



Conversations with an Expert

The Private Enterprise Research Center awarded Hoover Institution Senior Fellow and Stanford University Professor Joshua Rauh with the Kirby Distinguished Visiting Professorship in April, 2017. During his visit to Texas A&M University, he was interviewed by PERC's Dr. Liqun Liu and Dr. Andrew Rettenmaier.



Joshua Rauh spoke at Texas A&M University on government pension promises. PERC hosted his lecture at the George Bush Library.

Your work on public sector pensions continues to receive quite a bit of attention. How did you get involved in studying the pensions' funding shortfalls?

It's something that I realized has a really important public policy set of implications and is not well understood. The bottom line of what I found in this research is that through the pension plans that state and local governments offer their employees, they are creating large debts. These produce unfunded liabilities in excess of pension plan assets that taxpayers owe to government employees.

If you talked to somebody who worked for a large company 40 or 50 years ago, they typically had what's known as a defined-benefit pension plan. If you work for a big company now, chances are you have 401(k) plan. As I looked at the reasons for the transition from defined-benefit to defined-contribution in the corporate sector, I learned about the ways that defined-benefit plans are accounted for and the way companies think about how much those plans cost. Those calculations are guided in part by regulations and also on principles of financial economics.

Companies must think about the fact that if



In the last hundred years, we've lived through one of the greatest bull markets in financial history in equities. That doesn't mean that it is necessarily going to be repeated and it doesn't mean that one can assume it is going to be repeated.

- Joshua Rauh

they promise employees that they're going to pay them a monthly benefit when the employees retire, both federal regulations and also shareholders will force the companies to think about that deferred compensation as a cost of current work. Companies have to pay that cost at some point in the future and if they don't plan and plan for it appropriately, then the company is going to get into trouble. We've seen this with many companies that did not transition to 401(k) plans and kept traditional defined-benefit plans, like in the auto and airline industries. These unfunded pension and deferred compensation obligations are a big part of why airlines and auto manufacturers have gone bankrupt.

Defined benefit pensions are slowly going away in the private sector through corporate bankruptcies and plan transitions, but what about the public sector? The vast majority of public sector employees are still in defined-benefit plans. The measurement of the plans' liabilities are very much at odds with the basic principles of financial economics and sensible accounting. This mismeasurement postpones these costs, which are really today's costs, to the future by not sufficiently planning for the fact that these pensions are going to have to be paid. As each year goes by, things get more and more difficult for cities and states because they are both trying to pay for the current services that people need: schools, public safety, libraries etc.

and they are trying to catch up on these legacy liabilities- these old promises that they have made.

One of your main contributions to this topic is your focus on the relevant discount rate to apply to accrued pension obligations. Why is it that we have to consider different discount rates than those traditionally used for private sectors in regards to annuity providers?

It's hard to appreciate the importance of the question "What is the meaning and significance of the discount rate?" If a government promises that it will pay a retired public safety official or a retired teacher a pension in 10 years and that the first year the pension is going to cost \$50,000, how much should we have to recognize today as a cost? How much do we have to set aside in order to be confident that we are going to meet that obligation? If we do not set aside enough to be able to meet that obligation, future taxpayers are going to have to pay for the salaries of the teachers and public safety officials at that time and they are going to have to pay for these legacy liabilities that we left.

The public sector has answered these questions through pension funds invested in stocks, bonds, private equity, hedge funds, and real estate to try to meet these future promises. This is exactly what private sector pensions do,

too. But the difference between the two is the discount rate used to calculate the present value of the accrued pension payouts that will occur in the future.

State and local government accounting typically assumes a rate of return of around 7% or 7.5%. Using the rule of 72's, which says that if something is invested at a 1% growth rate it will double in 72 years. By dividing that by 10 and assuming it is invested at 7.2% the investment will double in 10 years. Based on this kind of logic, every city and state that sponsors a defined benefit pension plan is assuming that a dollar they are contributing today is going to grow to be two dollars in 10 years on the grounds that these investments are forecasted to perform well and from the historical performance of equity markets which have performed very well.

However, equities, stocks, private equity, and real estate are risky investments. Public pension promises are guarantees and have to be treated like any other kind of government debt. There is no real difference between someone buying a municipal bond issued by the state and a pension promise, other than perhaps it's even more difficult to get out of the pension promise than it would potentially be to get out of a promise to pay back your municipal bonds debt.

Detroit, Michigan; San Bernardino, California; Stockton, California; and Vallejo, California are all places where pensions have been largely preserved and governments have defaulted on their municipal debt. As a result, the appropriate thing to do is to think about pension promises as government debt and measure them accordingly using the discount rate on high quality government bonds, and these discount rates are much lower than the 7% to 7.5% currently used by public sector pension plans.

Your analysis has taken those pension liabilities and discounted them at a more appropriate lower

government borrowing rate and compares those liabilities to the assets that the state and local governments might have in their pension funds. You then identify a new measure of the degree to which the pensions are underfunded. What is a rough estimate of how much larger those unfunded obligations become?

If you look at their own disclosures, state, county and local governments across the U.S. state that they have unfunded liabilities of anywhere between \$1 trillion and \$1.4 trillion. We find the true unfunded liabilities to be closer to \$3.8 trillion and that's only considering benefits that have been promised based on work and salary up until today and assuming that all future benefits will be fully funded.

Another really important piece is that the discount rate doesn't just affect the measurement of the level of unfunded liabilities; it also affects the measurement of the flow of ongoing costs. State and local governments generally claim that they're running balanced budgets. The implications of this analysis is that in fact, they are spending a good deal more than they are actually bringing in revenues because of these pension promises that they are making to public employees. State and local governments prefer to view a promise to pay something in the future as something someone in the future will deal with and that's inaccurate. You're making people in future pay for the services they're going to consume in the future and also for the legacy liability of the services that we consume today.

Every year that we operate under this flawed system of measurement, the \$3.8 trillion in unfunded liabilities is getting bigger. Any year where it doesn't get bigger is only a year with high return in the stock market, but the march of these unfunded liability figures have been progressively upwards and that's because no state or local government that sponsors a defined benefit plan is actually running a balanced

budget. They're not actually contributing enough to pay for the present value of these new promises and to prevent the debt from increasing unless they're making a special one-time large contribution.

Here at PERC, we have suggested reporting accrued Social Security and Medicare benefits as liabilities of the federal government. What are your thoughts on including those as comparable to the other liabilities in the financial report of U.S. government?

There are seven U.S. states that stipulate that pension benefits may not be diminished or impaired in addition to other states that hold the general view that a pension promise is a contract. With federal government liabilities, it's different. Citizens don't have any legal recourse if the federal government makes changes to Social Security. Public employees can and have sued their employers - the state and local governments - for trying to impair pension benefits. With that said, it is clear that promises that the federal government has made to both to citizens in general and also to their own workforce that are promised benefits, accrued, and would be extremely difficult or impossible to renegotiate or reduce in any way. Trying to get a sense of what is the benefit that is actually accrued that we're not going to be able to change is extremely valuable.

The assumption one makes is that past a certain age it's just infeasible to cut benefits for people. In the past, changes made to Social Security have been done in a way where essentially anyone who was retiring within a couple of decades of retirement was grandfathered in, such as the

change in retirement age to 67 from 65. That change was determined in the early 1980s and is only now really getting fully phased in. Once you have a program that is providing benefits and is not on solid footing, somebody is going to have to bear that. If the burden is pushed off into the very distant future, the people who bear it are people who are not necessarily thinking about it or voting based on it at the time. From a political standpoint, I think it is appropriate to think of the benefits that are currently being paid to current retirees or even those that are

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getting paid in the very near future as being accrued and unable to be changed.

In recent years you've done research related to income and wealth inequality. What's driving the recent rise in inequality both in income and in wealth? How dynamic is the group that we observe at the top of either one of those distributions?

Income inequality, first of all, is a really vast area and there are many different aspects to look at. My research has focused on the top 1% and even in the top .1% or higher of wealthy individuals in the economy and trying to get a sense of what are the drivers of the patterns. The standard statistics show that while the top 1% income equality hovered around a relatively constant level from the 1950s through the 1980s, since the 1980s, pre-tax pre-transfer income shares of the top 1% have gone up a great deal. One of the drivers of my research was trying to understand why that happened. In fact, if you look at the Congressional Budget Office statistics, the top 1% share of after-tax after transfer income is hardly changed if you compare today versus 30 years ago.

Policy has mostly kept up with a lot of these changes. That said, there's still this very interesting question of why top 1% pretax pre-transfer income shares have increased so much. Our research focused on the market hypothesis, which is broadly that market forces are causing this to happen. Using data from Steven Kaplan at the University Chicago, what we discovered is that the rise in top incomes is very broad-based across professions. When we started our work, the inequality literature focused on CEOs of publicly traded companies, we found that if you looked at a wide range of other types of professions, such as sports stars, celebrities, financial industry professionals, lawyers, etc., that the income inequality within was increasing a great deal. The top performers are now earning more salary from what it is that they are doing in the same way that CEOs, top hedge fund managers, top lawyers, etc. are earning more. The evidence is much more consistent with skill-biased technological change where it is much easier now for talented people to reap the benefits of their talents.

The most plausible explanation for this change is technology. Technology allows any given person to scale up the production from their talents in ways that were not possible before. The finance industry is an example where top incomes have increased. A single money manager can oversee more money, more capital than before because the information technology tools are much better.

A lot of the wealth creation that we've seen in the technology industry is also the place where there's a tremendous income inequality. The top earners in the technology sector are capitalizing on the global network that was made possible by the Internet. That just wasn't possible 20 years ago. Today in the U.S., the wealthiest people on the Forbes Top 400 list are entrepreneurs who have created companies that have relied on technology to scale up what it is

that they're doing. The evidence that explains these increases in pre-tax, pre-transfer income of the top income quantiles is largely in the camp of skill-biased technological change and entrepreneurial opportunities that were created by technological change.

You have focused on the very top--have you considered the very bottom of poverty, which is also related to income quantity?

One area where I have looked a little more broadly across the income wealth distribution is the question of whether there is a crisis in preparing for retirement. For example, statistics show that around half of the people approaching retirement don't have any tax-deferred retirement savings such as 401K or IRA funds. They do have Social Security, and so there is a debate about the appropriate way to measure whether Social Security is adequately replacing income. Traditionally, the statistics from the Social Security Administration have emphasized the replacement of wage indexed incomes with the idea that retirees should be able to keep up with the pensions they're receiving with increasing wages in the economy.

Andrew Biggs at the American Enterprise Institute placed more emphasis on final earnings replacement. For example, you want to replace what you are earning later in life, but are not necessarily indexing that to wages going forward, perhaps to inflation. As I think about poverty and how these questions of inequality are applied to retirement finance, there are two conclusions that I have come to. One is that the big crisis is more in labor markets and employment opportunities and by how much these programs replace income?

The second is that there have been major advances in private individual savings. More people today have access to an employer-provided retirement plan than was the case 30

years ago. I think that's the direction that public policy should go in, trying to figure out ways of improving people's private economy labor market prospects and also encouraging individual savings.

What are some of the main findings of your recent work on how state level taxation affects firms' locations?

When I was studying the public sector pensions, there are a few people who reacted to a budget by saying, "There is no budget problem. States will just raise enough taxes to pay pensions." When talking about public sector pensions, the amounts of unfunded liabilities and the deficits that they're running make it such that the necessary tax increases would be extremely painful. The real question is are such increases even feasible? Citizens don't like to stick around when the taxes are increasing more and more while providing them increasingly fewer services. It's a lot easier to move to the next county or to another state.

One of the drivers of those patterns supports what businesses decide to do. When I looked at what policy institutes were writing about this question of whether businesses respond to state-level taxes in their location, I found that some reported that state level taxes do not matter for employment. Most of those studies, while they did their best with the data in settings that were available to them, had two problems.

The first is that it is not easy to get data on where companies choose to locate their activities. My coauthor, Xavier Giroud and I have been able to use the micro-census data from the U.S. Census Bureau to find the location of every firm in the U.S. and the organizational form of the firm as well as any company that does not have to pay corporate income tax. From this information, we are able to look at how multi-state firms respond when a state that they're very active in raises the corporate tax rate, compared to similar firms that are organized as pass-through entities and are directly subject to personal taxation.

From this information, we're able to identify the impact of corporate taxes on employment and business activity in the state. About half of multi-state firms

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moved activities to another state. The other half of activities either moved abroad or is considered forgone activity. If you look at a corporation that is paying taxes under that state corporate tax code compared to one that is only paying under the personal tax code, the former company responds heavily in people moving out of state when the state changes the corporate tax but the pass-through entity does not.

Kansas did a well-publicized business tax reform a couple of years ago and there was not a boom in employment or in business activities. A lot of people pointed to that and said, "Business tax reform doesn't matter." Well, that's not right. In our studies, we look at 35 years of the history of business tax changes at the state level and there are hundreds of these changes. There are specific reasons why it didn't work for Kansas. It essentially just gave the opportunity for companies to reclassify corporate income as pass-through entity income without actually changing that the tax burden for both those types of companies. This is the reason the research that we have done on corporate tax and from location decisions has important policy implications. The Federal government is talking about doing something that is similar to what Kansas has done. Without fundamentally changing the tax code, companies are not going to be able to move in to a state that exempts pass-through taxation if these companies are already organized as C Corporations.

How do you help guide graduate students in choosing a dissertation topic? What do you want them to focus on before they choose the topic that they're going to spend years working on?

My advice is always to try to do something that is at the intersection of two groups of topics. It has to be a topic that both an academic audience of professors and a large group of people outside of academics care about. The key point for

graduate students is that they are going to have to write a dissertation that will help them land an academic job. Their topic has to be something that the professors who might be hiring them are also losing sleep over. I advise students to see what people are talking about and getting fired up about, then you can use that as a way to brainstorm ideas. It is important to choose a research topic at intersection of two things: academic interest of the professors in your field and policy interest with societal importance.

Kirby Distinguished Visiting Professorship

First awarded in 1988, PERC's Kirby Distinguished Visiting Professorship brings internationally acclaimed scholars to Texas A&M University to interact with faculty and students. Other recipients have included Nobel Laureates Douglass North and James Buchanan, and most recently John Taylor from the Stanford University and the Hoover Institution.

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