Probable Causation, Episode 71: Zoe Cullen

Jennifer [00:00:08] Hello and welcome to Probable Causation a show about law, economics and crime. I'm your host, Jennifer Doleac of Texas A&M University, where I'm an economics professor and the director of the Justice Tech Lab. My guest this week is Zoe Cullen. Zoe is an assistant professor in the entrepreneurial management unit at Harvard Business School. Zoe, welcome to the show.

Zoe [00:00:27] Thank you. Thank you.

Jennifer [00:00:28] Today, we're going to talk about your research on how to increase employment for people with criminal records. But before we get into that, could you tell us about your research expertize and how you became interested in this topic?

Zoe [00:00:39] Yeah, absolutely. So my training is as a labor economist, I follow closely behavioral economics and experimental economics. But I typically see the world from the perspectives of companies that are making policy questions for themselves, such as pay, transparency in the workplace, or how they're going to screen employees, which in aggregate affects labor market outcomes and social outcomes care a lot about. So inequality being one, unemployment rates being another and I especially like studying platforms that get to make these decisions on behalf of many employers.

Zoe [00:01:20] So you'll see a little bit of this study today, but oftentimes the designers of these marketplaces make decisions about who sees whose wages and how employment screenings going to work. And you'll see that many of the companies that operate in the markets have to just opt in and opt out. It's a great setting to sort of see how these decisions that companies could make themselves affect the wide range of decision makers. So you asked about this particular topic that we're going to study and I would say the answer to how I got interested in criminal background screening is primarily through these conversations with practitioners who are running the platforms and whose biggest headache by far is how many employees or potential employees this screen out just by virtue of these criminal background checks and by a big portion, I mean as much as a third of all applicants can just fail a criminal record screening process.

Zoe [00:02:19] And the company, of course, still is on the hook for paying for the actual background check. And so it's not just losing their supply of workers, but it's also about this variable costs that can really ratchet up a lot of expenses, trying to figure out all the different potential violations and small courts all across the country, each of which require a fee. And all those small fees have to be paid every single time a person applies to be a part of a labor market. It seemed obviously important to the people designing these labor markets and a very strange costs do pay without really understanding the reasons for why we might be screening out so many people.

Jennifer [00:03:00] Your paper is titled "Increasing the Demand for Workers with a Criminal Record." It's coauthored with Will Dobbie and Mitchell Hoffman. And in this paper, you run a randomized experiment with an online job platform to test what works to get employers to hire people with criminal records, but let's back up a bit to start. So say a little bit more about what we know about kind of the current market, about current employment rates for people with criminal records and why this is a concern for policymakers, for researchers and you've already mentioned the employers.

Zoe [00:03:31] Unemployment rates are high for formerly incarcerated individuals. They're high and we also know that they are countercyclical. So during a recession, they'll be especially high. So we looked at this last we go back, one recession to the financial crisis in 2008. The unemployment rate among formerly incarcerated reached 27%. That's higher than it's been throughout all of history for the general population, but it's especially high for minority groups. So if you looked at 2008 unemployment rates, you probably see here single digit numbers.

Zoe [00:04:10] So unemployment rate for white men was around 4%. But for the formerly incarcerated white men, it was 18%. If you looked at the minority group, so say black men in the general population, we hovered between 7 and 8%, but for the formerly incarcerated was as high as 35% and actually 43% for black women. Not only is it a matter of importance for the overall group, but it's the matter of equity in our population and if we think about sort of why policymakers think about this question, it's not just a matter of raising employment rates. It's also a matter of the downstream consequences of raising employment rates for a group of people for whom we're very concerned recidivism and other bad outcomes might happen for such. Policymakers are also thinking about crime spillovers for this group and what it means if they're not fully integrated into the rest of society.

Jennifer [00:05:12] And so why is this a concern? Why are policymakers in particular worried about this?

Zoe [00:05:17] Well, there's typical concerns about individual well-being, but then on top of that, there's also a concern in this case that recidivism and increased crime rates will skyrocket if people don't find a way back into an integrated lifestyle, which includes employment. And there's these externalities that I think people are worried about from a social perspective, in addition to just generally caring about getting people jobs that they're seeking.

Jennifer [00:05:48] So what are the most likely reasons that employers are currently reluctant to hire people with criminal records? What are they worried about here?

Zoe [00:05:55] Right so this is actually the question at the heart of our research. So to be perfectly frank, I'm going to describe to you what our hypotheses were at the time that we started conducting this study. But certainly this is the area that was hardest for us to work out and you'll see that our hypothesis for what employers really think about when they screen on crime is premised based on general economic intuition about what employers care about when they hire in general. And so there's lots of room to and headway to make in terms of linking so to the specifics of people's crime records and the interpretation that employers place on those records. It's a to step back and just tell you how we were thinking about this when we think about just the employers decision about hiring typically it will be a combination of how productive they expect someone to be.

Zoe [00:06:55] And on top of that, perhaps the risks that they bring to the workplace. And here, risk can actually be really broadly defined from people who simply don't show up on time or might quit at a really inauspicious moment to bigger liabilities of sexually harassing a coworker or stealing something on the job. And at that first interview that an employer might have with a worker, it's not often that they'll have a lot of detailed information either about productivity, especially for entry level jobs where soft skills might matter or about the risks that that could potentially break. And so the intuition we had was that the criminal background screening was one signal that could be associated with either how productive

a person was or how maybe how responsibility would be, how ridiculous they would be, or a signal about the risks that they could they could bring to the workplace. And in the absence of much more detailed information, that signal could potentially be a very important or salient signal that helps an employer make the decision.

Jennifer [00:08:03] So before you all first started working on this paper, what did we know about what works to increase employment for this group?

Zoe [00:08:10] It's such a great question because I know, and Jen here you're you're the expert.

Zoe [00:08:13] So I my read of the specific literature on efforts to increase employment among workers with a criminal background is that many of the policies that have been rolled out and studied in detail have actually been, on the whole, fairly ineffective. And so indeed the policies I'm referring to and we can talk about them in more detail, would be banning the box, preventing employers from using that criminal screen in the very first instance during the application process or the work opportunity tax credits or tax credits that employers can apply for after hiring and working with someone for particular disadvantaged groups, including workers that have a criminal record. And in this a bit, from my perspective as someone who's been following a literature on what might work for disadvantaged groups more generally, there are some studies that I thought were particularly effective that I think are worth mentioning, and they also show up in our study.

Zoe [00:09:14] So, for example, in the case of workers who have essentially been locked out of the labor market for any period of time, Amanda Pallais in her 2014 paper, her job market paper showed quite cleanly that having just the very first performance review or reference from an employer would make all the difference in helping that worker get a foot in the door. And so their overall employment and their wages would rapidly rise. And even more recently, actually, Sarah Heller and Judd Kessler pushed this further, showing that in the context of hiring youth who had just done an internship, that first reference letter could also be the key to getting someone who might be overlooked into the into the job market and integrated. So I think that from that broader literature, we had some ideas about what might work well for workers that have a criminal record and perhaps even better than some of the actual policies that are designed for workers with a criminal history.

Zoe [00:10:21] So that, for example, these tax credits that I mentioned, which will look a lot like the subsidies that we use in our experiment, it on the whole, seems to have very little impact on unemployment for this group for many possible reasons, including the fact that employers might not be so aware of it and that the paperwork involved to get a tax credit for just a very specific group of workers might not just be worth it. So for these reasons, I think we focused on building on a literature slightly outside of policies that have already been executed for this group.

Jennifer [00:10:55] So why do you think there's this disconnect here that there have been, you know, successful policies in targeted at different groups that have been studied and we have evidence on, but we don't have that kind of evidence for this particular population. What do you see as the primary hurdles that researchers like yourselves have to overcome in order to figure out what works here.

Zoe [00:11:15] Oh, gosh. So yeah. So, I mean, what we would have loved to do and it has actually been done is just get a honest answer directly from employers about what it is that they care about when they look at someone's crime history and what signal that they infer

from that about how well the worker would fit into their workplace, how well they would perform the job. But it's a little like asking people to explain their implicit biases. And so even though these questions have been asked directly before, it's very hard to know exactly what to make of the answers to questions, especially in today's environment, where it's fairly ubiquitous for employers to want to say they believe in equal opportunity, employment, especially care about second chance employment.

Zoe [00:12:04] And it's easy to sort of rack up a lot of enthusiasm for hiring this group that's in commensurate with the facts we see, which is on average quite low rates of hiring from this group. So I would say hurdle number one is that, you know, direct questioning has been more and more difficult in this case than other cases. And the other is that sort of if we if we think of the gold standard as sort of rolling out the policies that we think of the best chance of succeeding in a randomized fashion and then tracking the outcomes of workers, especially this group that has had a past crime. There's many challenges involved. One is we've seen already that there are these have been unintended consequences for policies that have been designed for this group.

Zoe [00:12:51] But another is that it's also just very hard to track this population and their reasons for that. You know, the group of formerly incarcerated workers will tend to have a less easily identified set of residences to visit to interview them for. And it would be very difficult to link all the different databases necessary to do that tracking. So I think the second hurdle is really just how hard and expensive and logistically challenging it would be to roll out and try many hypothesized solutions, especially without really some evidence that they're doing exactly as intended and not creating unintended spillovers that are offsetting the positive benefits.

Jennifer [00:13:36] Yeah. And this makes me realize we do have an interview with Amanda Agan from a while back on Beyond on the Box, which is one of those policies with those unintended consequences. So we will link to that in the show notes if people want to hear more about what went on there. Okay. So as I mentioned earlier, you ran a big experiment with an online employment platform. You don't name this platform in the paper, which is why we're not going to name it here. But tell us about the platform. How does it work? What types of jobs does it include and which employers use it?

Zoe [00:14:03] This particular online platform is designed as a large scale staffing solution, so I think perhaps a typical incident to have in mind would be a job posting by a company like Target for 50 workers potentially all at once, potentially for some seasonal demands. So maybe they need all 50 to come in, maybe in seven different locations around the country to help unload extra inventory or something of that nature, which the jobs themselves don't require a specialized skill set. And the work itself is temporary. So those are the main key distinctions about the labor market that we're going to study relative to, say, the general more typical labor market of long term employment. And on average, the firms that are able to take advantage of this staffing solution are large firms. So, you know, whereas the median firm in the U.S. in general has maybe 2.5 employees here. You're going to see that the median firm has 40 employees.

Zoe [00:15:10] And actually, this respondents to our survey segment are going to be even larger than that. So that's one way to think about the participants in our platform. And then there are other comparisons we can think about. So we've taken the names of the firms to participate in our in our study, and we've linked them to the types of industries they work in. And then compared those industries to with the distribution of firms look like in the US more generally, and we'll see that they have broad coverage of those industries.

Zoe [00:15:41] So about a third of workers are in the service industry, as you would see in the US, and we have a overrepresentation of manufacturing firms. So 20% in our sample whereas I think broadly speaking in the US it's just below 10%. So in that sense, where we have broad coverage of industries and I think we can even look at heterogeneous results across industries, but we don't capture the impact on very small businesses much the way other studies have done so because the bulk of firms in the US are small.

Jennifer [00:16:19] And then so how does the hiring process actually work on the platform? A target, for instance, will post an ad saying we need to hire 50 people and then what happens?

Zoe [00:16:28] Oh so, this is going to be central to sort of the design of this entire study, as I mentioned. But since jobs are typically temporary and matches are made quickly what has to happen for these jobs to be filled on time is target would submit very specific work criteria. So they would basically describe the requirements in enough detail that they hand off those requirements to the platform. And then the platform selects from its pool of workers who's eligible and then assigns them the actual job. So after Target submits those criteria, it's in the hands of the platform who goes to actually shop on site at the start time for this position. And so and the market will clear relatively quickly. So most jobs are filled within 48 hours and those would be the 40 hours before the start of this job.

Jennifer [00:17:28] Okay. And so the types of criteria that my guests are sort of like easy to measure and objective and that you might put on your list, I guess for things like education, would there be anything on past employment will be on that list.

Zoe [00:17:39] So does it seem like very sensible things.

Jennifer [00:17:43] But they're not there.

Zoe [00:17:44] In any criteria list I think for, you know, for longer term employment. Yes. So like if we took the example of unloading inventory, what would be important there would be the employer would specify can lift 50 pounds repeatedly for delivery jobs and has it as a license to drive a truck. A lot of specifics about or maybe even though, you know, there's there's some large stadiums that hire for event staffing. So three previous events, staffing training would be a criteria that's fairly specific or in the food and restaurant industry, there will be health and safety requirements that these employers would like workers to have proven to have. So I would say they're directly fairly specific to the actual tasks rather than to a work history per se.

Jennifer [00:18:33] Got it. Okay. And then I gather that historically this platform has done a criminal background check and that anyone with any criminal history. What's the screening been there would be ruled out?

Zoe [00:18:46] Yes, that's a great question. Yes, to the first broad question. So, yes, this platform up until the time that we worked with them, had required that workers pass a criminal background screening. The criminal background screening was conducted by one of two big companies in the Bay Area that do these rapid screening tests, and they ingest a large matrix of crime categories that the platform has selected as important. And I would say, broadly speaking, most categories of crimes were being screened out. And there's another question you might ask about the specifics of the lookback period. So how far back those crimes could have been committed and still shown up in screen, someone out

and that's you know, there is a very complex matrix for some crime types to look back period was much longer than others and it also has varied a little bit over time.

Zoe [00:19:48] But I would say, you know, these two big companies do quite a bit of screening for many, many employers and this platform was doing with the mobile platform is doing. And that's sort of maybe without giving all the details of the matrix that they selected, it's possible for me to say it was a typical screening check.

Jennifer [00:20:11] Got it. So I'm also curious, just for a little bit more of the backstory here. So how did this experiment and research partnership between your team and this hiring platform come about?

Zoe [00:20:23] So I have to give them a lot of credit in this case because they stepped into the academic arena. I met their CTO at a conference at Stanford and it was a conference about, well, the topic they were interested in was managing the future of work. And the CTO, clearly reflecting the values of this company, spoke about upskilling workers who are participating on their platform. So they expressed a real interest in something that I have already described as really important to me, as they're developing the link between choices they make on their platform and aggregate outcomes for their worker pool.

Zoe [00:21:08] So I was in touch with them shortly after this conference. And I have already mentioned to you, I knew from working with other platforms what a big headache the screening process has been for applicants who don't pass crime criteria. And this is the magic combination of their interests in thinking through this kind of costly problems in their platform side and having higher ups that were both academically inclined. And in particular, there was a member of the board cared about second chance work for this group in particular led to sort of this natural partnership. And you'll see that sort of there's a lot of sensitive information that is required to execute this type of survey experiment.

Zoe [00:21:56] And so really all these ingredients, I think, were pretty critical.

Jennifer [00:22:00] Love it. I love hearing stories about practitioners and policymakers, you who who actively seek out research partnerships, which should happen more often. Okay. So let's talk about let's talk about the experiment itself. So you worked with the platform to contact hiring managers. So who received this email and what did it say?

Zoe [00:22:18] So the pool of people who received the email included everyone who had been active on this platform and hired through the platform dating back to its inception. So it was a large pool of clients here. The client is going to be a hiring manager at a typical firm is obviously a large firm here and the email had to achieve a couple of things. So the email first of all is going to come from the platform as the platform desired and is good for our purposes as well. And the platform is going to reach out to these hiring managers in the email said dear and then it had this personalized name for the person who actually received the email. And it had to kind of accomplish two goals. One is it had to communicate to the hiring manager that filling out the content of this survey was going to affect their pool of workers on the platform so that the reasons to fill this survey out were really important for the the actual choices that the hiring manager in the platform had to make together to figure out who was going to show up to the job. And the second important feature of this email that I will read to you was that it didn't indicate much about the specific pool of workers, namely workers with a criminal history early on, so that there was no selection into this survey on the basis of how interested clients were already in hiring workers that had a criminal record.

Zoe [00:23:54] So the actual email I have in front of me, the first piece said, "We're considering expanding the pool of workers who can perform the jobs that you post, and we need your guidance." And then there's another there's another paragraph after that that says, "we're going to transfer you $50 as Amazon gift card after you complete this survey. It will be sent to you electronically, automatically." And that piece was important to the platform and to us as researchers, because what we really wanted was for them to realize that this was an important business matter and that the platform was going to pay to compensate for their time, and also that they complete the entire survey so that there wouldn't be attrition early on after seeing what the topic of the survey was about. And then there's a final piece to this email that says, "Please share your truthful and considered views because they matter for our policymaking and all your answers will be kept confidential." So that was supposed to be the hook, and it went out to about 9000 card managers.

Jennifer [00:25:00] Okay. And then how many of those 9000 responded? And how should we think about how representative that final pool is here?

Zoe [00:25:10] If you look at the full 9000, which included all of the clients that had been active since the beginning of the platform's history, the response rate was 14%. If you looked at those clients who had been active in the previous quarter before the survey went out, over 50% were responding. And the biggest predictor for whether the in the client pool that received the email, whether they ended up responding to us or not responding, was just how many jobs they were posting and their size. So these were even of a pool of large businesses, the larger ones that were responding and the ones who were more recently active.

Zoe [00:25:54] And then to your question about external validity, so how do they look compared to firms more generally. So I sort of I gave this away a bit in an earlier question that you asked. But what we do is compare the the firms to intergroup database or database, a commercial database on all firms in the US and along two dimensions they're quite different. So the firms in our sample are older on average. The average has been around for at least 20 years and they're also larger. Another thing that jumps out to us is when we compare so we replicated questions that the survey for Human Resources Management had asked a representative panel of business managers about on our survey, and these were about attitudes directly concerning workers of the past crime.

Zoe [00:26:44] And in those cases, we also see that on average our respondents express slightly greater concern about performance and the client response to workers with a criminal history. And they also express a greater interest or greater reason or salience to the reason of a second chance hiring for saying yes to workers who have certain records. And that's sorry, that's a long winded way of describing questions which I'd already describe had already said to you are hard to interpret, they are hard to interpret because these are sort of direct questions with no consequences, mistakes that we ask, but it's sort of important, I think its nice to see that we would not expect our pool of employers to be based on just their direct responses overly optimistic about the outcomes from hiring workers with a criminal record.

Jennifer [00:27:41] Great. Okay. And then a key benefit of working with this jobs platform is that the questionnaire you sent out was what economists would call incentive compatible. So what does that mean in this context, and how did the platform use the responses that were submitted?

Zoe [00:27:58] Okay. So this goes back to exactly how the platform operates and how we make use of that. So as I mentioned, the hiring managers submits criteria about who can perform the job and then the platform has the opportunity to then pick the particular worker. So when an employer says yes to our question about hiring workers with a past record under conditions that gives the platform permission, legal permission to then go ahead and actually assign a worker with a criminal history to that job. In essence, the stakes for saying yes to our survey are high in the sense that in fact the platforms intended to and did follow through by assigning workers with this who met the particular conditions of the employer and could also have a criminal record to those jobs. So by incentive, compatible with the emphasis here is on does the employer have the incentive to be truthful in answering our questions.

Zoe [00:29:10] And I think here they make this very explicit when we go through the actual questions on the survey. In this case, the incentives, I think, are aligned to be very truthful, precisely because the actual consequences are real.

Jennifer [00:29:26] Right. And this is in contrast with sort of a typical survey where you just ask, you know, would you hire some with a criminal record? And people can just say yes with no consequences here. If they say yes, they actually are going to be hiring people with criminal records. That is the direct consequence. Excellent. Okay. Yeah. And that is definitely the very cool part. Lots of cool parts of the paper that I think is the coolest that they're able to do this. All right. So let's step through each of the questions on this questionnaire, in this experiment and what you find. So the first thing you ask is about employers basic willingness to hire people with a criminal record. So what was the question you asked and how did people respond?

Zoe [00:30:07] Okay. So the first question is, would you permit workers with a criminal background to perform job, see post I just want to highlight here, there's actually no conditional statement beyond that. And the hiring manager has the option of saying yes, only if it's hard to fill my job or no. And a yes here is going to legally grant permission to the platform to allow workers with criminal history to accept that job. So that's the very first question. It's very simple. And we get a 39% response rate of yes.

Jennifer [00:30:40] Great. All right. So once you have that baseline established, you tested the effects of different interventions or incentives to try to convert the other 61%. So each one was designed to address a particular type of concern that employers might have, which we talked about earlier. So first was wage subsidies. So why might wage subsidies be helpful here?

Zoe [00:31:02] Okay. So, you know, the reason why we think about wage subsidies is twofold. One is because they're directly relates to policies that have been attempted before. So I mentioned the tax credits that the federal government offers for hiring workers with the best record. The subsidy is very much analogous to that program. So it's a popular policy, but also you'll see it helps us put other policies in context so we can compare for each policy that we try. We can compare how large a wage subsidy would be necessary to achieve similar outcomes, and it just helps put this dollar value on.

Zoe [00:31:44] I say simplest, the sort of most familiar way of increasing demand. So I think it's kind of important to think about how we chose the actually plays out. It basically changes the effective wage that an employer pays. So in the case of a 10% wage subsidy, the employer is going to pay wages that are 10% less than they would otherwise and we

know the platform makes it very clear that the worker is still going to receive 100% of the of the posted wage. So there's not going to be differences in the wages that workers receive. It's just a difference in what the employer pays. In the case of a 100% wage subsidy, that's where the worker is essentially free from the perspective of the employer. So this would be like asking, you know, you hired two workers.

Zoe [00:32:33] And the question is, would you allow a third worker to show up who might fit this criteria. In our case, somebody has a past record, and actually that's not too wild. The company, you know, the platform was thinking about a 100% wage subsidy or this bonus worker as a way of testing whether or not these matches led to satisfied outcomes. So satisfied employers and good work outcomes.

Jennifer [00:33:02] Yeah. And I guess just to say a little bit more about why these kinds of policies are affected, I mean, if employers are worried that people with criminal records are less productive, say, or that they're not like worth the full wage life, they might be producing more when they're whether they are or if they're less likely to show up or something and it would be costly in some way that basically it's just an added incentive to try to get people over that hump and to give people a chance. So what wage subsidies did you offer and how did they affect employers willingness to hire people with criminal record?

Zoe [00:33:36] So we had the opportunity to randomize how large the wage subsidy was, and we randomized values ranging from 0 to 100. So a fifth of people would get a very low wage subsidy or zero, so either zero or 5% subsidy, and then another fifth would get a 25% subsidy. And then if we get a 50% subsidy and then finally a 100% subsidy. And so what we find here as well, as I mentioned, when there's no subsidy at all, just the answer to the baseline question. We saw that 39% of employers were willing to allow workers with criminal records to accept their jobs. In the case, we ramp it up to a 50% wage subsidy, that rises to 54%, and then it sort of plateaus after that.

Zoe [00:34:31] So there's a we observe a 54% of employers willing to hire this food workers, even when the wage is entirely compensated, so entirely paid for by the platform with 100% subsidy.

Jennifer [00:34:45] Which is fascinating in part because it means it's not all about productivity. Right. It's got to be they must perceive some extra cost there. They don't just want a free worker. Okay. Super interesting. Okay. So next, you consider offering crime and safety insurance. So what types of concerns would this insurance address?

Zoe [00:35:03] Okay. So this is back to this question you asked earlier about what are the reasons that employers use criminal records in the first place for. And one hypothesis is that it might not be a signal of productivity at all, but it might be a signal that there are additional risks. In which case, maybe they would be willing to pay the same wage as long as the risk itself was fully mitigated.

Zoe [00:35:31] And so the we designed a policy we're calling crime and safety insurance policy, which is is actually is not common, but exists. And the way it works is that an employer might submit a claim associated with an insurance check. So basically, if you submit a claim which would indicate there was a crime related to the person who had a criminal history, you submit the cost incurred as a result of that incident. You would submit it to the platform and they would pay up to a cap. So the cap is another value that we can randomize. So we consider insurance policies with a cap of as low as $5,000 and as high

as $5 million. And the idea behind randomizing the insurance cap is to get a handle about overall which types of concerns employers really matter.

Zoe [00:36:30] So, for example, if these are petty theft crimes and these are more minor infractions that employers are worried about, we would see a similar boost in employment from a low cap insurance policy, as we would from a very high cap insurance policy. So indeed, we randomized the question itself as if the platform could cover damages up to and then we would put in a value $5,000 related to theft or safety incurred by workers with a criminal record. Would you permit such workers to perform jobs you post? And at baseline we see with the low insurance cap, the percentage of people willing to say percentage of businesses willing to say yes to higher jumps, 12%, 12 percentage points. So actually, it goes from if you look at just the no wage subsidy case, it demand went from 39% all the way up to 51%. And that's with just the lowest cap. And when we introduced the $5 million cap, we get a 17 percentage point boost.

Zoe [00:37:33] So I just want to highlight two things. One is that the biggest boost came from just the low insurance cap, the 5 million lower insurance cap raises demands. It raises demand, especially for the businesses that have high value inventory. But the fact that just covering the first $5,000 gets such a boost, I think is is very well worth highlighting and commensurate with the notion that modest risks are one of the deterrents that employers consider when they hire this group.

Jennifer [00:38:03] Yeah, it's also really interesting because the federal bonding program exists, which I think is also a $5,000 insurance level and is free for employers and they claim it's easy to sign up for. So I guess the question is why, you know, when that already exists, why the baseline isn't assuming that, right?

Zoe [00:38:24] Oh, yeah, yeah, absolutely. Jen this is such an important question. And it also relates to whether the tax credits didn't yield a similar boost that we saw when we offered the subsidies. So, yes, so it really begs us to kind of reevaluate what it might be in this context when the platform is sort of directly taking on the maybe whatever the paperwork burden might be for these insurance claims or implying a subsidy. What am I b in this context that makes the uptake so popular versus sort of this broader federal policy is that you're absolutely right have have shown to be less truly less persuasive.

Jennifer [00:39:01] Yeah. Yeah. Okay. So then next step, you consider the effects of screening applicants based on their performance history on the platform. So why might this be helpful?

Zoe [00:39:12] This idea I like to give credit to the paper that I referred to earlier by Amanda Pallais. She also is considering this platform wide policy of helping entry level workers get that first review.

Zoe [00:39:27] And in our case, on this platform, after you complete a job, the employer will submit a reading which will range between one and five stars. And that particular rating could be a criteria that an employer uses to require of workers who can be in their pool of workers. So the question we ask is if the platform required workers with a criminal record to have satisfactorily completed X number of jobs with X, and again, is it a number that we randomize between one and 25 receiving positive reviews would you permit such workers to perform jobs you post. So this is to just be really clear about this. This is basically saying, would you allow the subset of workers with a criminal history who have already

proven to have at least one satisfactory performance rating to take your job. And in that case, when we offer it again, we see a substantial boost in employers willing to accept.

Zoe [00:40:27] So it leads to a 13 percentage point boost in the hiring demand on average. So that that's you can see how in context, that's somewhere between offering the 5,000 and 5 million dollar insurance cap and also equivalent to about an 80% wage subsidy.

Jennifer [00:40:43] And did that vary across the number of jobs that they had performed in the past or was just like one good job performance enough to get them that benefit?

Zoe [00:40:54] Yeah, your intuition is correct. So the numbers I just quoted, you were for just that one job performance or. Yeah, increasing it to 25 jobs only marginally increases that number. So it's a very small difference between one and 25 jobs. And that just kind of goes to show that the signal is all in that first performance rating.

Jennifer [00:41:14] Yeah. So it's just like having anyone vouch for you basically is good enough. Interesting.

Zoe [00:41:19] Exactly.

Jennifer [00:41:20] Okay. Next, you consider the effects of screening applicants based on their criminal record history. So what's the thinking behind this approach?

Zoe [00:41:29] Oh so screening on a criminal record history. So yeah. So let me describe I think correct me if I'm wrong in interpreting your question, but I think you're asking about when we asked directly about different crime types.

Jennifer [00:41:39] Yes.

Zoe [00:41:39] We asked about different crime types, not only in the category of crime. So we think about violence separate from financial and property crimes, separate from drug crimes and we also vary the severity. So we think that misdemeanor is distinct from felonies. And then finally, we think about the lookback period. So we separately are asked about demand if the look back period were restricted to just one year. So if we limited we looked at all crime types, but we stopped looking past one year into the history of a worker-- what would demand be like?

Zoe [00:42:16] So when we start to look at these that were demand for subsets of workers with criminal history, it's important to emphasize this. We're detecting demand for some groups, but also mechanically setting demand for the remaining workers who don't meet this criteria to zero. So, for example, we get a huge boost in demand for workers who have not committed a crime in the last one year. So if we were to add that restriction, but drop all the other restrictions demand goes up by 21 percentage points. Seems like the most effective policy we've discussed yet. But of course, that means that for workers who have recent crimes, demand would be would be mechanically zero.

Jennifer [00:43:03] Right. So what do you find? How do employers respond to potential workers within each of these categories?

Zoe [00:43:09] Okay. So there's a really strong demand response to shifting the crime type.

Zoe [00:43:16] So if we think about violent crimes, demand is as low as 6% and we think that drug related crimes demand rises to about 50%. So you can see there's actually really strong, heterogeneous responses. And I would say actually the category of the crime actually seems to matter even more then distinguishing between misdemeanor or felony. So, for example, violent felonies and violent misdemeanors respectively met with six and 10% of employers saying yes to this group, whereas drug related felonies and misdemeanors so drug related felonies are already that demand is already back up to 27% and for misdemeanors, it's as high as 51%. And then the property of financials in the middle between those two, I think this is important news for the platform that we're working with because they quickly realize that the matrix that they were filling out to send to the background screening company actually has a lot of options for which types of crimes should and shouldn't be screened out. And this was direct evidence that employers have strong preferences over the crime types.

Jennifer [00:44:26] Okay. And then finally, you use information on the performance of people with criminal records who had inadvertently had access to jobs on this platform in the past. So tell us a little bit about first about how this happened. So how many such individuals were there and what do we know about them?

Zoe [00:44:43] Right. So okay, this gets into the details of how platforms mitigate the costs of the background checks. So it would be an overwhelming burden if the platform wanted to actually check the criminal background of each and every person who ever applied to work on the platform. Because collecting all those court records actually costs between eight and actually up to $20 per head for a person.

Zoe [00:45:09] And the way they solve or the way they mitigate the costs is by waiting for a new user to the platform to match with the first job. So that means that the worker has not only filled out the online, has gone through the onboarding process, but they've actually matched to a particular job and there's a start time and everything is set to go. And at that point, the platform instigates the background check. And there are cases in just the span of 2019, 5% of all applicants who made it to this point, their background check didn't come in until just after the job had started. So they were able to complete that first job before the results arrived. And for that reason, there were enough individuals, so on the order of several hundred who had completed their first job, but we know ultimately failed the background check and was ultimately booted off the platform.

Zoe [00:46:11] And so as a consequence, we can look at how those first jobs went compared to people who applied and passed the background check compare their first jobs as well. And that's how we get sort of an objective measure, one objective measure of how workers with a criminal history might perform relative to those that do not have one.

Jennifer [00:46:36] Right. And we might be worried this is a somewhat selected or weird sample in the sense that like, you know, this it was probably clear on the platform that they were going to do a criminal background check and 5% is lower than I would imagine in the broader pool of potential applicants here. But it is something, some objective information that might be useful. So you provide that information to employers then in this questionnaire. And so why might providing misinformation be helpful? What were you thinking when you put this on the on the survey?

Zoe [00:47:08] Okay.

Zoe [00:47:08] So let me just point out one fact that might be helpful to your your earlier suggestion that these might be a selected sample. They might well be. But we to actually see what their background histories look like. And so we've categorized the actual crimes that they've done and relative to studies that have sort of published what crime rates look like across different categories of crimes. This group actually appears to have committed what we would think of as more severe crimes and I don't know if there's a particular explanation or good explanation for that. I think you're right that these are people who gave it a shot, went through the onboarding process, even though they could have gotten screened out. And it could have been it could have been people who had very few outside opportunities or neglected to pay attention to that part of the screening process, but just to give a sense of in terms of the crime types, I think we're looking at, so the negatively slightly negative selected sample and the reason why we thought the objective performance information was so important is as a direct test of whether crime history is a signal to employers of productivity.

Zoe [00:48:24] And of course, there's the performance rating the five star rating encompasses many aspects of an employer's experience with a worker. So, of course, it could also encompass aspects that touch on risky behaviors, for example. But by and large, we can look at whether or not that, you know what the rates of five star performance ratings are among workers that do and don't pass the background check on the platform in their first job, and also look at the rates of very low performance ratings. So no shows or one or two star ratings potentially more indicative of kind of bad behavior.

Zoe [00:49:01] And just see if indeed a employers could correctly predict what the relative ratings would look like for these two groups. And secondly, whether or not learning about the truth through our provision of information about this would affect their willingness to hire.

Jennifer [00:49:21] How do you test the effects of that information and what do you find?

Zoe [00:49:24] Right at the very end of this survey experiment, we randomize people into whether or not they would received information. And so you can think about having a treatment group and a control group, some of whom received information about the history, the performance history of workers with a criminal record relative to those who didn't and those who never received that information. And for all clients, we ask them to guess what the performance ratings might be. So here we offer actually an incentive, either $2 or $10 for getting the correct answer. And we say like, what do you think is the true share of five star ratings in the in the in the group with criminal records?

Zoe [00:50:06] We think the ratings are very low shares of new shows and one one or two star ratings. Okay for this, the results are pretty stark. So clients are even though we tell them health workers without a criminal record do so they on average get at 86% of the time get five star ratings. Clients think that workers with a criminal record are going to get a five star rating on average 70% of the time. So a pretty dramatic drop in performance on high end. And similarly, they say no show rates are going to be higher as well. So that is a 14 percentage point boost in a no show ratings expected by employers.

Zoe [00:50:51] And for those who we tell the truth, we can see that their beliefs shift so we tell them what we found using the historical records and they update their beliefs. So they revise their best guess to this question that we just asked. And then we ask at the very end of the survey, do you want to revise your choice? So you remember that very first question we asked about baseline demand. Would you allow workers with criminal records to

perform the job seekers? And so at the very end of the survey, we asked it again for the control group. We see the ones who did not receive information at all throughout the survey about the true performance. We don't see a change in the demand, but for those who do receive the information, we see a boost in the percentage of people who say that they would like to revise their rating and they moved from a no to a yes. And so on average, this is a seven percentage point boost just from giving that information about average productivity rates among workers with a criminal record.

Jennifer [00:51:56] All right. So let's summarize these findings since there were so many moving parts here. So what's the punch line? Which interventions work best on average?

Zoe [00:52:04] So I think there's sort of the way we think about this is sort of which which interventions are most cost effective. Because, you know, in some sense we randomize the values of all of these so that we can see a version of the policy which leads to a large boost in demand and the version of policy that leads to a more modest boost. And now we can step back and say, well, look, like in the extreme case, we can, of course, give 100% wage subsidy and get 64% of employers saying, yes, that would obviously be very expensive.

Zoe [00:52:34] That would be to subsidize the work force. Are there other ways of getting there that are less expensive and with just providing objective performance information which is free? That alone got a boost that was equivalent to about a 40% wage subsidy. And then we can get to effects that are close to an 80% subsidy if we move to the performance review and the insurance policies. So taken all together, I think the main punch line is that both information about performance and risk mitigation, they both seem to be very effective and cost effective relative to a wage subsidy.

Jennifer [00:53:15] So what are the policy implications of these results? What should policymakers and practitioners take away from all this?

Zoe [00:53:21] Well, first that I would so you mentioned the federal bonding program. So it's not as though there hasn't been some thought to versions of these types of policies at scale. But I think now that we're armed with numbers in a context where we know for sure the employers read the information, understood the information, and the process for implementing it is clear. We know that the numbers are high, higher than we would have expected, given just evaluating this program or comparing it to tax credits. So now I think thinking about scaling, we would want to think about what parts of those programs prevent it from being as effective. I think in general, moving away from worker specific subsidies towards thinking through the sort of more specific information that employers need to resolve either productivity or risk mitigation or even just understanding of risk. So basically talking about the mechanisms behind all this and what it would mean to supplant the criminal background check with more pertinent, more salient, more relevant employment information. I think that's sort of the direction I would love to see policymakers move towards and away from essentially the topic we haven't gone into detail about, but sort of just banning the information.

Zoe [00:54:46] So this option of just removing criminal records without any alternative policy which can have, you know, which can lead employers as we've searched for other signals race, for example, as a way of recovering the information is, I think, moving in the wrong direction. The right direction would be to think about providing the extra information necessary to supplant the signal.

Jennifer [00:55:08] And you talk in the paper about how the platform has used your results already. There's probably more information since then. So how has the platform responded to your results?

Zoe [00:55:18] The platform has been amazing. They set up the program so that employers who through our survey said yes to working with this group could have that opportunity. And then they started to think about the best platform policy for them, given these results and given how it would be to implement the different policies. And they came up with a solution that they're working towards slowly and steadily of allowing group of workers with criminal records to participate in the marketplace, but requiring employers to choose and eventually pay for specific crime screening. And by specific tiered system where you pay more to screen more.

Zoe [00:56:00] And by taking advantage of the heterogeneous preferences of employers, of the varied preferences of employers, they hope and we hope to, given these results, that it will maximize the number of jobs that workers with the crime criminal record can accept. And so already, just based on asking for employers to opt into criminal screening, they've already seen an addition of now, I believe, 50,000 jobs that are newly available for workers with a criminal record that previously would not have been open to them.

Jennifer [00:56:40] That's fantastic. Okay. So that was your paper. Are there any other papers related to this topic that have come out since you all first started working on the study?

Zoe [00:56:48] That's a super. I'd like to think that it would come onto my radar if it had. Most of my studies take seven years, you know, and it's been only two years. So it's just a matter of and besides to see what else is out there on this.

Jennifer [00:57:05] Yeah no your study is definitely unique. Like running this kind of experiment is it's rare to find these kinds of opportunities. So definitely unique and very cool. Okay, well, so, so what's the research frontier? What are the next big questions in this area that you and others will be thinking about going forward?

Zoe [00:57:21] Well, I think there's so much headway to make in terms of understanding what drives firm demand and policies that are specific to them. So taking their perspective really seriously, rather than focusing on what I think are very effective policies that have been hard to implement person by person that focus on on the work versus for example, like cognitive behavioral therapy treatments could be very effective worker side policy or one that we've seen be very effective with the firm side policies, especially with respect to increasing employer employee demand.

Zoe [00:57:54] You know, sort of could be heavy hitting in the sense that you get one firm like Walmart to adjust its policies and it could affect the job opportunities for many who fall into this particular disadvantage group. And I would say, like, you know, we don't we barely touch the tip of the iceberg because there's so many there's so many ways of basically of increasing demands along the dimensions that we described that we didn't get to do. So, for example, if we thought that the criminal record was a signal of soft skills in our paper, we just test like a 1 to 5 star rating. It goes nowhere close to how well you might do if you actually could include a reputation or a resume that had something to say about, you know, actual responsibility, soft skills, risks that might be relevant to the employer.

Zoe [00:58:45] These types of sort of the actual pieces of information about especially low skill entry level workers is still so limited and I think has a long way to go. And there's also sort of like the obvious differences that my coauthors I wish we could have done, which is to sort of actually track what happens. So suppose the firm increases their workforce with respect to this group, and now they have experience hiring and working with workers who have criminal records. How does that experience get out? How does the match go? And does is it sort of does experience lead to higher demand for this particular group?

Zoe [00:59:26] I think those are all questions that we would love to see others. And if we found ways of doing it, we would also do.

Jennifer [00:59:32] That's great. My guest today has been Zoe Cullen from Harvard Business School. Zoe, thank you so much for talking with me.

Zoe [00:59:38] Thank you very much, Jen.

Jennifer [00:59:44] You can find links to all the research we discussed today on our website probablecausation.com. You can also subscribe to the show there or wherever you get your podcasts. To make sure you don't miss a single episode. Big thanks to Emergent Ventures for supporting the show and thanks also to our Patreon subscribers and other contributors. Probable Causation is produced by Doleac Initiatives, a 501(c)3 nonprofit, so all contributions are tax deductible. If you enjoy the podcast, please consider supporting us via Patreon or with a one time donation on our website. Please also consider leaving us a rating and review on Apple Podcasts. This helps others find the show, which we very much appreciate. Our sound engineer is Jon Keur with production assistance from Nefertari Elshiekh. Our music is by Werner and our logo was designed by Carrie Throckmorton.

Jennifer [01:00:29] Thanks for listening and I'll talk to you in two weeks.