Bargaining through Agents Podcast Transcript

Christopher Woodruff

Welcome to the CSAE Research Podcasts, a series of conversations about research taking place at the Centre for Study of African Economies at the University of Oxford. I'm Chris Woodruff, Professor of Development Economics at the University of Oxford and a member of CSAE.

Today we'll be discussing the research behind the paper 'Information and Bargaining through agents: Experimental evidence from Mexico's Labour Courts' published in the Review of Economic Studies.

Well-functioning courts are essential for health of both financial and real economies, but courts don't function well in most low-income countries and the root causes of poor performance are not really well understood. In this study we used field experiments with ongoing cases to analyse sources of dysfunction in Mexico's largest Labour court. Joining with me today to discuss the project are Joyce Sadka, Professor of Research at the Instituto Tecnologico Autonomo de Mexico, or ITAM, in Mexico City. Welcome, Joyce.

Joyce Sadka

Hi, Chris, thank you very much for inviting me.

Christopher Woodruff

And Enrique Seira, Professor of Economics at Michigan State University.

Enrique Seira

Hello!

Christopher Woodruff

Welcome, Enrique!

Enrique Seira

Thank you, glad to be here.

Christopher Woodruff

Welcome everybody. So let's jump right in and start with the research. Joyce, what's the role of labour courts in Mexico?

Joyce Sadka

Labour courts in Mexico are supposed to adjudicate all firing disputes or disputes about fringe benefits or disputes that may be about collective bargaining, not necessarily about individual labour rights, Courts historically were meant to be conciliation and arbitration boards, so that they attempted first to conciliate and then they adjudicate the cases that do not come to any kind of settlement. It's important to mention that Mexico doesn't have any unemployment insurance, and that means that the severance pay which is paid to workers who are fired is basically their only social insurance that will help them. Possibly, if they get this payment quickly to search for a job and not go to a worse job. So labour courts are very important for the functioning of the labour market in Mexico.

Christopher Woodruff

You worked with the Mexico City Labour Court. Tell us something about how big that is. How many cases are there in the Labour Court in Mexico City?

Joyce Sadka

It's a big court it received, at the time we were working on these experiments, over 30,000 filings per year. And at the time that it closed its doors when there was this labour reform that maybe we'll talk about in a little bit, it had over 120,000 case files open, which means, not only is it a very big court, it's the biggest labour court in Mexico. It also has a very large backlog, maybe approximately four years, if it were to finish the cases about as fast as it gets them, but it doesn't finish the cases about as fast as it gets them. So we could think of the backlog as being even more than four years.

Christopher Woodruff

That sounds like a long time. I think we'll get into that. Can you tell us what the issue the research was trying to address was. What wasn't working. I mean, you've already given us an idea there, four years of backlog sounds like something's not working, maybe, as well as it should. But what is it that you thought wasn't working?

Joyce Sadka

Well, at the time when we started the research, we didn't have a very clear idea about what was not working, and I think one of the things that was important in the research, and perhaps Enrique will talk about that a little bit, is we tried to document a set of facts, a set of stylized facts, if you like. But we documented those first to understand why these cases were not settling, and one important thing that I'd like to say, is from the beginning we compared Mexico to other countries. Mexico, as you probably know, is

part of the Organisation for Economic Co-operation and Development (OECD). So we compared Mexico to OECD countries, but we also looked at some countries in Latin America like Chile, perhaps Brazil, and we looked at the difference in settlement rates, and we looked at the US as well and compared. And what we found is that Mexico had lower settlement rates than a lot of other countries, in spite of two things that are true about the vast majority of the labour lawsuits, which is, they're not very high quantity and, because of how the labour law is structured in Mexico, they are not legally very sophisticated or very complicated. And this would tell us from the point of view of economic theory, on bargaining, that most of these lawsuits should come to a settlement immediately or very early in the process, and we did not find that empirically. So that, I think, was the starting point for this research.

Christopher Woodruff

And when you say that they aren't very big quantitatively. You mean the size of the case, not the number of cases. We've already talked about the number of cases. So this the size of the cases.

Joyce Sadka

That's right.

Christopher Woodruff

What is what is a typical case.

Joyce Sadka

A typical case is a worker who probably earns about 500 to 700 US dollars per month, who has worked about 18 months and is probably in their late twenties or early thirties or mid-thirties. Around that range between 28 and 35/36, and probably is being fired for one of 2 reasons. Either, there wasn't a good match between the worker and the firm to begin with, and so that worker really wasn't very productive in that job. And another very important reason for workers to be fired is really the firm is not doing very well financially due to market conditions, or the firm is just not very productive. We have to remember that Mexico has a very large informal sector, and it also has a very large proportion of small and medium, but kind of on the small side firms that don't grow much. And part of the reason they don't grow much is the labour law itself, because severance pay is a lot for a firm that has hired a worker for a short period of time and needs to get rid of that worker. A lot of firms don't want to formalise even their employment relationships. To avoid this cost of firing. There are, of course, other factors, macroeconomic factors, factors that have to do with credit. But labour law rigidities have something to do with the configuration of firms in Mexico.

Christopher Woodruff

Right. Okay. So, Enrique, can you talk us through the design of the project? So first of all, Joyce says, we didn't really know at the beginning what the problem was. So how did you think about the design at the beginning of the project to try to figure out what the research should try to uncover and unpack about what the problems were.

Enrique Seira

So this was a project where we had a lot of help from the government partner, and we started by asking plaintiffs and defendants of a case many things. What are your beliefs about winning. What is the likelihood that you think you're going to win this case? These were cases that had already started. And if you think you're going to win, how much are you going to win? And how long will it take? So we started asking people about their expectations. And then we started also asking people about their own lawsuit, the content of their own lawsuit. Have they asked for extra hours that were unpaid and or vacations that were not taken. And then we realised that this environment was one where parties were overconfident. They all thought, plaintiffs and defendants, that they are going to win the case. The probabilities of winning a given case sum to 1.5%. And also where they had very little information, not only about what the law mandated they are entitled to, but also about their own lawsuit. Half of the workers didn't know what was written in their own lawsuit. So there was an environment where information was scarce and where parties seem to be overconfident in the likelihood of winning, and we learned that just by asking, almost like an anthropologists, we went there and asked people to try to find out where they were thinking, that's the way we started.

Christopher Woodruff

Can you say something about the design? Where did that take you. How did you then come up with the design for the project?

Enrique Seira

Yes. So once we establish that information seemed to be a problem, we look first looked at the literature, the theory literature, and several strands of literature suggested that informational problems and overconfidence could lead to low settlement, to the breakdown of bargaining. So there was a happy coincidence that theory was clear about the costs of a breakdown of bargaining. And also our empirical work suggested that indeed, those conditions seem to be present there. And the solution, the theory solution is in both cases in overconfidence and asymmetric information. Well, let's try to provide information is objective and trustworthy. And so that's what we did. Let's say we designed an experiment. We wanted to provide information as objective as possible and as useful as possible. So we a designed what we call the calculator, which is just a machine learning prediction algorithm for predicting case outcomes of cases that have been closed but are similar to yours. For each person we had predicted three quantities: the likelihood of winning, amount you would win conditioned on how long the case would take, and we also had an estimate of how long it would take. And we designed an experiment where we gave this information to certain parties of a conflict, plaintiffs and defendants. It was condensed in one sheet and was during the years before the hearing, and to some other parties, randomly, we didn't give this information. That was the main design.

Christopher Woodruff

It sounds like every case must be different. And so you've taken the characteristics of the case, and you've come up with a number that says, here's what you'll win. How do workers react to that? How do the parties react to that? They must think. Wait! I know what my case is. You're giving me a number. Where can you say

something about where the number comes from, and then also how you take into account the fact that workers know something about their know something about their case.

Enrique Seira

Yeah, that's a that's a very good point. So the cases were taken from historical case files, so cases that have already closed. We tried to make this sample representative of previous cases. But we have 5,000 of those closed cases, historical cases. And then the estimates map characteristics of those cases like which industry did the worker work in, the tenure of the worker, the salary of the worker. And these last two characteristics, for example, are very important for severance, because severance involves a formula that is a function of tenure and salary. So with this characteristic, we estimated predictive models on the historical data set, what we call the calculator. And then we provided this predictive information for each ongoing case. We took these covariates: salary, tenure, industry and others, and then predicted outcomes using those cases covariates. Now, you're right that not all cases are the same, and so we were very careful to tell workers and plaintiffs of defendants, that these were averages of closed cases, and that he didn't exactly predict their own case. But at least they were precise on average. And we also provided some information of what the law mandates, not just the statistical prediction, to make sure they had a complete big picture. What the law mandates and what our model predicts. But we were careful to say that these predictions have error.

Christopher Woodruff

Great. So and then what did we find? Can you summarise that the outcomes of the intervention.

Enrique Seira

Yeah. As Joyce was saying at the beginning, we found that one of the big problems of the core was backlog, and that this backlog was growing with time. Even though these trials take years, settlement rates were low and so we conjecture that misinformation and overconfidence, or asymmetric information may be part of the reason why settlement rates were low, so we provided this information.

And so there were a couple of main outcomes. First, we wanted to see if this information changed expectations. So if we tell somebody "look, Chris, in historically, cases like yours have won with 37% probability and have won $500 after four years of trial", if we tell you that we want to see if your beliefs about winning the case, and how much it would win change. That was the first thing we looked at, and we find that indeed it changed not all the way to the prediction, but some of the way towards the prediction. So people didn't exactly believe what we said, but it tended to move in the right direction, in the direction of the model. Second, we say we seem to be changing beliefs. Now do they settle more? Which was our initial concern. And indeed, we found that on the day they received information settlement almost doubled from 6% to 11&on the same day. And so that was encouraging for us because it proved that giving objective information, predictive information, personalized information did help to increase element and that's what we wanted.

Christopher Woodruff

So I can imagine to kind of speeding up settlement. You've told me this. I've gotten this I was going to settle, anyway. But because you gave this information you sort of get my attention on the idea of settling today. Is there a longer term effect?

Enrique Seira

Yes. So this this is very interesting. You may wonder. Maybe this information just speeds up settlement. But we are not changing the total number of cases that settle at the end of the day, at the end of the years. And that's not what we find. We were able to follow these cases four years after treatment. It was a big effort of following cases, and we found that the treatment effect was constant for all these four years. That is, we are not just speeding up settlement, but causing new settlements that wouldn't happen without the information. I like this result because it kind of validates these theories of information and bargaining, information matters for settlement, and it matters in the long run. Now, Chris, I would like to mention one of my favourite results of the paper. So far I've said, on average, what were the effects. But one of the interesting things that we found is that, I was not expecting to find this, is that information only matters when it is given directly to the worker. When I give the information to the worker's lawyer, nothing happens. There's no effect on settlement, and we were very impressed by this result. It would seem it, this is consistent with a story where the lawyer doesn't want to transmit this information to his client, and suggestive of a moral hassle problem from the lawyer side.

Christopher Woodruff

Now I get the title. That's the bargaining through agents.

Enrique Seira

Exactly. That was a good title. I think you came up with it, Chris.

Christopher Woodruff

So, Joyce, let me turn back to you. We found a paper along the way written by some lawyers that said sometime back in the 1920s law and medicine reached a fork in the road, and medicine went one way towards doing all randomised control trials (RCTs). And law went another way, and never did an RCT for as long as the eye could see. And there are really very few randomised control trials in legal proceedings, even in sort of arbitration proceedings, much less in an active court. So engaging with live cases and doing an intervention, randomised intervention with live cases, is really quite a rare thing. Can you say something about how that came apart came about, how, I'm going to say you, were able to negotiate that with the court.

Joyce Sadka

Well, it started with building a relationship with the courts in general. But many years before we started this experiment I had used the Mexican transparency law, which is a very powerful legislation that says that all case files that are no longer subject to appeal are public information, and the courts have to provide this information in public versions. But the courts couldn't, because they didn't have the personnel or the technology to produce these public versions of the lawsuits and the law allows for researchers, just like us, to go to the courts and sign an agreement where we promise to keep the personal data confidential, or not use the personal data, and have access to the case. And so nobody had done this. I did it, and for quite a few years. I just extracted a lot of data because there was a lot to study descriptively. But by creating a relationship with several of the courts, these courts had worries about the rate of settlement, or the rate of cases being reverted on appeal or corruption in their notifications, and so on. And because of all these worries there was a chance to design research that would answer a policy question that the court had but at the same time have an academic upside or academic value. So in general, that was the approach.

Now, the Mexico City Labour Court is a is a particularly interesting case because we didn't look for them, they looked for us. They knew that I was doing work that had to do with monitoring notifiers who deliver summons and who are highly corrupt in Mexico, and I was doing work on this in Mexico State, which is nearby, and a new president of the Mexico City Labour Court literally sent somebody there to find me and bring me to an interview with her, because she was worried, among other things, about the low settlement rate, about having invested in conciliators and trained them, but not having people going to those conciliators in the hearings and asking to settle. And other things, she was also worried about corruption among the notifiers and other things. But she actually basically called us we didn't call her, so that gave us a lot of leverage, because there was a clear interest from the court to work with us.

Christopher Woodruff

And did the court then just jump right to an RCT. How did that conversation come about?

Joyce Sadka

No, actually, the courts rarely will jump directly to an RCT. So maybe one of the things that's different between medicine and law is that even though in medicine sometimes the studies have small numbers of people, and maybe econometricians might criticise some of the medical studies. But the idea that you have to have the control group and the intervention groups is clear in general to somebody who's in medicine. It's not that clear to someone who is in law. So you have to explain to these institutions that if they just try everything at the same time to try and improve what's happening, they will never know what worked, and because these policies eventually will be costly to them, if they want to implement them on a full scale, they really need these RCTs, because otherwise they won't know what to fight for in their budget and where to put their scarce resources. And so we explained this to the head of the Labour Court, actually Enrique and I had meetings with the head of the Labour Court to explain this, and eventually, years later, she attended a workshop at Berkeley, where there were classes for some of the policymakers, top policymakers from different countries. And so I think that in this case this lesson was really internalised by the leadership of the court. And it was a happy coincidence they had needs, they were open, we explained things to them, and we also built a relationship with them. And it ended up being very fruitful for both sides.

Christopher Woodruff

I realise here I looking back at my introductory script that I read, Joyce, I really failed to introduce who you are, in the sense that you have both an economics degree and a law degree, and while you're affiliated with the Economics department at ITAM, you're actually head of the law school. How much does that help in these conversations to be? I mean, ITAM is certainly one of the best law schools in Mexico. How much does it help to have the entry point of ITAM's law school. When you're engaged in these conversations.

Joyce Sadka

Certainly it's very helpful. ITAM is very well known as the top economic school and it started as an economic school, but it has a very good law school that started also some 45 years ago. And what's very important is that ITAM signs these confidentiality agreements with the researcher. So we agree that we will put into place all the procedures to make sure that we take the right care of the personal data that's in these case files. But ITAM is also willing to put its name on the line with us, which I think is very important, because just one individual showing up and saying "give me these thousands of case files," it just doesn't sound like any court would be willing to do it. So I think that there's a very important sort of backing from there.

And also another thing that's been very important for our work, Enrique will agree with me, is that ITAM has great students. And so a lot of our work has also gone through working with students who do things that are as simple as coding data, although that's not as simple as one might think, to working on econometrics for the papers, to helping to design the operational details of the experiment, running the experiment collecting surveys. And really our work has benefited greatly from the fact that ITAM filters students, and we have these great students, and many of them have later gone on to postgraduate work, and PhDs, and some of them are out there running their own experiments, as we speak.

Christopher Woodruff

I want to get into what the impact of the research was. And so Mexico passed the new Labour law in 2019 the paper was published in 2024, so I can do Grainger causality and say the paper published and must not be, must not have had any effect on the labour law. But tell me about how the research was useful in the in the discussions on the Labour Law.

Joyce Sadka

It's true that the paper was published four and a half years after the labour law came out, but you have to remember that pipelines are long in our profession, and we started these experiments in 2016, and actually the last of the experiments that we report on in the paper was run between the summer of 2017 and the fall of 2019. So, in fact, we already had some results at the time that the Labour Law was being discussed.

So the Labour law was reformed for a series of reasons. Some of them were internal to Mexico, but many were external, and they had to do with free trade agreements in general. There were other trade agreements, but the biggest that made the difference was the United States-Mexico-Canada Agreement (USMCA). And when Mexico was trying to pass the labour law in order to pass the revision of the treaty and ratify the treaty. I worked on a small proposal in March of 2018, and it was submitted, I worked with the head of the Labour Court, and we submitted a proposal for the labour law in March of 2018, but it didn't pass because the government was changing. The Partido Revolucionario Institucional (PRI) was going to lose

power and a new left wing party for the first time was going to take power in Mexico. And when that happened, the president of the Labour Court, the same person who had sent people to call me from Mexico State to come work with her in the Labour Court, started a legislative group, and this legislative group met every week from May of 2018 to November of 2018. And in this group there were some academics, very few, I was one of them, there were people from international organizations, like the International Labour Organisation (ILO), like the Inter-American Development Bank. There were people from unions. There were people from Government positions, Secretary of Labour from the State, Under Secretary of Labour from the Federation. Those kinds of people. And in those meetings I had the opportunity to show preliminary results from our experiments. And that led them to understand that the worker himself, or herself being in the conciliation hearing, was very important, following what Enrique just told us about a short while ago. And it led them to understand that making it compulsory for the parties to meet at least once was very important. Eventually, what happened after showing them all these results is that they asked me to help to put together the procedure that would be applied. So literally, what happened is that the 2019 labour law, which is still valid in Mexico, essentially codifies that last experiment that we report on in the paper which was pre-lawsuit conciliation not intervening in the cases that were already filed, but intervening with workers who had a firing dispute, but had not yet hired a lawyer. And so that got codified into the law, and that has opened a lot of doors for us to have policy influence, but also to build infrastructure that will allow us in the future to do research without having to collect data from paper files, and take so long to get results from our experiments.

Christopher Woodruff

Meaning digitised data.

Joyce Sadka

That's right. I'm now collaborating on a couple of large technical assistance projects. And we've moved into creating online case management systems for the conciliation centres, and then also for the labour courts. And the idea is that we're hoping to move to a paperless system where there's a lot of data online, and therefore the future calculators that could be calibrated may be even more exact or less inexact, if we follow what Enrique said, than ours was, because we will now have access to a lot more data, and this will allow parties to have more information and make better decisions.

Christopher Woodruff

One of the things then that came out of the law was a pre-suit conciliation phase, and a new institution, which is the Conciliation Centre, one in every state, so there's a Conciliation Center in Mexico City, and we can talk a little bit about the work that we're beginning to do at the Conciliation Center in in Mexico City. But I want to also point out then that it also meant that they took the courts themselves, and moved them from a set of courts under the labour ministry to a new set of courts under the judiciary. So while the Mexico City Labour Court that we worked with carries on with the cases that had already been filed. Once those cases are finished six or eight years from now, that court will disappear. And the new chort is there. So, in a sense, there's an opportunity here, and Enrique, I want to ask you about this. We had at least four years of backlog in the Mexico City labour courts. And in a sense, poof! It's all gone, we're starting afresh with new labour courts that have this preconciliation phase before them. Maybe the chance for the labour courts not to get

so much of a backlog. But is that a reality? And how do how do we prevent the how do we prevent the new courts from becoming as clogged, and having as long a backlog, as the old courts had.

Enrique Seira

I think the objective of the conciliation centres is precisely to aid parties to reach an agreement before filing a lawsuit. And so we think many of these disputes could be solved before reaching this costly stage of involving lawyers, courts, and judges. We are starting to work with the Consolation Center in Mexico City, which receives hundreds of parties with their disputes per day, and we're trying to work with them to facilitate the bargaining. And this could be, this is work in progress, by providing information, by helping them focus on getting an agreement, instead of being angry. I think there's this many opportunities here given the amount, just the sheer amount of cases we're dealing with, to help them settle. And only those that cannot agree using words, would be able to go to the next stage and get a get a lawyer. The other thing that's interesting here, as I told you, one of the last results of the paper was that it seems that lawyers get in the way of a good settlement. Because they may have different incentives than the client, and so trying to intervene before they get a lawyer may be a good way to facilitate agreement. That's a second promise and good thing about working with parties before they make a lawsuit. So I think there's a lot of potential here.

Christopher Woodruff

Great, so good luck to us with the ongoing research to try to prevent that backlog rebuilding in the new labour courts.

So I want to close with a with a brief discussion on the logistics of what we're doing. Let me say, on the podcast you can't see me but I've got a smile on my face. And I do whenever I think about this project, because Enrique and Joyce run teams of many, many research assistants working in the courts and the Conciliation Centre at ITAM, I come up with a few words and the title, and get my name on the paper. So for me this has been a fantastic collaboration. But I know that the amount of work that goes on on the ground is enormous. And so let me start with you, Joyce, can you describe the operation? Maybe at the court or maybe let's just jump to the operation at the Conciliation Center, and what your team do there.

Joyce Sadka

So currently, we have a team of people who work as technical assistants for the use of the of this online conciliation case management system. However, they're already doing work such as they've conducted focus groups with the conciliators, interviews with the conciliators. They've helped us to do observations of how workers stand in line, how they enter the Conciliation Center to study whether we should have an information booth outside the door or right on the inside, where we should place these booths. And eventually, when we start this experiment, we will probably have at least 20 individuals who will all be either lawyers or economists. More than half of them will be people who have specialised with us over some years, and they already have their degrees in law, and maybe a master's degree. We have several now that already have master's degrees in labour law who are working with us, but we'll also have some younger students from the last semester, maybe of their economics degree, who are interested in development and interested in empirical analysis of legal issues, and they're interested in RCTs. And they will be there giving information to people, supervising that the conciliators operate whatever we need them to operate at the beginning of a hearing, having the parties watch a video, we'll have some tablets where they will be able to watch those

videos, and so on. What's most difficult in this kind of implementation, in my opinion, is making sure that the experiment is clean. And what's very important is making sure that every single enumerator, interviewer, operational personnel, from the youngest to the oldest, from the ones that know lots about economics and others that know little about economics, but more about law, all understand how the experiment has to be run and how what not to do, so that you don't mess up the control and the intervention groups. I think they also need to be inspired because this is a difficult job to do. You meet resistance, even if the Conciliation Centre itself is willing to work with you. It has 90 conciliators, and some of them will be resistant to the work. Some of the parties may be resistant. You need to understand the treatment of the personal and confidential data. So it's quite a complicated job to do. And I think that they need to be motivated and understand what the mission is and that means that the researchers have to be there with them. And we can't run this by remote control, and that, I think, is one of the roles that that I have is making sure that this runs in a way that corresponds to the design of the experiment. I think that's what's very difficult to do.

Christopher Woodruff

And then when we get the data from the experiment, it all comes back to ITAM to the team of researchers there. Enrique, maybe you can just give us a brief description. you manage that that team quite a lot. Tell us what the work is and how that operation works.

Enrique Seira

Yes, sure, but let me say something very quickly before that. Joyce is, I mean, she's a special person. I think if it weren't for Joyce this would be hard to do, and the communication between Joyce, her team, and the leaders at the Labour Courts is essential to get the support the research needs, but also to translate the research output to policy. And this is one of the most successful projects I've been involved with, just because of that link in terms of the research. Let me call it the Econometrics team, we have very good students working with us. Many of them are interested and have gone to do PhDs in economics. I see my job as first motivating him, as Joyce said, as explaining what we're doing, and then coaching them on how to do the analysis. But they are much, much better at coding than me now, I'm getting scared, but these are a great set of young people embarking on research. For me, it's a pleasure to work with them. And my job is basically guiding them, what are the main questions, what analysis we need to answer the questions, what are the challenges? But it's very smooth, I mean, they're already very good.

Christopher Woodruff

Great. So just to echo the point that you made there, Enrique, which was what I was going to close with, which is this. I think this project, to me, one of the things that I think it really shows is a pathway to impact which is not about publishing a paper and having policymakers read the paper, but about continuous engagement with the policy process, and that is where you know, Joyce, especially, I think the connection to the law school, the fact that you're a lawyer, the fact that you can talk to people on that level, and that you have more energy than the whole team put together to be able to do it, is really kind of instrumental in making the project as successfully from a policy perspective as it has been. So look, I want to just say thank you to both you to Joyce and to Enrique for joining me in this discussion.

Enrique Seira

It's been a pleasure and sharing. The research is very enjoyable after all the effort it takes to produce it is just a joy. And working with you, too, was also very, very nice for me.

Joyce Sadka

Yes, I wanted to say thank you so much, and that Chris does a lot more than put the words in the title. And really, I think we have had a very fruitful relationship, not only with the courts, ITAM, the law school, the economics department, the students. But we've also had a very fruitful relationship working with each other, and I think that complementing each other as co-authors is part of the secret of being able to, you know, go the whole 10 miles and get to where we've been able to get right now.

Christopher Woodruff

Or the whole 10 years.

Joyce Sadka

Yeah, exactly, or the 10 years. Thank you very much, Chris. It's been fun.

Christopher Woodruff

Thank you and thank everyone for listening to the CSAE Research Podcasts, we hope you'll join us again next time. To listen to more episodes from the series go to the CSAE website.