

# How Should We Look At Jobs? A Discussion of Labor Market Data and Job Postings

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*Part 1: This is the first in a series of posts that will provide insight on what we see and where we are going with incorporating job postings into our tools.*

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## SUMMARY

Several years ago, “real-time labor market data” arrived on the scene. The idea behind this data is good: use job-posting analytics to shed more light on the labor market by providing current data on employer demand. Many people have asked when we will add real-time data to our tools, and we have researched this extensively ourselves. What we’ve found is that while the idea is interesting, putting the data into practice in a safe, reliable, and consistent way is much more complicated. The U.S. economy is huge and the labor market is full of “churn” (i.e., new hires plus those who left a job or switched jobs). Job postings represent a much smaller subset of that churn, and can’t easily be turned into real, solid, and actionable numbers. So, at this moment, here are our two big takeaways with regard to job postings:

**PROS:** Job postings give us specific and detailed information on the types of skills that employers



want and who those actual employers are. This means that job postings are a good source of information on skills and companies that are hiring.

**CONS:** Job postings are not the same thing as labor market data. In other words, they aren’t necessarily

real jobs, and they only represent a small part of the economic activity that occurs in America's enormous economy. Furthermore, job postings are problematic because they are subject to seasonal shifts and the quality of the data is all about how good we are at scraping company websites. This is a bit like depending on the internet (uncontrolled and unverified) for information vs. depending on more standardized and economically sound sources (federal and state payroll records).

With all this said, if you are working on a strategic planning project (e.g., gathering information to justify a new educational program), it is imperative to use job-posting data in conjunction with labor market data. ***Job postings, after all, are only the tip of the iceberg.***

## **JOBS: THE LABOR MARKET PERSPECTIVE**

In the United States, the federal government provides the majority of jobs data, which is commonly referred to as “**labor market data**” or “**labor market information**” (LMI). This is the main type of data that we use in our products and services. The data comes from agencies like the Bureau of Labor Statistics (BLS) and U.S. Census Bureau and is used for understanding current employment statistics for some 1,100 industries and nearly 800 occupations. So, when we say “job,” we are referring to someone currently employed or self-employed in a specific industry and occupation. People can hold more than one job at the same time, so jobs aren't necessarily people as much as they are positions currently held in the labor market.

One other fact here: The U.S. has the deepest, richest, most publicly available set of labor market data available in the world, and it actually gives our nation a big leg up when it comes to strategic planning.

## **HOW IS LABOR MARKET DATA GENERATED?**

A job in the labor market is associated with payroll records, which companies must report to the federal government. And if there is one thing that the feds are good at, it's counting people and how much they make for the purposes of accurately collecting taxes! The data is released on monthly, quarterly, and annual cycles and provides standardization across geographies so we can gain insight on trends across the country or for different regions. As a result, the data is highly useful for big-picture, strategic planning.



The current population of the U.S. is nearly 315 million, and according to EMSI's database of labor market information, there are roughly 148 million jobs in the U.S. (including both salaried and self-employed workers). There are also 11.4 million people unemployed. That is a lot of data to work with and the analysis we provide via labor market data provides insight on all of these jobs. LMI offers us a number of categories of data for each of those millions of jobs, including its location, its earnings,

and its specific industry, occupation, education level, and knowledge and skills level. This data is great for understanding present economic realities so we can make better, more objective decisions.

## STRATEGIC PLANNING AND THE PUBLIC SECTOR

For the past decade the public sector has been a primary consumer of labor market data. The main users tend to be regional planners (like workforce boards and economic development organizations), state colleges and universities, and other governmental agencies concerned with the development of regional workforce and education programs. LMI works well in the public sector

## ANOTHER PERSPECTIVE: JOB POSTINGS AND RÉSUMÉS

While the public sector has been relying on labor market analysis for planning efforts, the private sector has become more aware of and focused on **job-postings data**. This particular set of jobs data is all about being more efficient and responsive to short-term hiring and staffing needs. Whereas labor market data is big, standardized and slower, job postings are a veritable Wild West, lacking standardization and displaying very fast reaction to seasonal trends and shifts (e.g., every November job postings will tell you that it's time to get into the retail business, and every January it's time to shut it down). Job postings are associated with literally thousands of job titles and the list seems to be ever growing.

The data is harvested via web-crawling technology. "Spiders" go out to company websites to find their job postings. Consequently, in the private sector, you will often hear people say, "Company Y has 25 jobs available." In this case, the word "job" is a shorthand term for job postings. There's no

because the public sector is just more oriented to strategic, long-term planning than it is to near-term, tactical planning.

The primary criticism of LMI is that it isn't updated fast enough or doesn't cover emerging and in-demand occupations, which has some validity. However, we would argue that because LMI sources such as EMSI actually classify so many industries and occupations and have such a rigorous system, the datasets do a better job of capturing the total employment picture and revealing present economic realities than most think. Titles and definitions will need to change over time, but the data is still there to be used and understood.



problem with that, but it is important to know that those postings are an entirely different species of information when compared to labor market data. Does that company intend to hire 25 people?

A big pitfall of job-posting data is that **any company can make any type of posting for any reason at any time**. Meanwhile, a neighboring company could hire 25 people and not generate one posting. From a data perspective, postings are fraught with difficulty if we are trying to make pure one-to-one

connections to the labor market.

Therefore, when using this data, here are a few important things to note:

1. Job postings are not “complete” in the same way that labor market data is. They only capture a very limited number of jobs.
2. The data can change a lot from month to month,

*which will be hard for many public agencies to respond to in a timely manner.*

3. Postings are very useful for helping us understand who is hiring, what skills they are interested in, and where the most “churn” is occurring for employers right now.
4. Try to contact the potential employer to find out if their postings match up with how many they say they are planning on hiring.

## **JOB-POSTING ANALYTICS OR REAL-TIME LABOR MARKET DATA?**

More recently there has been increasing interest in harmonizing job postings with labor market data so that the public and private sectors can get their hands on more current data to gain both tactical and strategic perspectives. The changing economy and the advent of “big data” as a big focus have created a strong desire to better understand all these sources together.

Some in the public sector have begun to refer to the job-posting analytics as “real-time labor market data.” The thought is that the job postings can offer a more current employment picture.

As a company that works primarily with labor market data and has been watching how job-posting information is being used out in the wild, we would advise planners to be cautious and perhaps use slightly different phrasing (like “**job posting analytics**” instead of “**real-time labor market data**”) for four reasons:

### **1. IT IS MISLEADING TO ASSUME THAT JOB POSTINGS CAN BE EQUATED TO LABOR MARKET DATA.**

We say this for one simple fact: Job postings aren’t real, physical jobs. The data is somewhat theoretical because the company who has the posting hasn’t necessarily hired anyone for that

specific position.

To illustrate: It would be problematic to assume that 1,000 job postings are equal to 1,000 currently held jobs in various occupations or 1,000 positions in a specific industry. And depending on the source, you could be dealing with duplication, especially if the exact same job posting for the exact same job finds its way into 10 or 15 different websites.

Here’s another illustration. Let’s say that an online job search reveals that there are 1,000 jobs for a specific job title in Los Angeles. Traditional labor analysis of that occupation reveals that there are currently 6,000 total jobs in L.A. These 6,000 jobs represent actually positions where someone is employed and the 1,000 postings are records of employers looking to fill jobs. If the total market is 6,000 jobs and employers are looking to add another 1,000 new jobs, we would be looking at a 17% increase in employment. Impressive growth! We are willing to grant that 1,000 postings is a big deal. It means companies want to hire and that occupation really deserves attention. However, our point here is that the postings are very different than what we can see from real labor market analysis. We can’t just assume that the postings are providing us with the same sort of data.

## **2. TREND ANALYSIS OF JOB POSTINGS CANNOT BE COMPARED TO LABOR MARKET TRENDS AND PERFORMANCE.**

Now let's say we do a bit more labor market analysis and find that the occupation in question actually grew by only 5% in the past year. That would be 300 new jobs – not 1,000. Over the next year or so, it is probably safer to assume growth closer to 5% as opposed to 17%. It is possible that companies in L.A. want to hire 1,000 additional workers in that year but, as historic LMI indicates, many companies are not able to fill all those positions.

Also, job-posting activity can be quite high while hiring practices can remain quite steady. When job advertisements are made public, we don't know if the job is for a new position or fill an existing position opened up because someone separated (fired, moved on, retired, etc.). **We can have five job postings, but all five positions were filled by five people moving from one company to the next.** The gross effect is five hires, but also five separations, with a net effect of zero job changes.

This should cause any planner to pause and review things a bit before decisions are made. If one is assuming that a 17% increase in job postings is enough to go on from a planning perspective, that assumption could prove quite expensive, especially if that assumption results in a decision to add a new training program and the market is really only expanding by 5%.

Again, the job-posting data is useful but misleading if it isn't nuanced with real employment trends.

## **3. JOB POSTINGS AREN'T A GOOD MEASURE OF EMPLOYMENT OR THE LABOR MARKET BECAUSE THEY AREN'T COLLECTED VIA ANY SORT OF STANDARDIZED REPORTING OR CODING.**

We mentioned this before, but the U.S. has a big advantage over other nations because of the amount of data we produce, standardize, and release. Job postings don't really fit into this mold. On one hand, they are indicative of hiring trends, skills needs, and other important metrics, but from a planning perspective, these "job counts" are problematic because they only capture data scraped from the internet. Making broad, sweeping decisions based on this data alone is problematic to say the least.

## **4. MANY OF THE JOBS THAT ARE AVAILABLE AREN'T ACTUALLY ADVERTISED.**

This doesn't mean that job postings shouldn't be used, but it does remind us that the data is limited. Remember, we live in a big economy. There is a lot of churn going on and job postings don't capture all of it. A recent article in The Wall Street Journal mentioned the plight of Jessica Rodrigues, a jobseeker in New York City who realized that just responding to online job-postings and trying to network her way into a job wasn't enough these days. While discussing how Ms. Rodrigues actually found her way into full-time employment, the article mentions an interesting statistic:

*While the Internet has made it easy to apply for work, career experts say that offline networking efforts to meet people and get introductions are a far more effective way to land jobs—especially since 80% of jobs aren't publicly advertised, says Steven Rothberg, founder of job-search website CollegeRecruiter.com in Minneapolis.*

## THE WEATHER EXAMPLE

Let's use another illustration to help round out the perspective. Imagine that one of those maddening spring snowstorms is approaching. The storm is a bit like the economy: large, dark, and uncertain. The flakes that emerge from those clouds and blow past are like the job postings that show up on company websites. The snow that actually makes it to the ground and accumulates is true labor market data.

### HOW MUCH WILL WE GET?

When you first see the storm, all signs might point to lots of accumulation. However, we well know that these weather systems can just as easily blow right over, leaving no real accumulation. This is a lot like the discussion on job postings and labor market data. There might be a “flurry” of postings, but not as much hiring. If actual hiring isn't going on, it is dangerous to build out a big strategic



approach (think green jobs). Furthermore, our ability to accurately collect, understand, and measure flakes in the air is very limited compared to our ability to measure what is actually accumulating on the ground – the labor market.

### HOW SHOULD WE MEASURE?

Imagine two people standing in the snowstorm. One of them pulls out a bucket and starts to run around catching flakes in his bucket. This is “real-time,” he exclaims.

The other person waits for a couple of hours, pulling out a ruler from time to time to measure what is actually accumulating on the ground.

Who has the better approach? Well, from a strategic perspective, it is vital to do the actual measurement once things are on the ground — once the jobs are really there. Measuring data on the ground yields much more reliable data, and more accurately captures real job accumulation. Again, the churn that is happening up in the air will in some degree lead to jobs, but it can be very misleading, especially if you are trying to develop a long-term plan.



## DAILY FORECASTS VS. UNDERSTANDING THE CLIMATE

Extending this analogy further, if we were to use current weather conditions (job postings) for decisions that have longer-term impacts – for example “I’m going to the store for new boots!” – we all know that this might not be the best way to react.

like, “Wow, it’s 80 degrees in early March! I’m going to buy a totally new wardrobe!” This would be like using purely tactical data for strategic planning.

However, let’s say we are moving from a place like Florida to a place like Oregon in the middle of March and we need to actually purchase some new clothes. To better understand the sort of investment we need to make we wouldn’t consult a weather app exclusively. We would look at data on



Current weather conditions are useful for answering tactical questions like, “Should I wear a jacket today?” or, “Wonder if I should bring my snow boots?” Nobody (hopefully) uses a weather app to plan a new wardrobe. We don’t say things

typical weather patterns, temps, and precipitation for the region so we can plan accordingly. Again, this would be tantamount to using labor market analysis for strategic planning.

## CONCLUSION AND REVIEW

1. Data is powerful and persuasive, but, as is the case with any powerful tool, it can do more harm than good if it isn’t used in the right way.
2. The word “job” is used in different contexts and can mean different things. It is also associated with an ever-expanding list of data sources, which aren’t all created equal. Therefore, if you use data on jobs and employment to make important decisions – the type that might impact other people – it’s crucial to understand some of the basics of

this data before you get too far down the road:

- **What sources are you considering?**
- **Where do they come from and how are they generated?**
- **How reliable are they?**
- **What are their limitations and how should they be used?**

3. Labor market data is important for understanding fundamental realities of economies and human capital and is more useful for strategic planning.

Job postings are great for more tactical responses based on what employers need this month. LMI isn't going to be as helpful for understanding things like "Company X needs five new welders," and job postings aren't going to be as helpful when you wonder, "Should we add a new welding program next year?" Remember that by the time the new welding program is up and running and producing graduates, those five job advertisements will have been long filled. The question is whether any increased demand is going to be sustained.

4. Finally, here are a few basic guidelines to take from what we've said:

- **When talking about jobs, understand your terms. Is it labor market data or job postings?**
- **Does your decision have long-term, more strategic ramifications? If so, use labor market data and nuance it with postings to get a sense of who is hiring.**
- **Is your decision short-term? Job postings might be just fine.**

## **SO, WHAT IS EMSI DOING ABOUT IT?**

Right now EMSI is working on ways to better integrate job postings and labor market data. We feel that information on employers and skills in particular is potentially very valuable. In our next post, we will talk more about the problems we are finding in the data and will shed a bit more light on our approach and what you can expect. Stay tuned!

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*If you have any questions or comments, email Rob Sentz ([rob@economicmodeling.com](mailto:rob@economicmodeling.com)) or call us 208-883-3500. For more on making critical distinctions between labor market data and job postings, see our piece from last year. Jobs for the Future has also done considerable research on the topic in its April 2012 report.*

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