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JON GRUBER: A big week out of the Economics Department. Big news is the Nobel Prize. Very timely for this class because just a couple of lectures ago, we talked about Daron Acemoglu. I called him out as the best political economist in the world, and the Nobel Prize validated that, along with his collaborators, one of whom, Simon Johnson at the Sloan School, is also a good friend and a co-author of mine. So it's really been a thrill to see them get this award.

And let's remember why they got this award, because it's so timely. And they got this award because their work is timeless. But their work is particularly timely. Because you remember what I talked about? I talked about how, if you will, the line between government success and government failure can be rather thin. And that basically what their work was so important in showing out-- in showing was-- and I had the box in the book about their study of countries succeeded or failed, which is one of, probably, maybe the most famous economics article of the last 25 years and the main reason that they won the Nobel.

It's that basically institutions matter, and societies that weaken their institutions, particularly the democratic institutions, can move from a society that succeeds to one that fails. And they talk about comparisons like North and South Korea. Or right across the border, US-Mexico. Or other examples of places that were very comparable until institutional differences took them off the rails and drove them in very different directions.

Obviously, understated in that is where America is right now, and the importance of maintaining democratic institutions and the fragility of those Democratic institutions. And understanding that it's so critical for how we think about this election. And how we think about what happens after the election, the role that we play as a society, to make sure that it won't close our eyes to any erosion of the democratic institutions that could leave our kids and our grandkids with a failed state in the future.

So it's a really timely award. It's an incredible award. It's a profound award. And I really just think it's wonderful for MIT and for the world that they gave this award. So I urge you to read up on their own on Simon and James and their work. Read *Why Nations Fail.* Be one of the more than million-plus people to buy that book. It's an incredible book, incredibly successful book. And spend some time really reflecting on those issues because they're important for everyone all around the world. All right?

So with that in mind, let's get much more mundane. Let's talk about some specific social insurance programs. Once again, we're in the social insurance part of the course. We set the stage with chapter 12, setting up the fundamental trade off of social insurance. How much could-- subject smoothing does it do versus how much moral hazard does it cause? We talked about applying that in the context of Social Security.

Now we're going to turn to three other of the major social insurance programs in our society. And these programs, one of them I'll talk about is unemployment insurance. That is something-- a perfect example of unemployment insurance matters was during COVID, when we ended up with 6 times as many unemployment insurance recipients as we ever had because so many people lost their jobs. We realized the importance of programs like this. And I'll come back to what happened during COVID.

But I'm going to talk about each of these three programs. There's a lot of institutional detail to cover today. So once again, I'm going to try to go pretty-- keep it pretty shallow. Ask me questions about the features of these programs that you feel like you need to know more about to understand them. So let's start by talking about unemployment insurance, OK?

Unemployment insurance is the insurance we provide against layoffs. So UI's for layoffs. What does that mean? It's not for people who quit their job. It's not for people who get fired for cause. It's people who lose their job because-- not because their employer said they are bad workers, because the employer cannot afford to employ them anymore. OK? So that is a very important feature of this.

Moreover, it's a program that requires to receive the benefits that you're actively looking for new work. So you have to be laid off. You have to be searching. And you have to be searching for a new job. Searching for a new job, OK? So that's another big requirement. So basically, that's who the program is for.

What it provides you is a weekly benefit. And that weekly benefit is a function of your earnings before you lost your job. So if you look at figure 14-1, this shows a typical unemployment benefit schedule. This is the schedule for Michigan, but it's a typical unemployment schedule, where basically what determines your benefit is your weekly wage. In the highest quarter of the past year, it's actually the highest quarter in the year that ends the quarter before this one, it's-- very technically. But basically, the point is you have to show some attachment to the labor force.

So in if in your most active quarter last year you weren't earning at least $262, you don't get UI. If you weren't earning $262 a week in your most active quarter, then they say you weren't really attached to the labor force. We're not going to give you UI. Once you're earning that much, you get a minimum benefit, that minimum benefit of about $150-something a week. Your benefit then rises at about 50% replacement. So for every dollar or more of wage, you have 50% more benefit until you get a maximum benefit. Here, the maximum benefit in Michigan is $362, which you hit a little less than $700 in wages.

Now, one interesting feature about UI is that it-- unlike Social Security, it is a state, not a federal program. So we have 50 versions of these benefit schedules across the states. That is very exciting for empirical work. Because remember chapter 3, what we want is these quasi-experimental changes. Well, when the program's national, there's not a lot quasi-experimental change that's not-- doesn't affect the whole country.

Well, here you have states running experiments all the time for you. And so it's become an incredibly active area of empirical research is studying the effect of UI, because there's so much variation across states and over time. Overall, the average replacement rate for this program is about 44%. So similar to Social Security, replace about 44% of your wages. But obviously, it varies depending on how high your wages. So that's the benefit you get.

You get that benefit if, for a certain amount of time-- typically in a standard economy where things are going well, it's 26 weeks. So as long as you've worked enough, as long as you've been working for basically a year, you can get 26 weeks of unemployment insurance benefits. However, that number can vary a lot. For example, if you've been working for less than a year, in some states, they'll let you have UI benefits, but for a few-- less time.

States have what they call trigger rules, which are basically if the employer-- if the economic situation gets particularly bad in that state, they will extend benefits beyond 26 weeks. And then the federal government also issues emergency extensions when the whole national economy is in bad shape, like during COVID. During the Great Recession. UI benefits actually went up to 99 weeks at the peak. So they can be extended a lot when economic times are quite bad. So you get this replacement rate, which is a function of your wages. You get it for 26 weeks, but it varies according to economic conditions. OK?

Importantly, you only get it if you claim it. So it turns out only about 3/4 of those who qualify for UI actually take it. Now, it's free money. I mean, if you're unemployed, why not? And that's a fascinating issue. We'll come back to over and over again when we talk about social insurance, which is what we call the take-up problem, which is that just because someone's entitled to something doesn't mean they take it.

Well, why not? Well, there's basically two classes of reasons, three classes of reasons why people don't take benefits to which they're entitled. The first is just information. They just don't know that they get these benefits. The second is hassle costs. It's a pain. You got to maybe go wait in a line. You got to write a letter and, say, you got to produce documentation. It's a pain. And the third is stigma, which is maybe you feel bad taking a government handout.

Some combination of these three reasons explains why take-up is less than full. We don't really know what they are. We do know people respond rationally to incentives. That is, the higher is a benefit, the higher is the take-up. But that doesn't really rule out any of these because maybe it's higher benefit. Sort of rules out the information angle. But both hassle and stigma, if it's a big benefit, you only put up with the hassle and a lot of stigma. So the fact that take-up rises with higher benefits kind of says information isn't the full story, but it can't really differentiate between these two.

So if you look at all workers who separate from the jobs in America, only about a quarter get UI. We believe unemployment insurance is something everybody who's not working gets. It's not true. By the time you take people who were laid off, who are actively searching, and who decide to take it, only about 25% of those who are unemployed at a point in time are actually getting UI. OK?

So basically, that's how the program works. How is it paid for? It's paid for through a payroll tax. Your employer pays a payroll tax on your behalf. This payroll tax is small. It averages less than 1% of payroll. And it's partially experience-rated. Partially experience rated. What does that mean? Well, what does experience-rated mean?

Experience-rated, we mentioned this before, is a system where you pay back what you collect. So in a perfectly experience-rated system, every dollar of benefits that your workers get you pay in higher taxes. That is not how the system works. It's a partially experience-rated system in that firms do not pay back exactly what their workers get. And we'll come back later to how that actually works in practice.

That's UI. Questions about that, about UI? Yeah? Go ahead.

AUDIENCE: Are there differences in how unemployment is defined based on whether the worker is on a W-2 or 1099?

JON GRUBER: Great question. We'll come back to that. It really is designed for traditional workers on W-2. So as the economy shifts towards more gig work, it's presenting a challenge, which we saw during COVID. We'll come back to that. Yeah?

AUDIENCE: So if you're a struggling with lots of layoffs, you'll get taxed more through these experiences?

JON GRUBER: Yes, partially, up to a limit. If you have enough layoffs, at that point, they'll stop taxing you extra. So it's basically there's a ceiling on what your tax rate can be. And I want-- the normative tone in your question I want to come back to, which is, well, gee, it seems kind of mean to tax these firms when they're down. But let's come back to why you may or may not want to do that. We'll come back to that later. So that's UI.

The second program we're going to talk about is Disability Insurance, or DI. DI is defined as a program for individuals who have become disabled and are unable to return to work. OK? Individuals who become disabled and are unable to return to work. So essentially, what happens if you become disabled? You have to first not work for five months. There's a five-month waiting period. Then, having not worked for five months, you can apply for disability insurance. There's an adjudication about whether you actually are disabled, and then you get a benefit.

So let's talk about each of the pieces. First of all, what is the benefit? The benefit you get is you get your PIA, but at whatever age you're adjudicated disabled. So remember, your PIA, that's your full Social Security benefit. What you get if you're retired at 67, you get that at 30, or 35, or 40, whenever you're disabled. So it's pretty good.

It's not great because your 35 highest years are not that high yet. But basically, if you tell someone at 50, they get to retire in their full Social Security benefit, that's not a bad deal for many people. OK? So benefits are fairly generous. OK? That's what you get. Moreover, once you are on DI after two years, you also get Medicare. You get universal health insurance coverage. So it's a benefit plus health insurance coverage.

How is it decided? Well, people apply for DI. People apply for DI. And there's an adjudication done by a state board. And they basically decide, are you disabled? And the way the system works today is about 1/3 of people who apply are adjudicated as disabled. But if you're not attributed as disabled, you can appeal to what's called administrative court. And you could actually technically go all the way to the Supreme Court.

And after all the appeals are taken into account, about half of the people apply get it. But a third get it right away. Of the other 2/3 that don't get it, a bunch get it on appeal. So then over time, roughly speaking, of those who apply, about half get it.

Now, the trick is this adjudication is very difficult. It's very hard to tell someone is disabled because most disability are for things which are not like losing your arm or becoming paralyzed. Therefore, things like chronic back pain, or depression, or things like that. They're very hard to determine. Moreover, the way DI works is it technically says cannot go to work. You get DI if you cannot go back and do work substantially similar to what-- basically, you cannot do work you're qualified for.

So if you're a high school dropout, lumberjack, and you-- your legs, and you become disabled, and you're in a wheelchair, clearly you're done. But if you're a software engineer, it's not entirely clear you are done because you're in a wheelchair. So basically, the adjudicator has this difficult decision deciding whether you're disabled and whether your disability means you can't do basically something that you're trained to do.

And as a result of how difficult this is, they ran an experiment where they took a set of disability insurance adjudicators and gave them a set of files to evaluate. And a year later, they randomly gave them the same set of files to evaluate. And they changed their mind in almost a quarter of them. So it's very hard to figure this out. I mean, it's not that they're bad. It's their job. It's just hard. OK? So there's a lot of randomness in this process.

Now, this program is a national program. In fact, it's part of the Social Security program. Social Security is technically called the OASDI, Old Age Security and Disability Insurance Program. So part of your payroll tax, your 6.2% payroll tax, is going to pay for DI. DI is actually a rather large share. DI is about 14% of the entire Social Security program. It's about $140 billion a year. So it's a big program. It's national, although the adjudication happens at the state level. So there's a little state variation, but mostly national. OK? Questions about that?

Now, the third type of social insurance we'll cover is the nation's oldest social insurance program, workers' compensation. OK? Workers' compensation differs from DI and UI in an important way. This is DI and UI are government-provided insurance that you fund through a payroll tax. Workers' comp is mandated private insurance. This is insurance that covers you against getting injured on the job. So it's insurance to cover you getting injured on the job.

The state specifies what you're going to get if you get injured. But it then says you have to go find insurance to cover that. It says, look, if you get the injury, you have to get paid this much. And you have to go find an insurer to buy that from. In some states, the state itself can be the insurer or one of the insurers, but generally people buy private insurance to cover this. So it is a mandated employer-provided insurance benefit. OK?

We're going to show later in chapter 18, effectively it's the same thing. Employers pay money, workers get a benefit. It's just how you're labeling it. But it is different technically. And once again, it's partially experience rated. What you pay to your insurer depends partly on your own accident experience, but not fully. Essentially, the bigger your firm is, the more it's based on your own experience. The smaller your firm is, the less they base it on your experience, because accidents can be random. OK?

Workers' comp has two components. There's a cash benefit, which you get if you're out of work, and coverage for your medical expenses arising from being hurt. So if you get hurt at work, it covers both your-- it both pays you a weekly stipend and covers your medical benefits. The weekly stipend varies across states, but is generally pretty generous. The typical workers' comp weekly stipend covers about 75% of lost wages, and it's not taxed.

So when you count taxes, the after-tax replacement rate for workers' comp is on the order of 90%. So it's pretty generous replacement for the wages that you lose, but it varies across state. Indeed, my favorite table of any paper ever published is what I call the Gory Table, table 14-1. This is how much you get for losing different body parts in different states. So for example, if you're working in Indiana and you lose your arm and your leg, you might want to try to drag yourself across the border to Illinois, where you get three times as much. No, you can't, actually, because it's based on where your employer is. But it makes a good joke.

Basically, there's a lot of variation. This table is kind of fun because you see, oh, is losing your foot really worth $90,000 or $150,000? But in some sense, it's more cute than useful. The vast majority of claims are actually what we call a temporary injury, which is the last column, which is what you get per week if you can't work. It's not some permanent damage. Mostly, workers' comp is not for permanent things. It's for temporary things that go wrong and you can't work for some period of time. But you even see that varies a lot over how much you get over 10 weeks-- varies a lot. Once you get to Illinois, you get twice as much as you get in Indiana if you're hurt for 10 weeks. OK?

Workers' comp is essentially no-fault insurance. So you're buying insurance from an insurer saying, look, it doesn't matter if you got hurt because your employer tripped you as you're walking by. I guess not really. But if it was a shitty ladder and it collapses, that's the same as your employer has a great ladder and you fall off. Either way, you get workers' comp. It's no-fault insurance. It arose, actually, because-- it's actually kind of interesting.

Before the program arose in the early 20th century, if you got hurt at work, the only way to compensation was to sue your employer. So it was an at-fault system based on a lawsuit. The problem was, I guess, lawyers hadn't figured out working on contingency yet. So if you're poor, you couldn't afford a lawyer. There wasn't Morgan and Morgan or whatever. OK? You couldn't afford a lawyer. So basically, poor people had no recourse was one problem.

The other problem with the system is we have another term for lawyers in this class. They're called deadweight loss.

[LAUGHING]

Why are lawyers called deadweight loss? Well, all lawyers do is transfer money from party A to party B and take some out along the way. OK? So basically, the tort system has a deadweight loss associated with it. And the view was, rather than all this deadweight loss, why don't we just go out and give them a benefit? However, the benefit is no fault, which raises moral hazard concerns we'll come back to. OK, so that is how workers' comp works. Yeah?

AUDIENCE: If you're hurt on the job, but you can still work, is that workers' comp--

JON GRUBER: If you're hurt on the job, basically the way it works is an adjudication, which is you go to a doctor and they say whether you can work or not.

AUDIENCE: And if you can work?

JON GRUBER: If the doctor says you're able to work, then you don't get workers' comp.

AUDIENCE: And then my third question was, can you explain the workers' comp with the partially-experienced ratings again?

JON GRUBER: Yeah. So what that means is full-experience rated would mean if Gruber Co. pays that $10,000 of benefits to my hurt workers, then I pay $10,000 back in tax. So basically it's just like they're just allowing me to smooth my consumption-- my firm spending over time. That for a large firm, that's basically what they do. But for a small firm, if Gruber Co. has two employees, it's pretty rare that one's going to get hurt. And that's a pretty big shock if one gets lost.

So then they'll say, well, look, your tax rate's a function partly of your experience or partly also of just an average experience in the state. Yeah?

AUDIENCE: Does this chart apply to things like fingers or toes?

JON GRUBER: Yeah, they got everything. They have everything. Expands out toward every body part. All right. So other question about his work? So let's compare him with this overview. Let's look at table 14.2, which basically is a summary of how these programs compare.

So essentially, what's the qualifying event? It's either unemployment, or disability, or on-the-job injury. How long does it last? 26 weeks for UI, although it can vary. Indefinitely for DI. Basically, once you're on DI, you never leave. Technically, you can leave. No one ever leaves once they're on DI. And then for workers' comp, it's indefinite until a doctor says you can go back to work. OK?

How hard is it to verify whether you're actually qualified? Well, to verify whether you lost your job is pretty darn easy. To verify whether you're looking for work is really hard. To verify whether you're disabled is pretty hard. To verify if you're hurt at work and can't work is really hard. OK? Much harder because it's much harder to decide if you can go back to work today or tomorrow, versus if you could never go back to work. OK?

What do you get? You get an average replacement of UI, about 45%. The average replacement for DI is about 60%. The average under workers' comp is about 90%. And does it vary across states? Worker's comp and UI does. DI really doesn't. So we're going to come back to this table later in the lecture and talk about what we've learned about these programs makes us think about the way they're set up.

Now, one thing that's interesting is, how do you think about the duration of social insurance benefits? So if we go to figure 14-2, this figure shows-- this kind of cool, colored figure, shows the level and duration of unemployment insurance benefits around the world. So for instance, the blue line's the United States. You get about a 44% replacement rate and it ends. After six months, it goes to 0.

If you compare that to Austria, you get about a 55% replacement rate that never runs out. As long as you're unemployed, you get the benefits. Belgium, it goes down, but stays high. Other states, it lasts longer, then goes to 0. Well, how do you think about-- how does our chapter 12 help us think about the optimal duration moderation of UI benefits?

OK. Well, let's start. So let's think about the principle of chapter 12, about optimal social insurance determination, and what forces should drive. Unemployment insurance benefits to be longer and what forces should drive them to be shorter. Or in other words, under what conditions do you like a system like Austria's, where you get it forever? Under what conditions do you like the system of the US, where it just cuts off after a short period of time? What are the trade-offs in thinking about that? Yeah?

AUDIENCE: [INAUDIBLE].

JON GRUBER: Yeah. So basically the cost, obviously, is the longer you let these benefits go, the less incentive there is to look for work. In Austria, if you don't love your job and you're sitting at home forever with 60% replacement rate, if they can't really verify how hard you're looking for work-- so there's a huge moral hazard cost. That's a clear disadvantage to making the benefits last a long time. I would say go US, we cut them off shorter. What is the counterargument for letting them last longer? Yeah,

AUDIENCE: Maybe the job market sucks?

JON GRUBER: Well, one argument is maybe the job market really sucks. So that would say the problem is you're kicking people off before they can plausibly find a job. What else? Going back to chapter 12. Remember, what drives consumption smoothing for social insurance programs? What drives that? What drives how much consumption smoothing you can do? Yeah?

AUDIENCE: How much [INAUDIBLE].

JON GRUBER: How much self-insurance you replace. Let's think about how self-insurance works for unemployment. When you first lose your job, you're probably pretty well self-insured. You got some savings. You got a credit card. You can borrow up to the limit. Some friends will help you out, but the longer you're unemployed, the worse and worse your self-insurance is going to be. So in some sense, that UI does more consumption smoothing the longer you're out of work, which would say benefit should, if anything, rise over time.

So the trade-off is on the one hand, the longer they're over time, the more moral hazard. On the other hand, the longer they last, the more consumption smoothing. And you have Stephen's point about the fact that if it's hard to find a new job, you might want them to be longer. OK? But then you have one last-- yeah?

AUDIENCE: Or you could think about it as [INAUDIBLE]. Is it from the end of that [INAUDIBLE]?

JON GRUBER: No. No, from the start. But then there's one last factor, which is that the fact-- that's another version of moral hazard, which is the longer you make it, the more people's skills deteriorate, and the harder it is to find a new job. So in other words, your moral hazard, not only keeping them from working. You're making it harder to find a new job. So the bottom line is it's a classic on the one hand, on the other hand thing. There's no right answer. But it's a great-- in one graph, in one example, it's a great way to understand the trade-offs of chapter 12. OK? Questions about that?

Now, let's talk about benefits. So that's the duration. We're not talking about duration anymore. Let's talk about benefits level. Let's focus on the replacement rate as the key determinant of generosity of social insurance programs. And let's ask, how do we think about the optimal replacement rate? Well, the way we think about the optimal replacement rate is to trade off the consumption smoothing benefits against the moral hazard costs.

And what's awesome about chapter 14 is we have a large literature on both. So we can actually put them together. So let's start. There's a much smaller literature on consumption smoothing benefits. The way that literature works is essentially asking literally if benefits get more generous, are people's consumptions smoother? So I did the first article on this with unemployment insurance, where I asked if UI benefits are more generous, are people consumption more smooth when they lose their job?

To the extent-- so think of a regression-- of the change in your consumption when you lose your job on how generous benefits are. Think of that regression. So delta C equals alpha plus beta times benefit. OK. If someone has 100% self-insurance, what should the coefficient beta be? Let's get some other folks involved. Come on, folks. Let's wake up. You got this.

If someone has 100% self-insurance, what should the-- how should the benefit affect your change in consumption when you lose your job? Yeah?

AUDIENCE: Zero.

JON GRUBER: Zero. Because you're already self-insured. Your consumption is already going to be smooth. It shouldn't matter. If likewise you have zero self-insurance, that coefficient should be 1. So it says that the regression from that-- the coefficient from that regression tells you both how much consumption smoothing the program is doing and how much crowded it's doing. And the answer through regression is beta is around 0.3, that basically people are pretty well self-insured, not fully self-insured. Beta is not 0-- but reasonably well self-insured.

And actually, I've then-- I and others have then gone to a series of articles showing whether self-insurance comes from. It comes from people save more when UI is less generous. And their spouses go to work more when UI is less generous. And as a result, there's a decent amount of self-insurance. OK? So there's some consumption smoothing, not a ton.

Now, this sort of analysis has been done for other programs, as well. If you look at disability insurance, there's a really neat study from the Netherlands by my colleague David Autor. And what David Autor finds is that basically-- that basically beta is much bigger. So this is-- so beta UI is smaller than beta DI. The disability insurance does a lot more consumption smoothing and a lot less crowd-out, which is not surprising.

Why? Why is it not surprising that there should be more consumption smoothing done by DI than there is by UI? Yeah?

AUDIENCE: DI is a longer period of time.

JON GRUBER: Longer period? It's a more serious-- you can't self-insure against losing your job the rest of your life. It's pretty hard to self-insure against. You can self-insure on being against being out of work for 10 weeks, so it's not surprising. Now, the one we don't know is beta workers' comp. This has never really been estimated. OK?

My guess is it would kind be in the middle here in the sense that on the one hand, getting injured is probably less anticipatable than losing your job. So that says people are probably less well self-insured. On the other hand, it's not as permanent as being disabled. So people probably have at least some savings they could use to help themselves out. So we don't know where beta WC is, but it's probably in the middle there.

OK. This is a way to put numbers on the intuition from last time, which is this fundamental trade off between self-insurance and consumption smoothing. OK. Questions about that? Now there's a relatively small literature on that. Since economists are grumpy, there's a much larger literature on moral hazard. That's more fun to talk about. It's not that fun to talk about whether smoothing consump-- It's really fun to talk about people perniciously not going to work because they're getting benefits.

So there's a massive literature on the moral hazard effect of workers' comp, of UI, massive literature on the moral hazard effect of all these programs. So I want to go through them one by one. The consensus in the literature is pretty small. That's all I have to say. The moral hazard literature is very large, so I want to go through each program one by one. And the moral hazard literature is large because, for example, for UI, you have all these wonderful state quasi-experiments to study. So a lot of studies of the form figure 14-3.

Figure 14-3 is an example of how you set up a quasi-experimental study of unemployment insurance. Let's describe what we have here. We have a state that used to have the blue replacement schedule and then changes it, raises its benefits, and adds the reds, and replace the upper segment with the red. So their new budget, their new state benefit schedule is the same up to $700. But then it's higher after $700. So they move from all-blue schedule to the blue plus red schedule.

The way quasi-experiment analysis works of that is, they say, OK, look. You've got two groups, those who earn below 700. Nothing changed for them. Those who are in above 800, something changed for them. So let's look and ask, over time, do you see a different behavior in those who earn above $800 versus those who earn below $700? The difference in difference. We discussed this. We discussed in chapter 3. Go and remind yourself, and look at the appendix to chapter 14 to remind yourself how this all works.

But essentially, we do a difference in difference. The difference in difference here is group-- we basically look at group H after minus H before is one difference minus L after minus L before. And let's talk what's going on here. You could just do this. You could say, well, look, the benefit increased. Let's look at what happened to group H. Did their unemployment durations go up? What would be wrong with that? Yeah?

AUDIENCE: [INAUDIBLE].

JON GRUBER: Well, no, no. Because you're doing it based on their--

AUDIENCE: Well, you do not have their control group.

JON GRUBER: But why do you need a control group?

AUDIENCE: See if there were other effects there.

JON GRUBER: What other effects are you particularly worried about?

AUDIENCE: I don't know.

JON GRUBER: Maybe they raise the benefits because it was a bad time. Maybe states rate benefits when there's a recession. So of course you're going to find higher benefits lead to longer-- people being unemployed more, because they raised benefits during a recession. So the idea is that this-- think of HA minus HB as being the effect of UI, the UI moral hazard, plus the effect of economic conditions.

But that's where this group comes in, which, say, well, the economic conditions also effect anyone below $700. So here you have the effect of just econ conditions. So by taking the difference in difference, you end up with just the UI moral hazard effect. And that's the idea of this approach. Yeah? Question? You look puzzled.

AUDIENCE: Yeah, for the DID approach, I guess one of the main threats to validity would be the comparison between the control [INAUDIBLE].

JON GRUBER: So let's put this in English. You clearly know how to think about this framework. Let's put this in English. What's wrong with-- how would you criticize what I just laid out here? I criticized just using this comparison. How would you criticize what I-- go ahead. See if you can put it in English. How would you criticize what I just laid out here?

AUDIENCE: If you have a control [INAUDIBLE] not the same people.

JON GRUBER: They're not the same people. But that's OK as long as they're different for random reasons. But why might they not be different for random reasons?

AUDIENCE: Well, because these are two different states.

JON GRUBER: No, it's one state. One state. Yeah?

AUDIENCE: Because the income is different.

JON GRUBER: Their income is different. And why does that matter? They're different before income beforehand.

AUDIENCE: It reflects demographic differences between the two.

JON GRUBER: That's OK. That's OK. If these groups are different, that's OK. You know why? Because I'm comparing before to after. So it doesn't matter these guys are in these guys. So I'm looking at what happens over time within the group. So any fixed difference between groups is picked up by this, by this. OK? The fact that these guys are in these guys doesn't matter. Because I'm looking at what happened over time within each group. Yeah?

AUDIENCE: [INAUDIBLE].

JON GRUBER: Exactly. The groups are different. That's not a problem. If the effect of the recession is different, that is a problem. What if recessions affect low-income workers differently than high-income workers? OK? So basically I should have broken this down in piece. Let's say your first estimate was just I'm going to look at HB.

Well, that's bad because the recession could have happened. Then you say, well, look at HA minus HB. Well, that's bad because-- I'm sorry, you look at HB. You say, well, that's bad because people just are different. HA minus B gets you this, then you difference out from this. This, by differencing, you get rid of any distinguishing differences within the group. But we don't get rid of is the fact that economic conditions-- what if this is econ H and this is econ L?

What if the recession affects them differently? Then you're not getting UIMH. You're getting UIMH plus another term, which is econ H minus econ L. What do we call that term? Bias. So the bias only goes away if econ H equals econ L. Well, how would you figure that out? What would you do to solve that problem? Are you just stuck? No, you're not stuck. What do you do? Someone actually already gave the answer. Yeah?

AUDIENCE: You have to make sure that they're randomly distributed.

JON GRUBER: Well, no, we know they're not randomly distributed because they start with-- I mean, people are bottom below $700 or above $800 are not randomly distributed. What has to be randomly distributed? What has to be random? Or what-- how would you-- actually, let's just take a step back and ask-- think about what I'm assuming here. I'm assuming that the effect of economic conditions on these two groups in this state are the same. How might I test that? Yeah?

AUDIENCE: If you look historically.

JON GRUBER: I could look historically? I could ask the last time there's a recession, was econ H and econ L the same? So I could literally try to control for this term. I could literally put this in the regression. That's one way to do it. What else could I do? Once again, somebody already gave the answer. I, a minute ago, actually gave the answer. I snuck it in. Yeah?

AUDIENCE: Think of that as a different state.

JON GRUBER: A different state. Look at the neighboring state, where any recession probably hits them about the same. But so therefore, this term should be the same in the neighboring state. So if you can test your steer assumption by doing the same regression for a neighboring state, you should get 0. If you get 0, then your assumption is correct. If you don't, then it's problematic.

Typically what we'll do in that situation is say, well, let's difference out what happens to the other state. That's called the difference-in-difference-in-difference estimator. Now, that may not be good enough because the other state may be different for other reasons. So then there's other things you can do. And this has given birth to an entire range of specification check technologies we do in economics, which we don't have time to get into.

But this is the basic idea, is the basic idea of quasi-experimental economics, it's a game of whack-a-mole on identification, essentially saying, here's my strategy. Now I've got to whack down all the potential problems with that strategy. With a randomized controlled trial, you don't. There's no problem. You've randomized by definition. That's why randomized controlled trials are very much in favor. Because the problem with whack-a-mole is it's really hard to prove. All you can do is disprove it a million ways.

And our poor students back there, Ahmet and Valerie, are writing papers where they're going to have to run 8,000 of these graphs and tests and show that-- because basically, what happens in economic seminars? You go there, and it's a bunch of people finding moles. What about that mole? What about that mole? You got to whack it, whack it, whack it, whack it. OK? Ultimately, the believable the paper is how believable you could be at whacking those moles and how much people really believe you've gotten them.

But that is-- just to be clear, while this course really advocates quasi-experimental methods as a solution to understand a lot of empirical problems, it's not perfect. OK? It's only perfect is to the extent you can really feel confident you've whacked all the moles. OK? Questions about that? All right.

Now, so what do we find? When we do that for UI, we find a reasonably large moral hazard effect. The consensus estimate. It's actually been revised in a recent paper. The consensus-- actually, it's an interesting story, a little bit of a sad story about it for academia. The consensus estimate was that the elasticity of how long people stayed unemployed with respect to the benefit was about 0.8, that for every 10% benefits were higher people stayed unemployed about 8% longer, which is a pretty big effect.

There's been a recent article which suggests maybe too big an effect, because it's noted something that's a frequent test for what we call publication bias. There's a bias that's, quite frankly, the fault of publishing companies, which is that if a result is significant, it is more likely to get published than if it's not. And the way you test for publication bias is you look at the distribution of significant statistics.

There's a massive spike at exactly the cutoff where it's significant. That suggests maybe people waited till that point, and then they published the article. There's a recent article which shows that's huge in this UI literature and suggests now that the right estimate is around 0.5, that there's been a lot of public-- that it's still-- the moral hazard, is still real, but maybe not as bad as we thought. It's a side note. Doesn't really matter for you guys. It's just an interesting side note about the hazards of published research.

The bottom line is moral hazard is real here. 0.5 to 0.8, that's a big range. But that raises an interesting question. If higher unemployment insurance benefits cause you to stay out of work longer, either 50% longer or 80% longer, whatever it, is that bad? In fact, why are you not sure that's bad?

Let's say it is true that higher unemployment insurance benefits cause you to stay out of work longer causally. What determines if that's actually efficient or inefficient? Yeah?

AUDIENCE: Well, wouldn't that suggest that people value leisure more than they are allowed to?

JON GRUBER: Well, let's go to allowed to. Certainly people are valuing leisure more. Certainly they stay at a lower value of leisure. To push your argument, the way-- by allowed to, you have this view that people can't really take advantage of their preferences for leisure. What would cause you not to be able to take advantage of a preference for leisure? The fact that you don't have money in the bank.

If everyone could borrow-- let's say everyone could freely borrow, and let's say they truly needed a week off. They just take the week off and borrow to pay-- to borrow and pay it back by working hard later in the future. You can't do that. And in particular, the concern is what if you need more time to find a good job? What if, in fact, the problem is that UI is too short? And with a short UI, people are rushed into jobs that are not the best fit for them. We don't want the brain surgeon working at McDonald's, OK?

But it's going to take the brain surgeon a while to find a good job. And the brain surgeon can't borrow to pay their mortgage. They're going to rush into a bad job. It's hard to look for a job when you already have one. Once you have the brain-- this is a very important point and subtle point in heart. So let's stay in it for a minute. Once again, we've got the brain surgeon loses the job. We're going to ask, are we worried the brain surgeon is going to rush back and take an inappropriate job?

The answer is no, as long as credit markets work appropriately. If credit markets work perfectly, the brain surgeon would not have to rush. Because the brain surgeon can say, look, I'm going to be rich again. I'll just borrow against my future wealth, and I'll take as long as it needs to find a good job. The problem is, banks won't make that loan. And as a result, they face what we call a liquidity constraint. They cannot get the money they need to find the best job for them, maybe.

So they need more time. So the fact that unemployment insurance is giving you more time might be good. It might be helping people match the jobs they want. Yeah?

AUDIENCE: It isn't a certainty that at approach you will find a certain job you're looking for. It's the credit market constrains you with the obstacles.

JON GRUBER: Credit market [INAUDIBLE]. But if it's not a certainty, the credit market still functions to charge a higher interest rate.

AUDIENCE: And then I guess--

JON GRUBER: But the point is that--

AUDIENCE: [INAUDIBLE] it doesn't work out well for the brain surgeon who ends up--

JON GRUBER: No, the brain surgeon who ends up not getting a job will just default, and the bank will lead it. But that's why they'll have to charge a higher interest rate. So now we have this conundrum. Well, shit, we know more unemployment insurance benefits cause guys to stay unemployed longer. But how do we tell is that helping them-- is that good in the sense it's helping them find better jobs or bad in the sense just subsidize them sit on the couch?

Remember, we talked last time about the distortion. Sitting on the couch is inefficient. Because if it's sitting on the couch you wouldn't have done otherwise, but you're doing because of these benefits, that's inefficient. So how do we determine whether UI benefits are causing you to get a better job or sit on the couch? What would you do? How could you test that? How would you test that? Yeah? Go ahead.

AUDIENCE: Could you graph the change in productivity or income from the old job to the new?

JON GRUBER: Exactly. You don't have to-- once again, you're answering in more level detail we need. But the bottom line is if it's helping you find a better job, we should see you end up with a better wage. So the test here, instead of a delta C regression like I was running-- where's my regression? I don't know where that was-- yeah, up there. Instead of regressing delta C, do delta wage.

What happens to your wage from your old job to your new job as UI gets more generous? If more generous UI is improving your search, you should see a positive coefficient there. If more generous UI is not improving your search, you should see zero. And the answer is you see zero. The bottom line is guys are sitting around, OK? That basically there's no evidence that's actually helping them find better jobs. It's just subsidizing leisure. Yeah?

AUDIENCE: [INAUDIBLE].

JON GRUBER: Gina, I'm sorry. You got-- louder and slower.

AUDIENCE: Oh, yeah. What happened with the type of work that you do that is not [INAUDIBLE] related [INAUDIBLE] childbirth?

JON GRUBER: Great, great question. That's a great question. We'll come back later to childcare. If you think there's a market failure in the people under-providing child care, that could be an argument for saying, well, gee, maybe the fact, their wages don't go up with providing childcare, maybe we're mismeasuring it. You really want total margin. This shouldn't be-- delta wage should be delta marginal product. Marginal product includes all the things you produce, including childcare. That's technically right. So it's not a full-- it's not a perfect test. OK. But clearly we think there's pretty significant moral hazard going on with UI. OK? So that's the evidence for UI

Now we come to DI. Here's the problem with DI. You can do the same kind of study, except it doesn't vary by state. So what are you going to do? Well, in that case, you turn to a different empirical strategy, which is shown in figure 14-5, a regression discontinuity strategy. This is from a study in-- I believe it was in the Netherlands again. What the Netherlands-- the Netherlands has a program where the benefits discretely, at age 45, get more generous. Exactly at age 45, benefits get more generous.

What the graph on the top shows-- the graph on the top figure 14.5 shows how claiming rates for disability insurance rates with age. Now, they go up. The older you are, the more likely you are to be disabled. That's not a surprise. But there's a huge jump exactly at 45, and there's no reason for this discrete jump at 45 on the benefits change. So this isn't a difference in difference in a traditional sense. This is literally-- it's like time series, in a way. It's just using a very sharp event and saying, this sharp event is exactly consistent with there being an incentive effect of this.

And then the bottom graph shows what happens to-- so let me explain how you interpret a graph like this. The x-axis is age. The y-axis is how much income people get from DI. Think of it as how often you claim DI, the odds of claiming DI. Each dot is-- I think it's a month of birth, the average. So each dot is the average amount of income for die for that month of birth in the Netherlands. So the dots are general-- And then the lines that are in red are the estimated regression coefficients on either side of the vertical line.

See, there's generally a positive slope before and after the vertical line. That's just saying people are more likely to claim DI as they get older. But it's the jump in that slope at 45 that is really striking. And if you look at the bottom, you do the same graph but with whether people work. And you see there's a corresponding jump down at age 45.

So that is a regression discontinuity approach to showing that disability insurance has an effect on people's labor supply decisions. That is, this is profound. This is saying people who could actually work are claiming DI. If DI was just people who truly had career-ending injuries and could never work again, this line should be flat. There shouldn't be-- the benefit level shouldn't matter. If you truly couldn't work again, then you should just claim it when you can't work, and not claim it when you can. Clearly this is not saying that, clearly, some people claiming DI could work and are claiming DI instead. And that's why you get this relationship.

There's a lot of fun studies in DI like this. I've got a study in Canada where there was a difference in different study where, actually, one province of Canada changed their benefit and others didn't. There's a really cool study. Another empirical approach that's really cool in catching on now is to use the fact that while DI is a national program, the people who adjudicate whether you're disabled are humans, and those humans have tendencies. And it turns out you get randomly assigned to who adjudicate your case.

So let's say that Ahmet applies for disability. He gets randomly assigned to me, and I'm a tough-ass judge. I never approve anything. And Valerie applies for DI, and she gets assigned to Paul, who's a loose judge. He approves everything. Then we actually have-- since that assignment is random, we have an experiment. What happens to people like Ahmet, who are unlikely to get DI, versus people like Valerie, who are likely to get it? And what you find is a similar thing, that people are unlikely to get DI end up working a lot more than people who are likely to get it.

So all these approaches give a similar answer. So the standard difference in difference, the regression discontinuity, the random assignment across adjudicators. And they all say the elasticity-- so this is the elasticity of UI. The elasticity of labor supply with respect to DI benefits is around 0.3. So smaller, considerably smaller than what you get for unemployment insurance.

Then it's true, higher benefits cause more use of disability. But the effect is not as large, which is once again not surprising. It's easy. Remember, moral hazard is going to rise in-- moral hazard is going to rise in difficulty of observability or verifiability. The harder it is to verify something, the more moral hazard there's going to be. Well, it's hard to verify if you're looking for work. It's pretty easy to verify-- it's easier to verify, but not perfect, if you're disabled.

OK, that's disability insurance. Finally, we come to workers' comp. Workers' comp, once again, it's a state program. So we have the same of approach. Indeed, we can even do a difference in difference in difference within a state. Figure 14-7 is from a famous study by Alan Krueger where the State of Minnesota changed its schedule, but in multiple places. So you could actually compare, say, group E to group D and group C to group B to group A. And then since they're very arbitrarily close to each other, you can actually learn less about recessionary effects because you have a bunch of comparisons.

And the bottom line is he found-- so for example, he-- what the numbers below are the elasticities you get at each segment. Or it's, I'm sorry, the delta duration in each segment. So in other words, duration went up a lot for segments E, C, and A, and barely up for segments B and D, which is consistent with this being a causal effect of workers' comp.

Here's what's striking about the workers' comp literature. You get a huge elasticity. Krueger's paper implies that elasticity of 1.8. For every 10% benefits, workers' comp benefits go up. You get 18% longer durations. The literature says it's found a smaller number. But I would say the consensus-- probably the consensus-- workers' comp elasticity is around 1, higher than UI, that basically people are very elastic in their decisions on how long they stay out of work with respect to the generosity of workers' comp benefits.

Now, workers' comp, there's all sorts of other fun studies, as well. In workers' comp, there's something called the Monday Effect. Let me explain the Monday Effect. Workers' comp, roughly speaking, 90% of workers' comp for two kinds of injuries-- lacerations, you get cut, or sprains and-- or sprains like you get hurt. You hurt your back, you hurt your shoulder, or something like that. Roughly speaking, that's the two types of injuries for workers' comp.

Which type of injury do you think is most likely on Mondays relative to the other days of the week? What happens to the ratio of sprains and strains to lacerations on Monday versus the rest of the week?

AUDIENCE: [INAUDIBLE].

JON GRUBER: Why?

AUDIENCE: Because it's much less easy to verify.

JON GRUBER: Well, it's easy to verify what?

AUDIENCE: Whether you're going to actually be injured.

JON GRUBER: Well, not that you're injured. In particular, what?

AUDIENCE: If you got injured at work.

JON GRUBER: At work. Because as long as you can drag yourself into work on Monday, you get hurt at softball. If you sprain your ACL at softball, you can call in and say, I sprained my ACL at softball. They'll say, great, we'll see when you heal up. Or you can drag yourself to work on Monday and trip, and say, oh my God, I sprained my ACL at work. They say, OK, here's $1,000 a week. OK? If you're lacerated, that's hard to do, unless you want to go in and reopen it or something at work. And once again, you see that Monday effect in great detail, that basically the ratio of sprains and strains to laceration is much higher on Monday. Sort of a clever test for moral hazard. The bottom line is moral hazard is real, and it looks like pretty large for workers' compensation. OK? Questions about that?

Let's go back now. Yeah?

AUDIENCE: So we've like, I guess, demonstrated like we're-- excuse me-- moral hazard is bad [INAUDIBLE] bad in the sense that it's inefficient. But in terms of if a government has a policy, such as workers' comp or disability insurance, and there is workers' comp and people choose to exploit that, is that necessarily bad for the government?

JON GRUBER: Yes, it's bad. Well, it's bad from the government's perspective because the government represents society. And if you take it when you're not qualified, there's two costs. One is we have more tax revenue we got to collect. And two is you're not producing goods that make society richer. So the pie is smaller. Yeah?

AUDIENCE: [INAUDIBLE] harder to verify [INAUDIBLE] affects more the moral hazard of the adverse selection?

JON GRUBER: We're not talking about adverse selection here. There's no choice of insurance here. Yeah?

AUDIENCE: Has it been looked into with workers' comp whether increasing benefits lets people stay longer and fully recover?

JON GRUBER: Great question. Great question, which is-- this is sort of like what I talked about with unemployment insurance. I said, longer duration unemployment might be good because it helps you find a better job. Longer durations out of work might be good because you come back healthier. And there's not great evidence on that. I'm suspecting we will find that even if there's effect, it's small relative to the amount of extra time, people stay out of work. But it could be. It could be there. It's a great point and a very parallel point.

It shows a great understanding of this parallel point, that just because you find an effect, there could be multiple interpretations. You got to take the extra step to do that interpretation. OK? So let's go back. Now here's what's cool is let's go back to table 14-2 and say, how did the government do? Well let's compare the next-to-last row of table 14-2, which shows the replacement rates for these three programs.

What do we know? We know unemployment insurance has a modest consumption smoothing effect and a reasonably large moral hazard effect, which suggests benefits shouldn't be too generous. And they're not that generous. 44% replacement rate. Disability insurance has a smaller moral hazard effect and a larger consumption smoothing effect, which says benefits should be more generous. And they are. They're 60%.

Workers' comp has an unknown, but probably mixed consumption smoothing benefit and a large moral hazard effect, which has benefits-- should be, if anything, similar or lower than UI. They're actually bigger than the other two programs. So this tells us workers' comp is too generous relative-- now, maybe too generous relative to some ultimate-- if God came down and spoke to us, but certainly too generous relative to the other two programs.

It's hard to justify a world where there's a bigger moral hazard and likely not that much bigger consumption smoothing, and the benefit's so much larger. OK? That is cool, because we've actually used theory and empirical evidence to draw a policy conclusion. Now the next, of course, we get policymakers to listen. That's a harder thing. OK? That's chapter 9 stuff.

But this is just a-- I love this point because this is really what makes economics fun. It's like, OK, we got a theory. We developed the theory. Now that theory suggests some key parameters we must know. We've estimated those parameters. And that gives us lessons for policy. And that's why I find this chapter very exciting. OK. Steven?

AUDIENCE: [INAUDIBLE] that workers' comp is more generous than the others with the inclination that it should be more in line with the others, but not clear whether the others should become more generous?

JON GRUBER: Exactly. No, I mean, I-- yeah. I haven't told you whether 44% is the right number. So really, it's a relative-- I still haven't told you exactly what the numbers are. But it's sort of a relative conclusion. All right?

Now, two other things to cover. And I'm going to have to-- we are having a little celebration for our Nobel Prize winner at 4:00. So I'm going to have to whip out of here right when class is over. So let me cover a couple of things pretty quickly before I go. The first thing is, what about the role of firms? And what about the role of imperfect experience rating?

So to understand what I mean by that, look at figure 14-8. Figure 14-8 shows the tax rate that firms face in Vermont. Let me explain what this graph shows. On the x-axis is basically a number which represents the extent to which a firm has taken advantage of the UI system. It's called the benefit ratio. It's the ratio of the benefits that's been paid out to the payroll of the firm.

You don't need to understand it other than know the more you move to the right, the more the firm uses the UI system, the more layoffs it has. On the y-axis is the tax rate the firm pays. The black line would be perfect experience rating. That would be a system after some minimum to make the program balance. The slope of that would be such that every dollar of firm paid out in benefits, they'd pay back in taxes.

Relative to that line, you notice two things. First of all, the red line is always below it. So it's imperfect experience rating that way. Second of all, there's flat parts. There's these steps as opposed to being smooth. And third and most important, there's a maximum rate. Someone asked, do you always pay ever and ever higher taxes? No, you don't. Once you hit that maximum rate, doesn't matter. You can lay off anybody you want. You're only paying the maximum rate. So you're never going to pay more than 7.7% of payroll, no matter how many people you lay off.

So those are the three senses in which this is an imperfect experience rating. So the question is, how do we feel about that? Well, let's come back to the normative implication that was raised before. If you think about what unemployment insurance tax does, it says, hey, what experience rating does says, hey, you, firm, just laid off a bunch of guys. I'm going to raise your taxes. That sounds kind of harsh. So in that sense, you can understand the argument for imperfect experience rating.

But what market failure does that argument rely on? What do you need for that argument to hold? Or how would you argue against that argument? Why would you say, well, firms that have laid off a lot of people shouldn't be subsidized? Because they have another thing they can do. What else could they do? How could they avail themselves of self-insurance in this situation, just like people can? In a perfect world. Yeah, Steven?

AUDIENCE: Allocate more savings.

JON GRUBER: Well, they can't really save, but they could borrow. They go to the bank and say, look, I'm laying off a bunch of guys now, but I'm fundamentally a sound firm. Give me money. And probably the bank may be more likely to do when the person goes because they have physical assets the bank can claim. So in a perfect credit market, this argument actually doesn't hold. In a perfect credit market, you shouldn't be subsidizing firms to lay people off because if they're a good risk, they can just borrow the money they need.

If they're a bad risk, what are you doing? You're systematically subsidizing bad firms. So if you think about what imperfect experience rating is doing, it's two things. It's providing insurance to firms that are good bets that could come back, but providing subsidies to firms that are bad bets and just shouldn't exist in the first place. Alex, question? Yeah. So let me give you the perfect example. Let's talk about Canada. OK. Let's talk about five minute about the famous Canada story.

In the Atlantic provinces of Canada, the economy basically has tanked. It was all natural resource economy. It's basically tanked. They have an unemployment insurance system. They rely on fishing, and fishing can't make any money anymore. They had an unemployment insurance system which had the following features. You got a replacement rate of 60%. So not outrageous, a little higher than the US. Not outrageous-- 60% replacement rate. But to get that, you had to work 10 weeks a year, and then you got the replacement for the other 42 weeks. So as long as you worked 10 weeks a year, you got UI for 42 weeks at 60%

Now imagine you and four friends just want to think about setting up a fishing business. OK? This is a hard example. So just listen. Don't take notes, just listen to this. You and four friends that want to set up a fishing business, OK? The fishing boat can work 50 weeks a year. Let's leave the other two out for vacation. So you can only take it out 50 weeks a year. So each of you and your friends would take it for 10 of those weeks, OK?

Let's say that with the fishing boat, you catch $8,000 worth of fish for every 10 weeks, or a total of $40,000 for the year. That is the amount you can produce. So each of you have worked 10 weeks a year, and you'll produce $40,000 of income. Now, what if you said to the authorities that after 10 weeks each of you got laid off? How would that work? Well, the first person, they would go out, fish. OK?

Oh, and I also say that your wages are $8,000 for every 10 weeks or $800 a week. I say that you earn $800 a week and you're laid off after 10 weeks. What does person A get? They get the $8,000 during the 10 weeks they work, plus they get 50-- 40-- 42 weeks of 60% of $800. So they get-- that's what they get for the rest of the year. Then person B works their 10 weeks, and they say they were laid off. That person C works their 10 weeks. Then they say they were laid off.

When you put this together, you have created a firm that is earning $141,000 on a actual product of $40,000. And there is no experience rating in Canada, none. So you've just magically ripped off the government for $100,000. That's the problem with imperfect experience rating or, in this case, no experience rating is it subsidizes firms. This firm should not exist. OK? This firm-- as long as those workers having something they can do elsewhere that earns more than $8,000 a year, this firm should not exist. But it does because the government subsidizes it. That is the cost of imperfect experience rating.

The benefit is it offsets credit market imperfections. The cost is that it subsidizes inefficient firms. Yeah?

AUDIENCE: [INAUDIBLE] a couple of times about [INAUDIBLE] are the biggest obstacles between-- or what are the biggest separators between the current credit market [INAUDIBLE]?

JON GRUBER: And so the biggest thing is, basically, it's essentially-- it's asymmetric information. So in a world of perfect information, I could go to you, Steven Bank, and I could say, hey, look, here's my firm. We basically can show you that we'll be viable again in two years, loan me money. And the bank would. First of all, that information is cooked. They can't trust-- you can't trust them. Second of all, you may disagree on your interpretations of that data. So even with perfect information, there could be bargaining problems.

So for those reasons, the credit market is not perfect, both information imperfections and bargaining problems. The reason Coase doesn't work, these kind of bargaining failures could apply here, as well. But it's very important to come back to lecture 1. With perfect credit markets, there is no argument for imperfect experience rating. Remember, the argument for imperfect-- in fact, there's not really-- basically, firms should just-- there's not really that much of an argument for UI necessarily.

I mean, there's still argument for UI because workers switch firms. But there's not an argument for imperfect experience rating with perfect credit markets. OK? Now, the last thing I want to cover in the last 10 minutes is what does this all mean for how we set up these programs? We talked about what it means for the benefit level. But these programs are more than their benefit levels. OK? These programs have lots of aspects.

So for example, one thing that these programs differ in-- could differ in is how well they're targeted. You could move from one uniform program to one that's different. So for example, in Europe the way disability insurance works is there's two levels of benefits. Essentially, they adjudicate how disabled, you are. And if you're like a no-brainer, you get a higher benefit than if they're not sure. They're trying to target it more.

You can imagine a similar thing in unemployment insurance. Turns out there's really fundamentally two types of unemployed people, those that are temporarily laid off and those that are truly permanently laid off. A temporary layoff is like my aunt in Minnesota, who every summer her firm said, we're going to shut the plant for three months, and you're coming back in the fall.

For her, there was relatively little consumption smoothing from UI. Indeed, I showed in my article-- I ran those regressions-- that for temporary layoffs, that coefficient was like 0. For permanent layoffs, where you're not sure when you're coming back, self-insurance doesn't work as well. And for permanent layoffs, that coefficient was bigger. So you could target the generosity of UI benefits to the type of layoff. The point is can exploit our fundamental lesson from chapter 12 to try to find places where self-insurance is poor and moral hazard is low to really target the most generous benefits, giving the same thing to everyone. So that's one kind of thing besides worrying about benefit generosity we can do.

Another thing we could do is we could say, wait a second. Could workers insure themselves? Imagine the following UI system. Basically, you were required, instead of paying UI tax, to have a fund. And you put money into that fund. And when you lose your job, you draw down from that fund. Now, the government helps out. If you lose your job before you've been working too long, they can help. They can top off your fund. If you stay unemployed too long, they can top off your fund, whatever.

But the point is, why not make you absorb the risk? Why do we want to do that? Well, essentially, it's like a Samaritan's Dilemma problem. If you lose your job, we're going to be helping you out. So we're going to force you to self-insure by saving. Rather than taking some payroll tax and throwing to the government, we're going to force you to self-fund. It's like privatized Social Security. Whereas privatized Social Security had a bunch of problems, like the fact, we have this legacy debt, those problems don't exist for privatized UI.

There's no reason we couldn't do that, we couldn't have a system where basically people save for themselves and their own accounts. And why would we want that? Because moral hazard goes away. If it's my own money, I don't suffer moral hazard. One way to see that is a really cool experiment they ran where they ran an experiment where instead of saying to people, you lost your job. You're eligible for up to 20 weeks of $500 a week. We said, you lost your job. Here's a check, a lump sum check that approximates the typical amount of money you get from UI. People found new jobs right away.

So basically we could think about moving towards actually fighting moral hazard, but still providing insurance by basically forcing people to self-insure. That's one direction we could go. So that's an interesting thing to think about. The reason to think about-- the reason [INAUDIBLE] to think about is that-- a question was raised earlier. We're moving into a world where traditional employment relationships are eroding. How do you think about unemployment for an Uber driver?

When is an Uber driver unemployed? Is it when people don't want to go from place A to place B? Then they're unemployed, right? So it's hard to define unemployment for many gig worker specialties. So UI doesn't really work. And this was a fundamental problem we faced during COVID. COVID hits. What do you have? You have a system which has two flaws. First of all, it's not generous enough.

And what I mean by that is in two senses. First of all, for some low-income workers, UI wasn't enough to pay their bills if they were going to be unemployed for a long time. Second of all, the second of which wasn't generous enough is the sense in which-- so first of all, let me think. There's two. So one is it wasn't big enough to pay the bills. What was the other thing I was thinking? I don't remember.

Anyway, so it's viewed as not generous enough, not big enough to pay people's bills. The second problem is that it's not designed for all these people who lost their gig jobs. So we set up two temporary programs during COVID to try to address these problems. The first was we gave everyone in America, in addition to their usual UI benefits-- oh, I know what the other reason we wanted generous was. I remember.

We didn't want people to go to work. We wanted them to stay home. It wasn't moral hazard anymore. Indeed, this is a key insight I'm diverting here to go back to nothing. We think about durations. UI should be more generous when the economy is bad. Why? Because moral hazard is smaller and consumption smoothing is bigger.

Think about a good economy versus a bad economy. In a good economy, you can always find a new job. So moral hazard could be bad because you're turning down those opportunities. And you have much better access to self-insurance because your friends have money to loan you. Your spouse can work. In a bad economy, you can't find the jobs. So there's no moral hazard if there's no job to get, and your spouse can't self-insure you.

So what should happen is UI should get more generous in bad times, less generous than good times. With COVID and extra piece, well, it was a bad time. We didn't actually want people at work because it was contagious. For that reason, we wanted a much more generous UI system. Now, in a perfect world, you'd say, well, let's just raise the replacement rate.

Let's say, well, instead of we think 44% is not enough in bad times, let's raise it to 80%, 90%, whatever. The problem-- what we did instead was say everyone who gets UI gets a flat $600 as well. Why is that different? Well, that's different because $600 means very different things to different people.

For someone very low-income, many people in America replace rates well above 100%. Because $600 plus UI benefit is well above what they're earning beforehand. That's never good. It's never a good idea to provide-- I mean, it's basically you don't-- you're already smoothing the consumption, and you're just adding extra moral hazard. Whereas some people who are rich, it wasn't enough to actually let them still pay their mortgage.

So why didn't we just raise replacement rates? Well, this comes back to chapter 9, because the administrative state in America is starved for resources. Because basically of opposition to government spending, many government agencies are not up to doing what they should do. The UI computer systems-- have any of you guys ever heard of a programming language called COBOL that existed when I was a kid? OK. UI system these days are still written in COBOL.

Basically, these systems have not been kept up. And the state administrator said, look, you want us to get money people right away. It's going to take us like three years to fix our systems so we can change replacement rates. Let's just send out a flat check. So this is a cost to society of not investing government resources OK? The other thing they did was they said, look, we will not require you to have had a traditional job. If you say you had a job and you lost it, we'll send you a check.

My daughter is a creative writer. She writes online. She doesn't have-- she's a gig worker. She just said, look, this is what I was making-- she self-asserted what she was making beforehand. She didn't lie, I'm proud to say-- self-asserted what she was making beforehand. They said, great, we'll send you x percent of that plus $600 a week. Other people did lie. And this led to massive fraud in the UI system.

Once again, we need a better system. We need to advance our systems to deal with this changing nature of work in the economy. All right. So that is a lot to absorb.