One of the most common concerns about AI is the risk that it takes a meaningful portion of jobs that humans currently do, leading to major economic dislocation. Often these headlines come out of economic studies that look at various job functions and estimate the impact that AI could have on these roles, and then extrapolates the resulting labor impact. What these reports generally get wrong is the analysis is done in a vacuum, explicitly ignoring the decisions that companies actually make when presented with productivity gains introduced by a new technology -- especially given the competitive nature of most industries.

The thinking generally goes that if a company could, say, be 50% more productive in a particular function, it would mean a commensurate reduction of jobs in that area. For instance, if a certain function (like engineering or sales) required 10 units of labor before, then with a 50% gain in productivity, in the future that same function would now only need ~7 units of labor. The challenge with this type of thinking is that it assumes that companies have maximized the amount of labor they wish they had for a particular function, when in reality many functions are only staffed at the level the company can afford. Further, it assumes that a company is not in a competitive field, and that the company would be complacent and happy about generating the same output as before, just with less costs. Finally, it ignores the fact that productivity gains in a market will lead to increased response from competition, which companies equally have to respond to with more productivity not necessarily more profit. Time and time again this is the type of flawed thinking that we tend to get out of broad economic studies on the labor needs in the economy.

To break this down and make it practical, I thought I'd illustrate the point with the example of an engineering function -- one that already is seeing the benefits of AI starting to roll out. The numbers will all be kept simple, but you can change almost any variable and the point will remain the same. The key to thinking through job impacts is to think through what happens a step or two \*after\* the productivity gain of AI is experienced.

So, imagine you're a software company that can afford to employee 10 engineers based on your current revenue. By default, those 10 engineers produce a certain amount of output of product that you then sell to customers. If you're like almost any company on the planet, the list of things your customers want from your product far exceeds your ability to deliver those features any time soon with those 10 engineers. But the challenge, again, is that you can only afford those 10 engineers at today's revenue level. So, you decide to implement AI, and the absolute best case scenario happens: each engineer becomes magically 50% more productive. Overnight, you now have the equivalent of 15 engineers working in your company, for the previous cost of 10.

Finally, you can now build the next set of things on your product roadmap that your customers have been asking for. We can't assume it will be 50% more because there are new points of friction and coordination tax that emerge as you have 15 equivalent engineers, but let's say your output goes up meaningfully. Assuming you're acting in your best interests as a company, the features you build make your product that much more compelling, which means at some point (sooner or later) they should result in an incremental gain in revenue. Let's be somewhat conservative on what impact these new features will have on your product, but let's say they generate an incremental 10% of revenue over time or keep customers retained at a 10% greater rate (roughly the same financial benefit).

Now let's assess the downstream impact. Firstly, any growth of revenue will often lead to some functions in the business growing as well to support these new customers, which will directly create new jobs. But further, the company now has to decide whether it remains satisfied with its 10 engineers that have the output of 15, or with their incremental revenue should they hire even more engineers to build the \*next\* set of features that will make them even more compelling to customers. Unless this company is in some rare monopoly position, they likely will want to build the next set of features even faster than the last set to grow even more quickly. This then means AI has caused the company --counterintuitively-- to hire more engineers than before, because the productivity of each engineer is much higher, allowing them to generate more return per engineer, and thus more revenue.

What's interesting is this analogy works similarly for most functions in a business. In sales, if you could make sales reps 10% more productive (i.e. they sell 10% more of your products/services for the same cost), almost every company in the world would prefer to hire even more sales reps, instead of merely banking the incremental profit. That incremental sales productivity again would lead to downstream implications, like the need to deliver more features to customers, and thus more R&D hiring! Even back-office functions that don't as directly tie to revenue growth, often are a bottleneck to growth . If you can reduce the bottleneck -- say lawyers reviewing contracts, or people processing invoices-- cycle time in businesses accelerates, which almost always lets you serve more customers faster or grow more quickly, again letting a company reinvest those dollars.

In the end, when you step out of the vacuum of just the specific productivity gain of a particular job function, and look at how the whole system will adapt and improve due to that productivity gain, a very different picture of AI's impact on jobs will emerge. Yes there will absolutely be changes to what jobs become more or less in demand in the future, but the competitive nature of companies inevitably ensures that across the whole system companies will be focused on leveraging AI to become more productive.