Job Creation In the California High-Tech Sector: What Is A California Legislator To Do (And Not Do)?

Testimony To The California Assembly Committee on Revenue & Taxation

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December 5, 2011

[SLIDE 1]
I appreciate the opportunity to participate in this meeting and to testify about the effects of tax policy on job creation. Note that these remarks reflect my views and are not necessarily shared by any organization with which I am associated.

[SLIDE 2]
Slide 2 contains a summary of the points that I will make this morning. My overall conclusion, based on my research conducted over several decades and in a variety of different contexts, is that tax policy is "Jobs Effective" but not "Cost Effective." If the legislature is interested in directing state resources toward stimulating employment in the high-tech sector of the California economy, then I would suggest that it be spent on creating an environment in which high-tech firms can flourish. This would involve spending on education and infrastructure in the broadest senses and on public/private partnerships. All policy initiatives lay claims on state financial resources. I believe that state funds are better spent on these initiatives rather than job-creation tax policies.

[SLIDE 3]
The role that taxes play in stimulating business activity has been studies for many years. Yet, I am sorry to report, definitive answers have remained elusive. Perhaps the title of the report by Therese McGuire (2003), past president of the National Tax Association, best summarizes the current state of the scholarly empirical literature on economic development — "Do Taxes Matter? Yes, No, Maybe So." Similar uncertainties also exist surrounding the effects of taxes on business investment (Chirinko, 1993a, 1993b; Auerbach and Hassett, 1997) and employment (Hamermesh, 1993, Chapter 3). Relatively few empirical investigations have been undertaken on job creation tax credits (but see Chirinko and Wilson, 2011), so we need to rely on the prior studies for guidance.

Why is it so difficult to discover the effects of taxes? A major division between some of the natural sciences such as chemistry and physics (where more definitive answers emerge) and the social sciences such as economics is that natural scientist can usually perform "experiments." We all recall our high school chemistry class where the liquid in test tube A was combined with the liquid in test tube B to form some sort of chemical reaction. The same experiment undertaken in the morning and afternoon chemistry classes yielded the same result, provided the test tubes were not dirty.

Social science research suffers from a “dirty test tube” problem. Unlike in chemistry class, we cannot hold all relevant influences constant. Firms are buffeted by many forces that differ over time. Empirical researchers studying firm behavior and its sensitivity to tax policies need to hold these other factor constant, to try to keep the test tube clean. This is extremely difficult to do since the vast majority of data – for example, employment and output -- are not generated by experiments. As an example of the need to “hold all other factors constant,” consider analyzing the response of employment to a job creation tax credit during a severe recession when unemployment is high or during a boom when unemployment is low. The estimated responses are likely to differ substantially.

[SLIDE 4]
This unfortunate ambiguity notwithstanding, it is nonetheless the case that the academic literature has a very positive role to play in considering the effects of tax policy on job creation. As I will discuss, it provides a very useable framework for reaching policy decisions, it highlights the key issues that need to be faced by policymakers, and it flags some pitfalls in evaluating job creation tax credits.

[SLIDE 5]
Slide 5 contains a framework for thinking about job creation tax policies. All tax policies begin with legislation enacted by state policymakers. In turn, this legislation leads to an initial set of job incentives. But state policy does not operate in a vacuum. These initial incentives are affected by and reactions in other states. These final job incentives then impact firms, and an absolutely critical factor is the extent to which firms react to these incentives. The end result of this four-step process is the creation of jobs.

[SLIDE 6]
We will begin by examining the channel between Legislation and Initial Job Incentives.

[SLIDE 7]
Slide 7 represents the economic impact of the rules and regulations describing the job creation tax credit in the legislation. This process can be a bit complicated, but there are reasonably well accepted procedures for translating enacted legislation into economic incentives.

The economics literature also suggests policy elements to be encouraged and avoided. Legislation that is salient and easily understood by firms is important for effective policies. While this may seem somewhat obvious, the federal job tax credit passed during the Carter Administration suffered from this problem (Sunley, 1980). The complexities and competing interests involved in the policymaking process may result in legislation that is opaque to the public. As an example of the relevance of salient policy, a study of the ability to raise revenues on highway tolls found that an EZ Pass system (where paying is less immediately felt by drivers) had higher rates than highways where tolls were paid manually.

The economics literature has warns of three pitfalls:

1. Job creation tax credits are usually offered as a one-time credit for a new hire. Legislation needs to be carefully crafted to prevent firms from hiring a worker, taking the credit, and then quickly firing the worker. This **"hire-then-fire"** scenario can be prevented by requiring the level of employment to remain above a certain level for an extended period of time and with suitable "clawback" provisions for offending firms.

2. Tax policies sometimes take effect after the legislation is adopted. For example, a bill may be passed on November 1, 2011, effective January 1, 2012. But, during November and December, firms will now have a strong incentive to delay hiring until January. This **"anticipation effect"** has been shown to be very important (Chirinko and Wilson, 2011). Interestingly, about 1/3 of states that have adopted job creation tax credits have this unfortunate anticipation feature.

3. Effective tax policy needs to focus on incremental hires, that is, hires that would not have taken place absent the tax credit. While easy to state in theory, it is difficult to implement in practice. Policymakers frequently use a **"rolling base"** to segment incremental hires (the object of job creation tax policies) from non-incremental hires. The base is usually the level of employment in the prior year; as employment increases, the base is "rolled-upward" in subsequent years.

[SLIDE 8] then [SLIDE 9]
Slide 9 reminds us that policymaking is not done in a vacuum. If California passes a business-friendly tax policy, then its "competitive states" may react by passing similar legislation. (Note that "competitive states" may be bordering states such as Nevada and Oregon, but may also include high-tech powerhouses such as Massachusetts and Texas.) This phenomenon is known as **"tax competition,"** which may lead to a "zero sum game" between states. That is, the effects of a tax initiative in one state are largely cancelled by reactions in other states. This channel suggests that regional coordination among states may be beneficial.

[SLIDE 10] then [SLIDE 11]
Slide 11 highlights what is, to my mind, the most crucial element in analyzing tax policies. How much do tax policies respond to the final set of incentives? Here the debate ranges from large to small effects. Based on my research, I believe that the effects, while positive, tend to be modest. Moreover, in the case of high-tech firms, other factors – the quality of the work force – loom large, thus diminishing the role of tax policy on hiring.

While this is not the forum for considering the details of a host of academic studies (though some references are provided at the end of this testimony), the small effects that I have found in my academic work resonate with common sense. Viewed in isolation, job creation tax credits surely increase the incentive to hire workers. But the hiring decision is also based on other factors – most notably the extent of demand for the firm's products or services and the quality of the work force. Taxes are one factor, but they are not the only effect, and it is reasonable to think that the response to tax incentives is generally small.

Some analyses claim that the ultimate effect of tax policies will be large even if the initial effect on hiring is small because of multiplier effects. That is, the new employees will stimulate additional rounds of spending, production, and hiring. I am not comfortable with multiplier analyses. For the long-run, the additional resources needed in the multiplier rounds of spending must be drawn away from other activities. Thus, while it is possible that the tax policy stimulates activity in one sector, this increase will be at the expense of other sectors. The net effect could be close to zero in the long-run. There may be greater scope for multiplier analysis in the short-run, but the basis for the actual multiplier figures used are usually far from clear.

[SLIDE 12] then [SLIDE 13]
The above discussion highlights the channels linking legislation to job creation and the important issues that arise. Your actions and assumptions are key: actions concerning good policy design; assumptions concerning the response to incentives. If you believe that the response is large, then job credits can have a substantial impact on new hires. But, as I believe, the effects are small, so are the impacts on new hires.

[SLIDE 14]
Now a bit of data. In an ongoing study with Dan Wilson, we are studying the response of employment to job creation tax credits in 23 states. Our preliminary finding is that, for a tax credit of 10% of the first year wage, employment would rise by only 0.2%. This very small effect is due to (1) a small response to tax incentives in general and (2) the small incentives. Assume a worker will stay with the firm for five years. Then a 10% credit for the first-year's wages corresponds to only a 2% credit for the wages to be paid over the five year period.

[SLIDE 15]
With either small or large responses, job creation tax policies will create jobs. Thus they are **"job effective."** But this is not sufficient for good policy. We must also ask two questions:

1. What is the cost of these new jobs?

2. How does this cost compare to the "opportunity cost" of not using these funds on alternative, possibly more effective and worthwhile, programs?

In other words, we must ask whether the job creation tax credits are **"cost effective?"** Question 1 depends on the responsiveness of firms to tax incentives. Question 2 depends on one's views of the benefits of alternative policy initiatives.

[SLIDE 16]
State funds used to finance job creation tax credits could be used for spending on education, infrastructure, or public/private partnerships. These programs arguably will arguably lead to more hiring by firms.

[SLIDE 17]
Or state funds used to finance job creation tax credits could be used to cut personal taxes. Such a cut might meet other public policy goals than job creation.

[SLIDE 18]
At this point, the absence of more definitive answers may be frustrating! But you are not alone.

[SLIDE 19]
When discussing economic policy issues with President Harry Truman, Dr. Edwin Nourse (the first chairman of the U.S. Council of Economic Advisers) remarked
"On the one hand…but then on the other hand.."

After Dr. Nourse left the office, a somewhat frustrated Truman supposedly asked his assistant, John Steelman, **"John, do you think you could find me a one-armed economist?"**

[SLIDE 20]
Frustrated? Hopefully not. I conclude by reminding you that

1. There is a useful framework for thinking about tax policy and its ability to meet policy goals.

2. Your actions and assumptions are key to the analysis.

3. There are several pitfalls that need to be avoided:

    a. Short-Term "Hire-Then-Fire,"
    b. Perverse Anticipation Effects,
    c. Rewarding Non-Incremental Hires,
    d. Magical Multipliers.

4. Lastly and most importantly, the criterion is not just the creation of jobs, but adopting the policy that will create jobs in the most cost effective way. As a result, the extent to which firms' hiring decisions respond to tax incentives becomes absolutely central.

[SLIDE 21]
Thank you for your time and attention. I would be pleased to take your questions.

Bibliography

Auerbach, Alan J., and Hassett, Kevin A., "Tax Policy and Investment," in Alan J. Auerbach (ed.), *Fiscal Policy* (Cambridge, Massachusetts: MIT Press, 1997), 339-386.

Bartik, Timothy, "Taxes and Local Economic Development: What Do We Know and What Can We Know?" *National Tax Association, Proceedings of 87th Annual Conference on Taxation* (1994), 102-106.

Bogart, William T., and Anderson, Nathan B., "Business Location and Taxation," in Joseph J. Cordes, Robert D. Ebel, and Jane G. Gravelle (eds.), *The Encyclopedia of Taxation and Tax Policy*, Second Edition (Washington: The Urban Institute Press, 2005), 39-41.

Bradbury, Katharine, L., Kodrzycki, Yolanda K., and Tannenwald, Robert, "The Effects of State and Local Public Policies on Economic Development: An Overview," *New England Economic Review* (March/April 1997), 1-12.

Chirinko, Robert S., "Business Fixed Investment Spending: Modeling Strategies, Empirical Results, and Policy Implications," *Journal of Economic Literature* 31 (December 1993a), 1875-1911.

Chirinko, Robert S., *Econometric Models and Empirical Findings for Business Investment* (New York: Basil Blackwell, 1993b). (A Monograph in the Salomon Brothers Center Series Financial Markets, Institutions & Instruments.)

Chirinko, Robert S., "Tax Policy and Capital Formation Under The EMU: Perspectives On German Economic Policy," in Deutsche Bundesbank (ed.), *Investing Today For The World Of Tomorrow: Studies On The Investment Process In Europe* (Berlin: Springer-Verlag, 2001), 9-37.

Chirinko, Robert S., “Corporate Taxation, Capital Formation, and the Substitution Elasticity between Labor and Capital,” *National Tax Journal* 55 (June 2002), 339-355.

Chirinko, Robert S., and Eisner, Robert, "Tax Policy and Investment in Major U.S. Macroeconomic Econometric Models" (with Robert Eisner), *Journal of Public Economics* 20 (March 1983), 139-166. Reprinted as chapter 18 in *Investment, National Income and Economic Policy: The Selected Essays of Robert Eisner (Volume Two)* (Cheltenham, U.K.: Edward Elgar, 1998), 352-379.

Chirinko, Robert S, Fazzari, Steven M., and Meyer, Andrew P., "How Responsive Is Business Capital Formation To Its User Cost?: An Exploration With Micro Data," *Journal of Public Economics* 74 (October 1999), 53-80.

Chirinko, Robert S. and Morris, Charles S., "Fiscal Policies Aimed At Spurring Capital Formation: A Framework for Analysis," Federal Reserve Bank of Kansas City *Economic Review* (First Quarter 1994), 59-73.

Chirinko, Robert S., and Wilson, Daniel J.,"State Investment Tax Incentives: What are the Facts?” *National Tax Association, Proceedings of 99th Annual Conference on Taxation* (2007), 36-44 (CD-ROM). A slightly altered version appears as "State Investment Tax Incentives: A Few Facts” in *State Tax Notes* 43 (February 26, 2007), 533-539.

Chirinko, Robert S., and Wilson, Daniel J., "State Investment Tax Incentives: A Zero-Sum Game?" *Journal of Public Economics* 92 (December 2008), 2362-2384.

Chirinko, Robert S., and Wilson, Daniel J., “State Business Taxes and Investment: State-by-State Simulations,” *Federal Reserve Bank of San Francisco Economic Review* (April 2010), 13-28.

Chirinko, Robert S., and Wilson, Daniel J., "Job Creation Tax Credits and Job Growth: Whether, When, and Where?," (with Daniel J. Wilson), UIC (November 2011).

Finkelstein, Amy, “E-ZTax: Tax Salience and Tax Rates,” MIT (February 2007).

Fisher, Peter S., and Peters, Alan H., *Industrial Incentives: Competition Among American States and Cities* (Kalamazoo, Michigan: W.E. Upjohn Institute for Employment Research, 1998).

Hamermesh, Daniel, *Labor Demand* (Princeton: Princeton University Press, 1993).

Markusen, Ann, *Reining in the Competition for Capital* (Kalamazoo, Michigan: W.E. Upjohn Institute for Employment Research, 2007).

McGuire, Therese J., "Do Taxes Matter? Yes, No, Maybe So," *State Tax Notes* 28 (June 9, 2003).

National Tax Association, Session on “Are State Business Tax Incentive Good Public Policy?: Multi-Disciplinary Perspectives in the Wake of Cuno v. DaimlerChrysler,” *National Tax Association, Proceedings of 99th Annual Conference on Taxation* (2007), 22-49 (CD-ROM).

Persky, Joseph, Felsenstein, Daniel, and Carlson, Virginia, *Does TrickleDown Work?: Economic Development Strategies and Job Chains in Local Labor Markets* (Kalamazoo, Michigan: W.E. Upjohn Institute for Employment Research, 2004).

Stark, Kirk J., and Wilson, Daniel J., "What Do We Know about the Interstate Effects of State Tax Incentives?," *The Georgetown Journal of Law & Public Policy* 4 (Winter 2006), 133-164.

Sunley, Emil M. “A Tax Preference Is Born: A Legislative History of the New Jobs Tax Credit,” in *The Economics of Taxation*, edited by Henry J. Aaron and Michael J. Boskin. 1980. The Brookings Institution. Washington, 391-408.

Wasylenko, Michael, "Taxation and Economic Development: The State of the Economic Literature," *New England Economic Review* (March/April 1997), 37-52.

Wilson, Daniel J., “Beggar Thy Neighbor? The In-State, Out-of-State, and Aggregate Effects of R&D Tax Credits,” Review of Economics and Statistics 91 (May 2009), 431-436.