Tim Phillips [00:00:00]:

Today on VoxTalks Economics has broadband internet democratized finance. Welcome to VoxTalks Economics from the Centre for Economic Policy Research. My name is Tim Phillips. Every week we bring you the best new research in economics. So remember to subscribe and follow us on Instagram as well at VoxTalks Economics. Online share trading might make it possible for all of us to diversify our savings and that would be a good thing. But social media might encourage more of us to play into bad investments and that's not so good. Hans Hvide of the University of Bergen is one of the authors of a new discussion paper that examines the impact of broadband internet on investment decisions and he joins me now. Hans, nice to talk to you again.

Hans Hvide [00:00:54]:

Great to be here, Tim. Thanks so much for inviting me. I'm excited about this.

Tim Phillips [00:00:58]:

That phrase, the democratization of finance, I saw it in your paper and we borrowed it from Robert Schiller. What did he mean by the democratization of finance?

Hans Hvide [00:01:09]:

That's a good question because I think Schiller's definition of that kind of changed as he went along with his books. But I think the essence of it is touching on what you just said, namely to get more regular people, most people, many people engage in investing in the stock market. And why is that? Or in equity? So why is that important? Well, you can put your savings in a savings account in your bank or in the mattress or something. It's not going to yield much in the long term. Okay? That's a proven fact. Well, the stock market at least typically will tend to outperform quite a bit to savings accounts. But there is a fraction of the population that are not participating in the stock market. They're not buying equities. So that's been a worrying thing both for their own long term outcomes and for wealth inequality. So I think Schiller going back to Schiller, I think his idea is what is it that stops these people from actually engaging, investing in the stock market? It could be lack of knowledge, it could be cumbersome institutions, high transaction cost, all kinds of things. I think his sense of democratization of finance is something to make the stock market more accessible to regular people.

Tim Phillips [00:02:15]:

And since we have had internet access then there have been a lot of investment firms that advertise about how we should be trading shares. What do we know so far about how much the internet has contributed to this democratization of finance?

Hans Hvide [00:02:33]:

It's fair to say that the early research results were quite disappointing in a sense because these results are research funds like 20 years old now and were mostly about looking at people that trade in stock markets. What happens when they get an online platform to trade on? So typically you can think of that as like reducing transaction costs and making it more easier, more fun maybe, and cheaper. What those research findings tend to say is that from a welfare perspective, maybe it wasn't so great because you got a lot of trading, like excess trading, if you like. You had these occasions of overconfidence, particularly of men, so they traded a lot. Right? And if you have like 1% commission and you turn around your portfolio 100 times during a year, there's not much left. So those were the initial results. And that was a starting point, I'd say, of well work tried to think about could it possibly be positive effects of the internet that the literature had looked at so far?

Tim Phillips [00:03:33]:

And now it's much easier to get the sort of financial information about companies or the performance of funds that before would have been very difficult to get hold of or you'd have had to pay for it, or only people that were in the markets had. Do we know if people have been benefiting from this sort of access to information?

Hans Hvide [00:03:52]:

Right, so this was sort of one of the questions we had in our paper. We'll talk about the data later, but we can look at what do they on the internet in addition to trading stocks? So we have data on both things. But I think prior to our paper, this wasn't a lot research about like, do individuals get financial information? Is the internet beneficial? It could certainly be things that I'm not aware of there, but I don't think that had been studied much, indirectly it had, because there were some things that had done it on indirectly, but we were able to tackle that a bit more head on, I think, than previous work.

Tim Phillips [00:04:26]:

I mean, you only have to go on social media over the last few years to be bombarded with people telling you how to invest your money. And we've also heard a lot about things like meme stocks. Is there also evidence on the other side of the ledger that people are being influenced by this to make bad decisions?

Hans Hvide [00:04:44]:

Yes, exactly. As I said initially, there was this early work saying that you get like super easy access to do online trading, then there will be hyperactive trading behavior that's not necessarily well for improving. Now, in more recent years we got social media. So there's been quite a bit of research on what are the effects of social media. Right? Do you get information that is useful for you or will there just be these hurting events and tens of thousands of investors going into GameStop and whatever, chatting on Reddit and things like that? If you look at those papers, you get the impression that social media isn't necessarily that beneficial. It's good maybe in that it gets you interested in stocks and it's like, oh, can I make some money there? But the kind of trading activity you get is kind of short termish, speculative type of trading, not the kind of thing that we finance professors tend to like more like long term index funds type of investments.

Tim Phillips [00:05:38]:

Yeah. The research that we're going to talk about in a minute, you've looked at the influence of fast internet access on investing. Are you just looking at the amount of investing and whether more people are investing, or are you looking at the quality of that investing as well?

Hans Hvide [00:05:53]:

Right, so we wanted to look at both things. We both want to look at what we call equity market participation, which is something very simple. It's just whether you're exposed to equities in your portfolio or not, whether that's individual stocks, equity funds, or what have you. And this is trying to address the findings of the literature. We're also trying to look at this fast internet, which is broadband. Does that affect those that already are investors? Those are already whole stocks. Do they start trading like crazy like they did back in 2000? Or do we get beneficial effects for this group too? So those were our two research questions.

[Voiceover] [00:06:36]:

Content moderation can make sure that investors aren't scammed on social media, but do we need laws to ensure that moderation works properly? We investigated this question in our episode from December 2022 called Do Content Moderation Laws Work?

Tim Phillips [00:06:58]:

Okay, so to do this research, you're going to need details of individual investors and individual investments. Where on earth do you get data with that amount of detail?

Hans Hvide [00:07:10]:

So, of course, then you have to move to Scandinavia to get that kind of detail. Okay, so detailed data you will get for other countries too. You will have very detailed data on portfolio selection from the US. And to some extent from the UK. The thing with those data sets is that they will not cover the whole population. I mean, not even remotely. So they will cover individuals that join a trading house. Right. So some Internet broker who gets an account there. Of course, that's going to be a very small fraction of the population. It could be selected in all kinds of ways.

Tim Phillips [00:07:46]:

Very skewed sample that, isn't it?

Hans Hvide [00:07:49]:

Yes, it will be, and we suspect it may be part of the reasons for the results of the previous literature or established literature was because they had this you call a skewed sample. So what we can do in the Scandinavian countries with the Register data is that we can in fact cover the whole population. So every single individual in Norway, investors, not investors, all of them.

Tim Phillips [00:08:11]:

Good Lord.

Hans Hvide [00:08:12]:

Right.

Tim Phillips [00:08:13]:

What else do you know about these investors? You can know about their investment behavior. Do you know anything else about them as well?

Hans Hvide [00:08:20]:

We have a lot of socioeconomic information at individual level. Things like income, even their wealth. We pay wealth tax in Norway. So that's a nice thing for us researchers. Right. Whether it's efficient, I don't know, but it's good for research and things like their education, background, of course, age and where they live, who they work for, actually, who they're married to, all kinds of family things, too. So we have an incredible both breadth and depth of registered data.

Tim Phillips [00:08:45]:

And your research is about the effect of having broadband internet access on their investment behavior. How do you know if these people have broadband internet access when they're making an investment?

Hans Hvide [00:08:59]:

So that's a very good question. So the simple answer is that we don't, but we have a proxy for internet access that we can show works pretty well, and that's whether there's broadband coverage in the municipality where they live. Right. So we have all these data on individuals and their investments, but we also have data on the broadband rollout in Norway, which was actually financed by big public program, started out in, I think it was 2002, that they started digging the trenches and putting the cables down.

Tim Phillips [00:09:32]:

So during that time, some people were in areas that were covered by this, some people were not. And you're using that. Can we say from this, the broadband access causes participation in the stock market?

Hans Hvide [00:09:48]:

That's what we argue it does. Right. There's always like statistical uncertainty, of course. But what we can document fairly well, and other people have been doing that before, is that conditional on some controls, the rollout of broadband was to a good extent random, maybe caused by geological conditions and cost of digging and things like local political conditions. Whether a municipality got broadband in 2002 or in 2003 was pretty much random.

Tim Phillips [00:10:15]:

And so afterwards people in those areas become more active as investors in the stock market.

Hans Hvide [00:10:21]:

Yes, they do. So that was the question, number one we looked at. So whether equity market participation goes up after you get access to fast internet, by the way, we can look at coverage of broadband. So this is whether your municipality there were like, cables laid down in your municipality, but you also have data on broadband usage. Okay. So we can see that once the municipality gets coverage, the usage of broadband at the household level goes up dramatically pretty fast. So our proxies are pretty tight in that respect. We know when coverage comes along, and we know that that causes usage. All right? But what we cannot do is to go to individuals in the data set and say whether they have been using internet or not in the server data, we can do that, but we can't do that with the transaction data.

Tim Phillips [00:11:10]:

Now, fast Internet costs money. Traditionally, being active as this type of investor is something that people who have more money have been more likely to do. Do you have the level of detail in your research where you can say that this increase activity is for everyone that would be a true democratization, or is it just concentrated in the wealthy?

Hans Hvide [00:11:35]:

Right. So that was certainly one of the things that we were very interested in seeing. So what it turned out for the experiment here we had in Oslo was that in percentage term, the effects were larger for the less wealthy. So it's still true that the more wealthy are more likely to be in the equity market but they were kind of catching up, if you like.

Tim Phillips [00:11:56]:

And to catch up, what sort of behavior are they showing here? Are they going and buying one particular stock that they might have got interested in or are they investing in more diverse portfolios?

Hans Hvide [00:12:10]:

And it surprised us because to be honest I was expecting that they started behaving exactly like everyone else. They bought portfolio of like three or four stocks. Now it turns out that they started buying diversified funds so they started buying equity funds instead of that. We don't really find any effect on individual stocks. The effects we find are for equity funds.

Tim Phillips [00:12:31]:

And that for a professor of finance like yourself you would consider that to be pretty wise behavior.

Hans Hvide [00:12:38]:

Absolutely. And we were wondering what was causing this? I mean why? It did surprise us. We were very lucky because we had access to survey data. So these are like nationally representative survey and ask households and firms about all kinds of questions including their internet usage. And then we were wondering well if they start not only investing but investing quite wisely, maybe there's a learning effect going on here. They actually learn something useful from the internet. They're not only going to flash news sites, wasting time on games and stuff like that actually learning something. And when we looked at the survey data I think we find pretty compelling evidence that broadband actually leads to human capital acquisition. They start reading magazines, they take courses on the internet and they do all kinds of things that we economists think of as human capital acquisition and including financial type of information that we felt put the pieces together and it was a compelling narrative here. If somebody's asked me before this paper whether I would believe in that narrative I would say I don't think I really believe in that. But we did actually find quite a bit of evidence pointing in that direction and we felt we learnt something too.

Tim Phillips [00:13:45]:

One of the other prior beliefs I have about this is the people that start to trade because fast internet shows up become that sort of day trader model where they're constantly churning their portfolios and as you say, that tends to drain away any returns that they're going to get. Is this the model that we see of people trading more often?

Hans Hvide [00:14:05]:

Yes we do. But this is a pretty tiny fraction of the population relative to those that actually now enter the stock market for the first time. So when we look at those that are already active in the stock market and then we divide them the 5% least active up to the top which is the 5% most active in terms of trading activity. So then when I get 20 groups we do find that in the top group, in the top 5% of existing investors, there seems to be this tendency of these people. They do go a little bit wild. Okay, we do find evidence of quite increased trading activity of these people, but that's like one out of 20 persons. Well, for the rest of the group, of these 19 out of 20, we find evidence of the same thing. As for the wise investors, namely they tend to go into equity funds, they don't go day trading, they simply have a high propensity to go into equity funds and invest more wisely, if you wish.

Tim Phillips [00:15:04]:

Can we say that the arrival of broadband internet is increasing the quality of financial decision making, financial investing in that general direction that Bob Schiller talked about, that Democratization. Is it broadly a good news story here?

Hans Hvide [00:15:23]:

Yeah, I think it is. I think it's a good news story in two respects. Both that you get higher equity market participation, which is democratization of finance, and you also get democratization finance in another sense, they start believing in what finance professors preach. Schiller never sounds paternalistic. That's quite amazing, actually, because he says a lot of quite paternalistic things, but he's like, oh, we came up with all these incredible tools for portfolio management, nobody cared about them. How do we help these people? And that's what's happening too here. That at least what we can say. They start behaving more like what finance professors say. Whether that actually increases their welfare or not, of course we don't really know, but traditional welfare prospective economists, this is good news in both ways.

Tim Phillips [00:16:09]:

Good news for them, good news for you as well. Thanks very much for talking about it, Hans.

Hans Hvide [00:16:14]:

Thanks, Tim.

Tim Phillips [00:16:22]:

The paper is called Broadband Internet and the Stock Market Investments of Individual Investors. And the authors are Hans Hvide, Tom Meling, Magne Mogstad and Ola Vestad. It is discussion paper 18067 at CEPR.

[Voiceover] [00:16:44]:

We hope you enjoyed this VoxTalk from the Centre for Economic Policy Research. If you did, please leave us a review and tell your friends. Next week on VoxTalks what effect did the railways have on innovation?