Wilmington workers turning over bricks. I could not see the results of jobs that never emerged because of the tax increases that paid for the street work. The seen and unseen problem always plagues us when we think about actions that can be taken by government to improve welfare.

But we can be certain that jobs that provide real purchasing power, which is to say wages in dollars that are not depreciated by printing press money, are never created out of thin air.

There is a different story when private firms decide to employ workers and people respond. Firms that hire must earn the money from customers to pay the workers and cover fringe benefits, which may include health-care benefits, retirement benefits, and the employer share of Social Security taxes. If the employer miscalculates, the firm owners and the entire enterprise bear the cost. Workers who take new jobs face a cost too. They are giving up other opportunities. If they make an error in accepting an unpleasant job, they bear the cost.

There are search incentives at play that tend to cause private-sector employers and prospective employees to be careful in making a job decision. The new employee must produce enough additional value to cover the full cost of wages, fringe benefits, and a profit to the firm. On top of that, the worker has to pay taxes on his earnings. Errors in judgment or the costs of just plain bad luck are borne by the employer and employee.

Empirical work by economists tells us what common sense suggests, that when workers are able to keep more of their earnings, more workers enter the labor force (Prescott, 2004). We also know that when business taxes fall, firms expand and will eventually employ more workers, if there is consumer demand for more goods and services. And we can well imagine that if there is uncertainty about taxes, economic recovery, and regulatory liabilities that employers will be hesitant about expanding output and employment (Mitchell, 2010b). Instead, as is the case now, profits can rise, cash can accumulate, and employment can languish (Powell, 2011).

For breadwinners out of work and young people entering the labor force, getting a job is crucial. Our economic and social life rotate around employment and jobs. But it really isn't

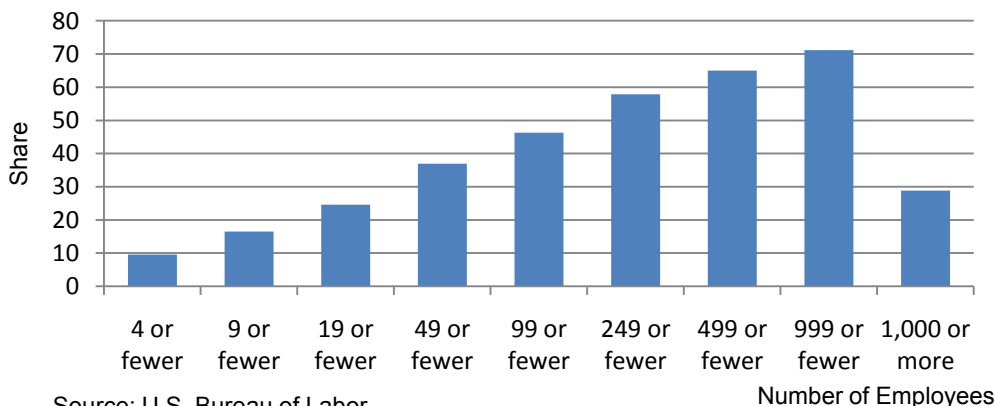
work that we seek, just for the sake of working. It is real income, which is to say the real goods, services, and experiences that income provides. Government policies that may seem to create more jobs can be at odds with growing jobs nationwide that produce more income. For example, putting economic rocks in our harbors with quotas to limit the importation of goods and services produced on foreign soil can protect jobs in threatened industries, but those policies reduce the incomes of all Americans taken together. Incomes fall for all when prices rise because lower priced goods are no longer available to consumers. In most cases, the purchasing power lost by the nation's consumers who face higher prices far exceeds the income gained by a small group of protected workers. Actions taken to protect the jobs of some make the nation poorer and reduce total job growth.

### Taking a look at U.S. job growth

From September 1992 through March 2005, the U.S. economy generated slightly more than 20 million new jobs (Bureau of Labor Statistics, 2005). Each one of these jobs represented a decision by a person seeking work and an employer looking for a worker, a voluntary meeting of the minds. Of the 20 million jobs, some 13.5 million, or 65 percent, originated in firms with fewer than 500 employees. Almost 50 percent of the growth came from firms with fewer than 99 employees. Of course, the period 1992–2005 was before the onset of the Great Recession, which began in December 2007. Focusing on this earlier period enables us to see how a normally operating economy generates jobs.

The importance of smaller firms on job production is seen in chart 1. Most new enterprises start small. Slightly less than 29 percent of the job growth came from truly large firms, those with 1,000 or more employees.

Chart 1: Net Employment Growth by Size of Firm  
3Q1992 - 1Q2005



Source: U.S. Bureau of Labor Statistics.  
<http://www.bls.gov/opub/ted/2005/dec/wk1/art>

Another more current view of the importance of small firm employment is found in the ADP Small Business Report (2011), which provides data based on ADP's client base. In December 2010, ADP reported 48.4 million were employed in firms with fewer than 50 employees. There were 59.0 million in firms with 50 or more employees. Interestingly, the smaller category of ADP client firms saw a 5.1 percent decline in employment from December 2007, the start of the recession, to December 2010. Those firms with 50 or more employees saw a 7.5 percent decline. The smaller firms were still growing faster (shrinking slower) than the larger firms.

Where do jobs come from? Most of them come from firms with fewer than 500 employees. A healthy proportion of those come from firms with fewer than 50 employees.

### **One-person nonemployer firms**

There is yet another way that jobs are generated. Some people decide to hire themselves; they start new one-person enterprises. Since these micro-firms have no employees, they are called "nonemployer firms" by the Bureau of the Census. In 2008, the most recent year for which we have data, there were 21.3 million U.S. nonemployer firms (Bureau of the Census, 2011). The count was down from 21.7 million in 2007. The recession had taken its toll. Recall that in December 2010 there were 131 million workers on the payrolls of all business firms. Nonemployer firms have no payroll. They are not counted in the 131 million. The number of people working for themselves in 2008 was 16 percent of the total employed in business establishments in 2010. That's a lot of jobs.

The often overlooked and seldom celebrated one-person firms generated almost one billion dollars in revenue in 2008 (Bureau of Census, 2011). Included in the count are three million firms offering professional and scientific services, which is one of the largest categories, two million real estate firms, and 2.5 million construction firms. The fact that these one-person firms have no employees doesn't really mean that the owners work alone. It means they have no payroll and issue no W-2 forms. Instead, these business operators often employ others as contract workers and issue 1099s at the end of the year. The owners often have no offices; they work out of their homes or do business in local coffee houses.

Where do jobs come from? Some 21 million came about when individuals decided to hire themselves in 2008. When successful, they paid themselves by providing goods and services to customers and clients.

### **Creating a job in a business with fewer than 50 employees**

In the early 1960s, I ran a business with slightly fewer than 50 employees. These workers were on the payroll of an industrial machinery division I managed in Atlanta; we had branch operations in two other cities. I knew each of my employees well. We worked

together, played together, and had meals together. Some of my employees were wives of friends and sons of neighbors; others were people I had worked with in other locations for more than a decade. I went to their weddings when they married, went to funerals when a family member died, and visited mothers in hospitals when a new child was born. What I did was typical of what most operators of small business do every day. Our business, like every other business, had its ups and downs. Overall, through the business cycles, we were growing.

Hiring a new employee is a big deal when there are fewer than 50. Before adding an employee, I had to be confident that our business was strong enough to support that person. Put differently, I had to believe the new worker would add enough production value to the business to earn his or her paycheck. This meant that the employee had to produce additional revenue to cover his or her wages, the cost of fringe benefits, and yield a profit to the business. Generally speaking, we would wait until we were sure about the prospects before we made a hire. We avoided adding risk to the business. I hated to fire good people.

We had a number of truck drivers working for the firm. Adding an additional driver meant acquiring an additional truck. The cheaper the cost of trucks, the easier it was to add a driver. If truck ownership became more costly, the hiring pace for drivers would fall. If fringe benefit costs rose, the cost of hiring workers rose also. And when competition became so severe that profits on sales went down, we would have to cut back on the number of planned hires. Highly motivated workers who put forth extra effort were the first to get pay increases. And if we failed to recognize their productivity, some other firm would attract our good people away from the firm.

While adding an employee was a happy time for me, terminating a worker was a sad and difficult time for everyone, especially if the termination was due to a lack of business. Few things are more difficult than giving notice to a good worker when business suffers. Firing good people is something to minimize. To avoid firing people, we worked harder, cut expenses, and tried to expand the sale of more profitable products.

The market place ultimately determined when we could create another job. We knew where jobs came from. They came from our customers.

### **Mr. Obama's 2010 State of the Union address**

It was probably due to my business background that I became excited while listening to President Obama's 2010 State of Union address (Bruce Yandle, 2010). "I'm . . . proposing a new small business tax credit—one that will go to over one million small businesses who hire new workers or raise wages," the president said. "While we're at it, let's also eliminate

all capital gains taxes on small business investment, and provide a tax incentive for all large businesses and all small businesses to invest in new plants and equipment.”

Later the president explained there would be a \$5,000 tax credit for employing an additional worker, forgiveness of the employer’s 6.2 percent portion of Social Security payroll taxes for newly added salaries and other salary increases, an end to capital gains on investment, and continuation of rapid write-offs for new capital investment, all to be targeted to businesses with 50 or fewer workers. I felt Mr. Obama was right to be concerned about small businesses. After all, they form America’s mainspring. But I also felt that if the special tax treatment was all that good, then the changes offered should extend for a longer period of time. And if the policies are good for a firm with 50 employees, why not extend the benefits to larger firms. After all, a growing economy can generate more federal revenue from other sources.

When related legislation was signed into law in March 2010, the new law provided exemption from payroll taxes for just 2010 when workers were hired who had been out of work for at least 60 days (Stolberg, 2010). The law also provided for immediate write-offs for capital investments of up to \$250,000. The law obviously targeted small businesses.

When interviewed about Mr. Obama’s job stimulation plan, Susan Eckerly, senior vice president of federal public policy at the National Federation of Independent Business, indicated that small businesses wouldn’t start hiring until earnings improved (Hoover, 2010). “An employer is unlikely to hire someone just to get a \$5,000 credit,” she said. And then there was uncertainty as to how long the special treats would last. There had been Cash for Clunker programs, special tax breaks for first-time home buyers, and a massive stimulus bill. These on and off programs made it difficult for employers to tell what was stimulus and temporary from what might sustainable.

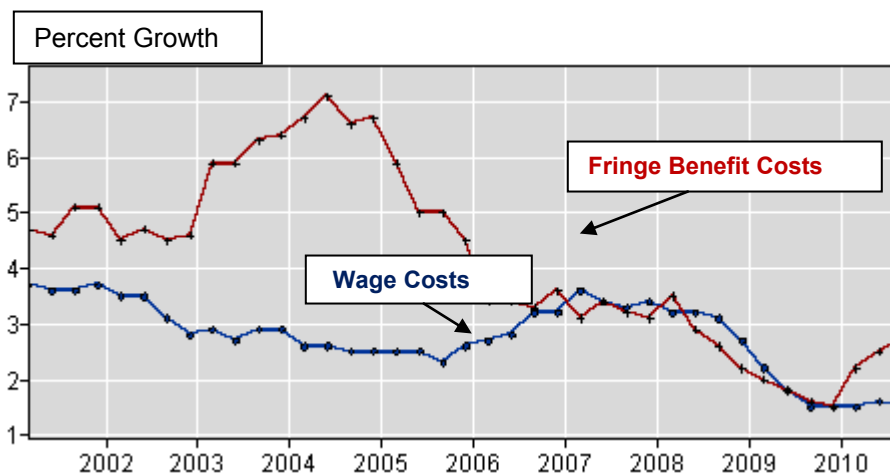
Adding just one new full-time hire when your toes can barely touch the bottom in a recession’s deep end is risky business. Employers everywhere want to avoid the unpleasant task of firing a worker. This means that in the midst of recessions when business seems to be improving, employers wait before hiring full-time workers. They take care of increased demand by increasing overtime hours or bringing in temporary workers. Rehiring former employees or adding new ones comes later.



## Changing the cost of hiring

All else equal, we can predict that firms will hire more workers when the cost of hiring falls. This seems obvious, but as indicated there is more to the cost of hiring than wages or salaries. Fringe benefit costs have to be paid also, and the new hire has to produce enough additional revenue from his work to cover those costs. The growth of a Bureau of Labor Statistics employment cost index for U.S. workers is shown in chart 2 for the years 2001 through 2010. Here we see an explosion of fringe benefit costs that occurred between 2002 and 2006. Then, from about 2007 through 2009, years that encompass the recent recession, fringe benefit cost increases paralleled wage increases. In the most recent period, we see fringe benefit costs are again outpacing wage increases. Generally speaking, the faster fringe benefit growth pace is driven by health-care costs. When additional health-care benefits are mandated, fringe benefit costs rise. And unless what the average worker produces happens to increase at just the right time, wage increases will suffer. The person on the job has to produce enough to cover both costs.

Chart 2: Employment Cost Index for U.S. Workers  
Annual Percentage Change



Source: Bureau of Labor Statistics.  
[http://data.bls.gov/PDQ/servlet/SurveyOutputServlet?request\\_action=wh&graph\\_name=EC\\_ectbrief](http://data.bls.gov/PDQ/servlet/SurveyOutputServlet?request_action=wh&graph_name=EC_ectbrief).  
 Visited January 16, 2011.

Increased production from the average U.S. worker can emerge for several reasons. Workers become more productive when they are healthier, have more education, and more experience on the job. They also are made more productive when additional capital, including information technology, is added to the workplace. Good management matters

also, as does recognition for improved performance. Of course, higher productivity generally can lead to higher earnings, which can include more fringe benefits.

### **Finding ways to increase jobs**

If we were just interested in increasing the number of jobs in our economy, we might accomplish that by mandating reduced expenditures on post-secondary education and healthcare and by raising capital gains taxes. These actions would cause firms to hire more workers to get the same amount of output. Jobs would go up. Less healthy workers are not as productive as healthier workers and more workers, who earn less, are hired when the cost of capital increases. Wages and income would go down. I learned an important lesson along these lines when visiting Bangladesh in 1986.

At the time, I was engaged in a World Bank project that involved a study of the effect of regulations on the export of goods from developing countries (Rottenberg and Yandle, 1987). Bangladesh was one of the countries I visited. In an interview with the manager of the government-owned Bangladesh textile industry, I was told about a large new mill being built within sight of the office I was visiting. The industry manager told me that he had purchased new 1950s vintage textile machinery from China for the new plant. (This was in 1986.) Why would they install obsolete 1950s machinery? The manager quickly explained that they wanted more jobs. They wanted low-paying jobs even though they recognized that the goods produced could not compete in world markets. The operators of the government-owned enterprise were motivated to achieve a short-run political goal. Of course, avoiding revolutions can be seen as an understandable political objective.

The Bangladesh leaders had their own ideas about where jobs come from.

### **Policies that assist sustainable job growth**

Governments can create jobs in at least three ways. First, they can build obsolete factories that employ lots of workers, as was done in Bangladesh. Those jobs are not sustainable in open competition. Then, governments can use tax money or deficits to put more people on government payrolls. Doing so may yield more jobs on balance if the government produces real benefits that taxpayers value. Those jobs may be sustainable in the sense that taxpayers agree to continue to transfer money from their own accounts to the government to pay for them. If the deficits get out of hand, taxpayers will be less willing to do so.

Governments can also employ people to perform marginal tasks that are not valued by taxpayers. Workers can be hired to turn over paving bricks. When taxes to fund public

works projects are paid, creating those marginal jobs can destroy more employment than is added.<sup>1</sup> Again, it is the problem of the seen and unseen. Finally, governments can take actions that improve the economic climate for private sector firms so that more people will seek work and firms will hire more workers. These policies include:

- Reducing taxes that individuals and employers pay when filling a job.
- Eliminating obsolete state licensing requirements.
- Reducing mandated costs associated with employment.
- Eliminating burdensome regulations that affect the use of labor.
- Reducing capital gains taxes so that firms will accelerate the use of the latest technology, which will increase labor productivity.
- Allowing exceptions to government stipulated pay rates so that employers and employees can contract on the basis of a voluntary meeting of the minds.
- Maintaining the competitiveness of the economy by avoiding the formation of monopolies and encouraging expansion of international trade.

### **3. THE DYNAMICS OF THE U.S. ECONOMY**

In November 2010, the Bureau of Labor Statistics published a quarterly report on job creation in the U.S. economy (Bureau of Labor Statistics, 2010). A table in the report contains the story of what I call the American job churn, the massive and dynamic process of openings, closings, hiring and layoffs that generates over time more, fewer or the same number of jobs in the economy.

A quick sifting of data in the BLS report reveals that in the three months ending March 2010, there were 311,000 jobs lost in the U.S. economy. This came about through 6,421,000 gross job losses and 6,110,000 gross job gains. Included in the 6,421,000 job losses were 1,190,000 jobs eliminated by establishments that closed and 5,231,000 additional job losses that occurred when ongoing establishments reduced the size of their workforces. The 6,110,000 gains came from newly opened establishments that added 1,114,000 workers and expanding establishments that added another 4,996,000 jobs. By comparison, in three months ending March 2005, long before the recession started, there were 7,620,000 job gains and 7,220,000 losses. The recession took the edge off the process, but there were still more than 6 million new jobs added in the quarter.

#### **The churn and geography of job growth**

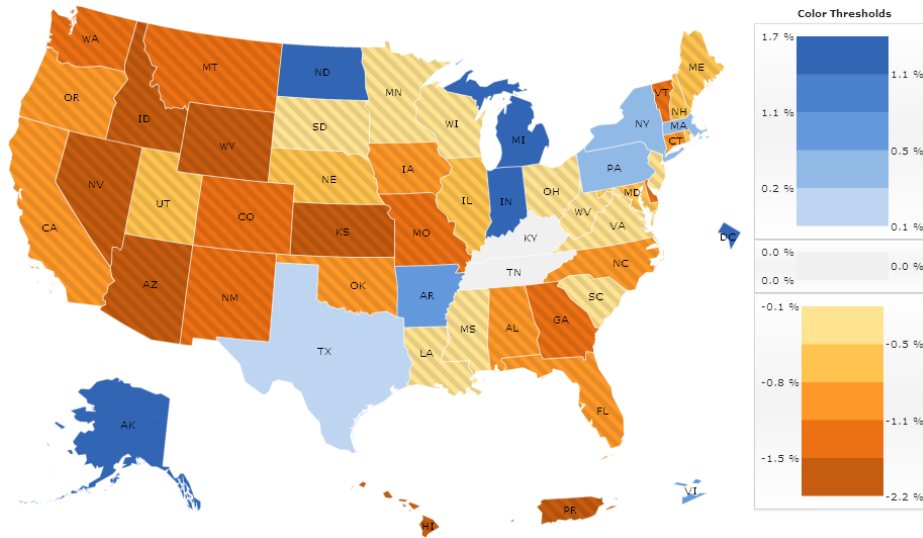
Sometimes, we tend to think of the U.S. economy as a static system that can be inspired by government policy to expand or contract. Politicians and others speak of taking action to create jobs, almost as if the economy will respond like a lawn that receives fertilizer and rain. But as the data just cited indicate, the economy is not static at all. Even in the

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<sup>1</sup> Indeed, there are a number of international empirical studies that identify just how large the employment losses may be when public-sector employment expands. One study found that public-sector expansions that generate 100 jobs leads to the loss of 150 private-sector jobs. On this see Mitchell (2010a).

recession's deep water, millions of jobs were being added, while an even larger number were eliminated. A person seeking a job just needs one job. Finding a job where six million are being added has a lot to do with being in the right place at the right time. Chart 3 identifies the states that offered the most fertile ground for finding jobs in a recent 12-month period.

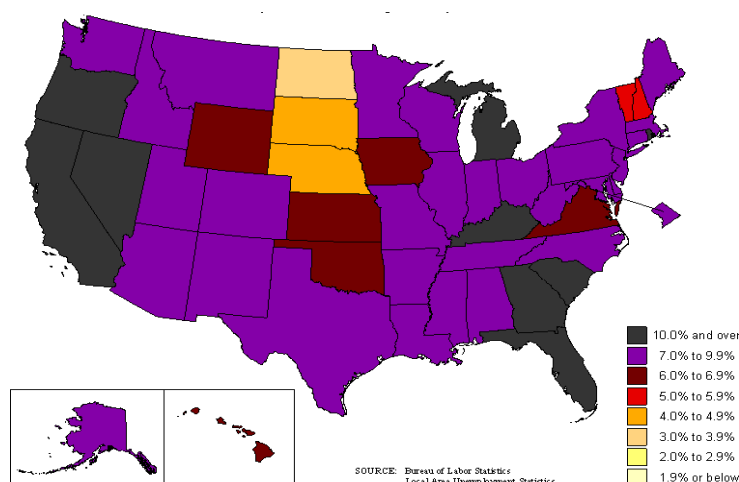
Chart 3: 12-month percent change in private-sector employment, June 2009–June 2010



Source: Bureau of Labor Statistics, [http://beta.bls.gov/maps/cew/US?period=2010-Q2&showHideChart=hide&pos\\_color=blue&Update=Update&industry=10&distribution=Quantiles&neg\\_color=orange](http://beta.bls.gov/maps/cew/US?period=2010-Q2&showHideChart=hide&pos_color=blue&Update=Update&industry=10&distribution=Quantiles&neg_color=orange). Visited January 16, 2010. Data for June 2010 are a preliminary estimate.

This rendering of employment growth captures the recovery of auto manufacturing in Indiana and Michigan, suggests the importance of energy and hard-grain production in North Dakota as well as energy production in Alaska and Texas, and picks up the recovery of auto production in Tennessee and Kentucky. Variations in the unemployment rate across the 50 states, shown in chart 4, provide another indicator of where jobs come from. Here we observe the heavy imprint of the collapsed housing bubble in California, Nevada, Georgia, and Florida. We also see evidence of stronger economies in the states located in the nation's center.

Chart 4: Unemployment by State, November 2010



Source: Bureau of Labor Statistics.  
<http://www.bls.gov/web/laus/mstrtrcr1.gif>. Visited January 17, 2011.

## The changing economy

The churning jobs economy responds to market forces calling for more or less products and services of one kind or another. As the churn spins, the composition of the economy changes. Some employment sectors expand; others contract. To illustrate, in 1970, some 40 percent of the U.S. private sector workforce was employed in the goods producing sectors—manufacturing, mining, and public utilities. By 2007 the share in those sectors had fallen to 20 percent. In 2010, the ratio was roughly 13 percent. All along, per capita income was rising, even as major employment shifts were occurring.

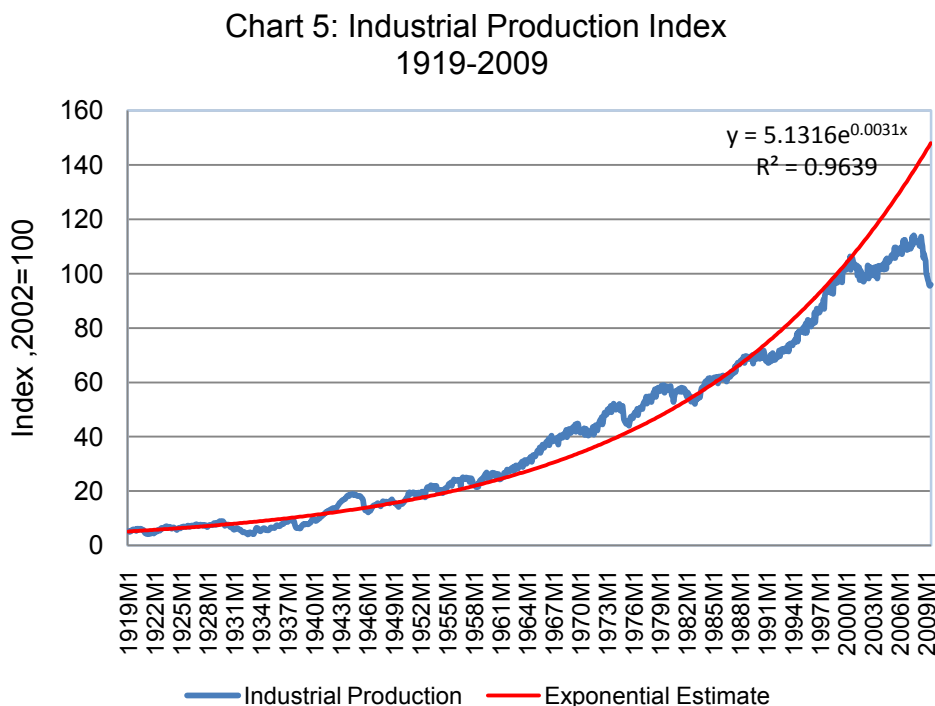
Even the Wizard of Oz would be hard pressed to take policy actions that would result in picking winners and avoiding losers in this economic game.

While employment in goods production has been falling, the volume of goods produced was rising. As shown in chart 5, since 1919, U.S. industrial output has increased at an increasing rate, except, of course, during recessions. Even with the rapid rise of China's industrial sector, the U.S. is still the world's largest producer of manufactured goods (Maybe it isn't China, 2010). And we do it with fewer people every year. But where did the manufacturing jobs go? China?

An analysis of world changes in manufacturing across the years 1992–2003 shows that manufacturing employment as a share of total employment fell by more in Asia than in the United States (Ward, 2006, 18–21). Indeed, rising productivity seems to have led to falling manufacturing employment in every industrialized nation, certainly in the United States (Congressional Budget Office, 2004). Of course, this does not say that manufacturing

production remained anchored in place. It does say that while production shifted from one country to another total manufacturing employment still went down.

Where did manufacturing jobs go? They disappeared in a cloud of productivity gains.



Source: Author's calculations based on U.S. Federal Reserve Board data.

## The rise of the knowledge economy

Jobs in today's modern industrial plants require higher levels of educational attainment than in the past. The same is true in the services economy. Workers in almost every sector employ more sophisticated processes, machinery, and information technology. As a result, the market is rewarding higher levels of educational attainment. In December 2010, when the nation's unemployment rate stood at 9.4 percent, the unemployment rate among Americans 25-years old or more with a bachelor's degree or higher was just 4.8 percent (Bureau of Labor Statistics, 2011). The jobless rate for the same population with a high school diploma was 9.8 percent. And those without a high school diploma faced a 15.3 percent unemployment rate.

In an effort better to understand employment growth in the emerging knowledge economy, Tate Watkins and I built a Knowledge Economy Index (KEI) for the 50 states using 2008 data and then used the index along with other variables to explain U.S. 2004–2008 migration of people 25–39 years old across the 50 states (Watkins and Yandle, 2010a, 2010b). Our work addressed migration from other countries to the 50 states as well as internal migration among the state. Our KEI, which was developed statistically, uses three

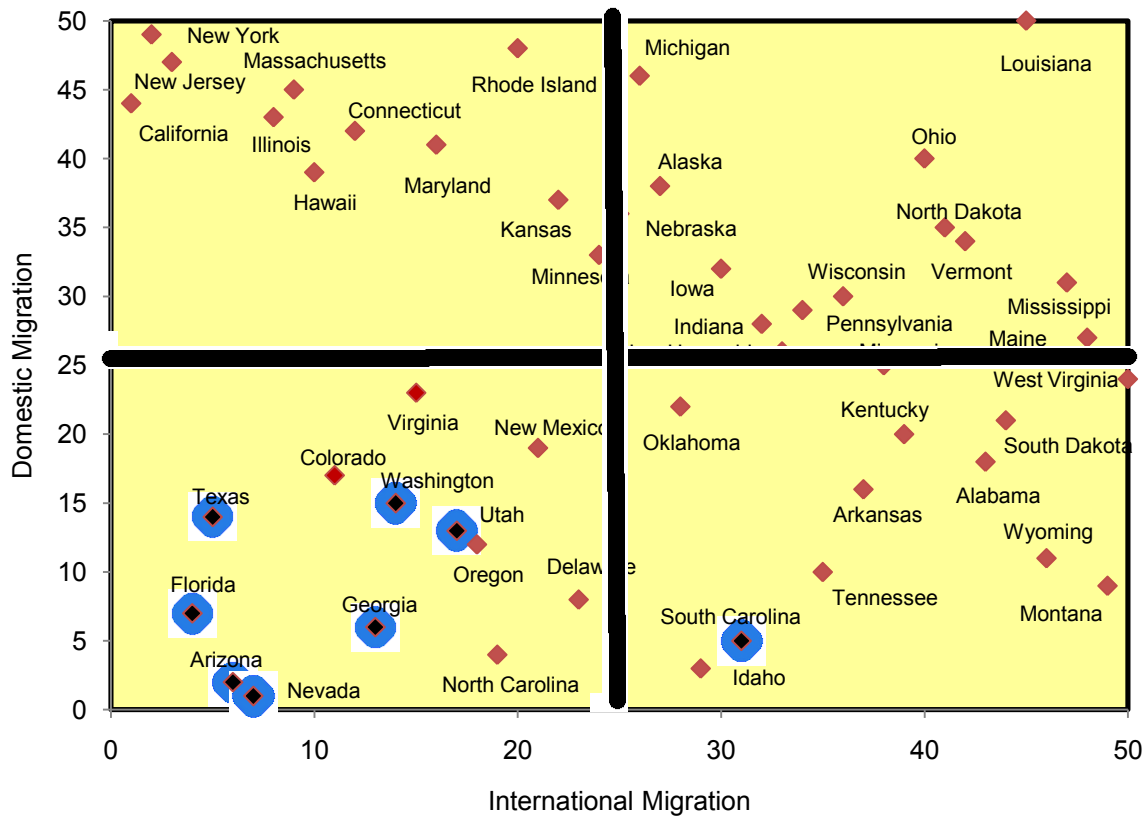
variables. These are, for each state, corporate R&D expenditures, educational attainment, and a count of fast growth firms.

We included the KEI in our statistical models along with a cost-of-living index for each state, per capita income, a creativity index, average population across 2004–2008, and an economic-freedom index developed for the Mercatus Center at George Mason University (Ruger and Sorens, 2009). Our robust statistical findings allow us to infer that migrating people in the 25–39 age group are strongly attracted to 1) more urbanized states, 2) states that rank high in economic freedom, 3) knowledge economy states, and 4) places with a high creativity index. Our findings relate directly to where jobs come from. Jobs emerge when prospective employers and employees make a deal. Deals result from search and migration to the places where work is found. Our results tell us that those states with lower taxes and less burdensome regulation have brighter prospects for attracting and keeping knowledge workers in their states. Obviously, this would be true between countries as well as between states.

Chart 6 shows a mapping of state rankings for domestic and international movers to the states we developed from our study. The southwest quadrant contains states that rank at the top of stack in attracting both domestic and international movers across 2004–2008. Interestingly enough, seven of the eight states that received additional seats in the U.S. House of Representatives in 2010 are located in the southwest quadrant of the chart.

Identifying where people move when seeking employment and a new life is another way of determining where jobs come from.

Chart 6: State Ranks for Average Migration Rate Rank 2004-08



#### 4. FINAL THOUGHTS

Where do jobs come from?

- They may be generated when governments decide to fund public-works projects that employ workers, but doing so may destroy more jobs than are added.
- Jobs emerge when governments expand the provision of services valued by taxpayers. These include protection of life and property and the provision of public goods that cannot be produced economically by private firms.<sup>2</sup>
- Jobs are born every day when private firms add workers to take care of business.
- Jobs are created when individuals decide to employ themselves in one-person firms that they own.

<sup>2</sup> The term public goods is a term of art in economics. A pure public good is a product, activity, or service that cannot be rationed, where once produced, the good is available to one or a large number of simultaneous users. National defense is the extreme case. A safe nation is safe for one and all, simultaneously, and once produced, cannot be denied to a nonpaying citizen. Reduced traffic congestion is another example. Many other goods and services produced by the public sector are not technically public goods, e.g., drinking water, sewage treatment.



Some jobs are temporary; others are may be long lasting. Which jobs are more apt to be sustainable?

- Jobs that emerge spontaneously when healthy firms employ individuals after a meeting of the minds.
- Government jobs that engage workers in producing services valued by citizens.
- Self-employment in one-person firms that contract to provide market-tested products and services.
- Jobs that are located in regions with a growing economy.
- Jobs that are not generated by temporary government programs.

What determines the pace of private-sector job formation?

- The pace of employment increases when local and national economies expand.
- The pace quickens when worker productivity rises due to improved or additional capital, more experience, better management, and higher levels of skill.
- More jobs are formed when taxes that burden workers and firms are reduced.
- Jobs expand when the red tape for starting a business is reduced and license barriers are softened.
- More jobs are generated when the cost of capital falls due to lower interest rates and lower capital gains taxes.
- The pace quickens when economic freedom rises and mobility increases.
- The pace quickens when there is more long-term certainty about taxes and regulations.

What can government do to enhance private-sector employment? Some of the answers are found in the bullets just displayed. More fundamental actions that can contribute to a healthier employment market include:

- Protection of property rights, reducing fraud, and enforcing contracts.
- Providing net beneficial levels of public goods that cannot adequately be provided by private firms along with other routinely provided public services; these include supplies of water and sewage treatment to support industry and municipal life, traffic control and transportation infrastructure to enhance mobility of people and goods, and net beneficial levels of environmental quality.<sup>3</sup>
- Maintaining price stability so that inflation does not erode earnings and wealth.
- Reducing uncertainty by avoiding disturbance of the basic rules of the game that are formed by statutes and regulation that define and protect property rights.

These final thoughts conclude this paper on jobs and where they come from.

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<sup>3</sup> Environmental quality can be assured by means of property rights protection and provision of courts of law to resolve common law cases brought by individuals and governments when harm is done to people and property by polluters. Assurance can be enhanced when governments exercise police power to guard citizens against natural and man-made disasters.

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