



## THE BROOKINGS PODCAST ON ECONOMIC ACTIVITY

**“Is the post-pandemic surge in business dynamism here to stay?”**

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*Episode Summary:*

Predictably, the rate of new business formations and business expansions at the beginning of the pandemic plummeted. But, in two waves, applications for new businesses and expansions quickly recovered, countering several decades of decline in business dynamism. Surprising many economists, applications have remained much stronger than before the pandemic. On this episode of the *Brookings Podcast on Economic Activity*, Hamilton Project Director Wendy Edelberg talks with John Haltiwanger of the University of Maryland about his new paper documenting this trend, whether it is a fleeting anomaly or the new normal, and how policymakers can balance cooling the overheated economy with supporting young businesses.

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**EBERLY:** I'm Jan Eberly, James R. and Helen D. Russell Professor of Finance at Northwestern University.

**STEINSSON:** And I'm Jón Steinsson, Chancellor's Professor of Economics at the University of California, Berkeley.

**EBERLY:** We're the coeditors of the *Brookings Papers on Economic Activity*, a semiannual academic conference and journal that pairs rigorous research with real time policy analysis to address the most urgent economic challenges of the day.

**STEINSSON:** And this is the *Brookings Podcast on Economic Activity*, where we share conversations with leading economists on the research they do and how it will affect economic policy.

Today on the BPEA podcast, Wendy Edelberg, director of the Hamilton Project, we'll be talking to John Haltiwanger, Distinguished University Professor in the Department of Economics at the University of Maryland. John and Ryan Decker of the Federal Reserve Board are coauthors of "Surging Business Formation in the Pandemic: Causes and Consequences," which explores a particularly interesting trend during the COVID-19 pandemic.

**EBERLY:** In 2020, while the pandemic was causing all kinds of chaos in the economy, interestingly, applications for new businesses and business expansion skyrocketed. The paper examines the causes of this jump and looks for clues as to whether this is a pandemic-induced blip—that is just paper applications that don't become actual businesses or employ new hires—or rather, if it is a sign of a long term shift in business dynamics.

**STEINSSON:** This recent increase in business formation comes on the heel of a pretty unsettling trend in the U.S. economy over the prior two decades before COVID, where we saw a generalized decline in business dynamism. This decline in dynamism was evident in a variety of measures of entrepreneurial activity, such as fewer young firms, declining rates of labor market churn, and so on.

And this was very worrisome because young firms contribute disproportionately to employment growth in the economy, and labor market churn is an indicator of what we often referred to as creative destruction, which is arguably essential for a healthy, growing economy. In this context, the findings documented in Ryan and John's paper are really encouraging.

**EBERLY:** And they've looked at the latest data and found a large increase in new business formation across the U.S. and across a range of industries. This has progressed from that initial surge in new business applications to new businesses that are in fact hiring people and creating jobs. So, it seems like more than a paper surge that some people initially feared.

There's also an interesting pattern within cities, what they call a donut pattern, where there is more activity in the areas surrounding city centers than in the city centers

themselves. So, there is a lot of dynamism and reallocation in the labor market following COVID. And Ryan and John have pulled together a broad and fascinating set of data resources to guide us through it.

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**STEINSSON:** Yeah, these are really fascinating results. But let's turn it over to Wendy and John to hear more.

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**EDELBERG:** Thank you, Jón and Jan. I am Wendy Edelberg, and I am very excited to welcome John Haltiwanger of the University of Maryland to the podcast. Thank you for joining me today, John.

**HALTIWANGER:** It's great to be here.

**EDELBERG:** To start off, let's talk about the broad pandemic-era trends underlying the questions you address in your paper. After a brief dip in new business formations and business expansions at the beginning of the pandemic, applications for new businesses quickly recovered. And then surprisingly, applications have remained much, much stronger than before the pandemic. We seem to be in an entirely different world. Can you describe those trends in business applications and why you seem sure that this increase is real.

**HALTIWANGER:** Thanks much for the question. The surge in applications in the pandemic has actually gone through two waves. The first wave was actually in the height of the pandemic. In July 2020, an enormous spike in new business applications. Then they started actually to decline throughout the remainder of 2020. And then in January 2021, they started to rise again. And they have risen to a new high level that has sustained through fall of 2023.

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So, initially, we thought the surge reflected, one, people had lots of time on their hands, and two, there were temporary market opportunities, and maybe even three, necessity entrepreneurship, because there was a lot of people out of work.

But then the second wave, particularly the sustained second wave, doesn't seem to fit that story, because the labor market has got stronger and stronger as we moved post-2021. And applications have remained high in a very, very strong labor market.

In addition, we now have evidence that these applications, which are really just the start of forming a new business, have turned into actual real new businesses with employees. It turns out the data we've used to track actual business formation in terms of hiring comes in with a lag. It comes from various administrative data sources at the statistical agencies. We now have that data through the end of 2022. We'd like to have it through fall 2023. We don't have it quite yet. But it's been quite striking, the very large surge in business births, literally creating millions of jobs over the course of the second half of 2021 and all of 2022.

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**EDELBERG:** Yeah, so let's definitely come back to all the really interesting ways that this business formation has been tied up with what's happening in the labor market. But first, let's talk about one of the most important ways that business formation may be affecting our understanding of the economy is through this thing we call business dynamism.

So, you raise the possibility in your paper that what we're seeing is a revival of business dynamism. So, first, of course, for our listeners, can you explain what that term means? What is business dynamism? And then why you think these data suggest some reasons for optimism.

**HALTIWANGER:** So, business dynamism encompasses, in part, just startups themselves. They are a critical part of the innovation process in the economy. When new products and new processes and new ways of doing business come along, that attracts startups. And so, just tracking the pace of startups is an indicator of whether the economy is being dynamic.

But it's more than that, because innovation also is inherently experimental. And we see that businesses that succeed in any given wave of innovation expand, and they often expanded very rapidly. Where businesses that don't succeed didn't really quite find the right secret sauce in terms of the products and processes and location and business model and so on, they contract an exit.

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And in the post-2000s period, we've actually seen a slowdown in the pace of these indicators of business dynamism, literally a slowdown in the pace of startups and a slowdown in the pace of this reallocation. We've also seen, because we've connected it to micro data on productivity, that this is a very important contributing factor to the decline in productivity growth over this period of time.

We've seen more productive businesses less likely to go rapidly. We've seen less productive businesses less likely to contract. We've seen a greater dispersion in productivity across businesses suggesting, one, maybe diffusion productivity has slowed down, but if nothing else, the process of moving resources to the most innovative businesses and away from the less innovative businesses has slowed down.

So, then we hit the pandemic and suddenly this long decline in the pace of startups has reversed. Now, it's only three years. Three years is pretty impressive, but this is over a couple of decades' period of time. So, we need to be cautious. Our evidence suggests that the share of activity accounted for by young businesses has started to turn around from its multi-decade decline. But three years is not enough to offset more than 20 years of a decline.

So, we're going to need to see whether this increase in startups is sustained. I mean, the last period of time where we really had a long-run surge in startups and lots of business activity, particularly in innovative intensive sectors that were young business, was the 1990s. The question is whether we're—by the way, that was a

period of time where there was incredible economic growth, including productivity growth.

So, the question is whether the business dynamism starting to turn around and may make us optimistic about future innovation and productivity growth.

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**EDELBERG:** I should say part of my slowness in turning my pessimism to optimism has been because I've been so informed by the incredible depth of research that you, John Haltiwanger, have produced about the declines in business dynamism over these decades. I feel like that has been, like, written into my brain in ways that it's just been very slow for me to update over these over these couple of years of good news.

So, I am certainly part of the slow updaters because of the influence of your—

**HALTIWANGER:** —that's made me cautious as well.

**EDELBERG:** All right. So, let's, let's come back to the really interesting ways that what we've seen with business formation has been tied up with the job market. So you find really interesting, compelling evidence of a relationship between people quitting and new businesses getting started. That's how the labor market, like, affects who's starting the businesses. But then there's the other side of the equation, this employer-employee relationship, and that these new businesses are also hiring.

So, can you talk about both sides of that and the trends you've seen over the last couple of years?

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**HALTIWANGER:** So, as we know, the surge in quits has just gotten an enormous amount of attention over the last couple of years. It's starting to tail off a little bit. Interestingly, in 2023, we're not quite at the levels we were in 2022, even though, by the way, business formation has remained robust.

But let's go back to the quits. And I think the term that's been used often in the popular press and by some scholars, the "great resignation," I think is a very catchy phrase, but I think it's actually an unfortunate label. Because it makes it sound as though people are leaving jobs, which they are. But in fact, we've known historically, but we also have evidence for the pandemic, that when people quit, they're moving to other jobs.

And so, so the way we want to think about quits and the surge in quits is there's been a surge in job-to-job flows. And there's high quality evidence out of the Census Bureau that shows exactly that, that the surge in quits is related to a surge in job-to-job flows.

And we also know from lots of studies, again, without even talking about new businesses yet, that when workers quit, they tend to improve their economic outcomes. They tend to move up the job ladder.

So, again, the last time we really had a high pace of quits like we had in the pandemic was the 1990s. Again, that was a period of time with tremendous economic growth, productivity growth, wage growth, and all the like. So, I regard a surge in quits as a good thing, not a sense that things are bad, but rather there are opportunities for individuals to improve their economic outcomes.

Now where do new businesses come in? Well, I do think that part of what the surge in quits is, is there was lots of reevaluation of people's lifestyles and work, and thinking about what really mattered to them in terms of the kind of jobs they have and so on. And so I think that that's partly where some of the quits, some of the shuffling of workers across businesses reflects those changes in what workers paid attention to, including amenities like working from home. So, I think that that's actually part of it.

Now, the new businesses that have come in, I think, are part of those opportunities. And so, I think it's not surprising that we've seen some close connection between the places where there's been a surge in quits, literally at the detailed county level, we've seen a surge in quits. We also see a surge in business formation. What do we think is going on? We think actually part of it is individuals literally going out on their own. So, the job-to-job flow is, I used to work for somebody else, now I'm my own boss. So, I think that that's part of the story.

But we also know, at least historically, we don't have the micro data yet quite to nail this, is that startups are a magnet for attracting workers. So, in terms of sort of ranking where workers are willing to go, startups are well known for poaching workers from other firms.

And so, I think part of what's been going on is these startups have come in, and startups offer new opportunities and individuals see a way to build their future through startups. And so, I think the connection is one, people going out on their own and two, startups very good at poaching workers from other firms.

**EDELBERG:** But let's drill down on that a little bit because it's not just a, like should I think of this as just net zero? Like workers were working at one firm that was big and established and now they're working at a third?

**HALTIWANGER:** No, I think not, partly because we, again, one of the things that we see out of the business startup data is that it's not net zero in terms of number of firms. We've seen a huge increase in net business, net business entry, not just gross business entry. So, something's going on out there that's opened up new opportunities for businesses on net and with, by the way, very uneven patterns across industries and locations.

I don't think it's just reshuffling. Although that's interesting all by itself, by the way. Reshuffling can be a very healthy thing for for an economy. If indeed matches are all much better than they were before, both in terms of generally match in terms of productivity or match in terms of amenities, that's a healthy thing for an economy.

And so, I I don't think we ever want to diminish the literally the productivity enhancing and the welfare enhancing aspects of making workers and firms happier with their matches. But I think there's also been a net a net expansion.

I think part of the reason the labor market has been so strong, we've been surprised over and over again, wow, where are all these jobs coming from? I think it's partly coming because there's been this huge net business formation. And I don't think any of us were quite anticipating that there would be so much net business formation.

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**EDELBERG:** I mean, you're absolutely right, John, about the shuffling being a potentially very good thing. This is certainly one of the reasons behind the dramatic wage growth that we saw in some of these periods. We know that this is a time when people get much stronger wage growth when they go from job to job, rather than just grinding away, you know, within a job and slowly but surely moving up a ladder.

But what I want to come back to is you mentioned a couple of times about specific industries, specific geographies. So, in the paper, you note some interesting nuances in the data that are specific to, you know, again, whether it's industries or geographies. You talk about something called the "donut effect" around cities and growth in high-tech sectors. So, talk to us about those trends and how they've shaped your interpretations of the data.

**HALTIWANGER:** So, not that everything comes in twos, but I think in this case, again, there's two very different kind of mechanisms going on. So, let's first talk about the "donut effect." So, we know there's been an enormous amount of attention to the fact that downtown areas in particularly major cities have high occupancy rates in terms of people who aren't coming to the office. Working from home has increased dramatically. People are coming in maybe a few days a week. Businesses in those downtown areas that were there to support those businesses—what do I mean by that? You know, restaurants and gyms and dry cleaners and so on—have suffered dramatically. We see that overwhelmingly in the data.

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Interestingly, what we've seen in terms of business formation is people are not starting these new businesses in downtown Manhattan. They're just not. So, even though Manhattan was a place pre-pandemic, if you just rank the areas in the New York City area—so, where are you most likely to start up a business?—Manhattan was close to the top of the list. It's actually at the bottom of the list within the New York City area. It's in the surrounding areas that we've seen lots of business formation.

So, one part of the story is these are support businesses. These are the support businesses that used to be supporting the daytime population in downtown Manhattan. Now the daytime population is increasingly in Brooklyn or in Queens or in the Jersey counties and so on. And so, people who are working from home at least a few days a week, they still want to go to restaurants for lunch, they still want to go to the gym, they still want all those sort of support services. And so, we have seen a surge in business formation exactly in those areas.

If that was the whole story, by the way, if this was all just reshuffling of service support businesses in major cities, I'd be less optimistic about what the prospects of

this were for the innovation of productivity growth. It still might be really important because it may be this is this is our new normal. This is the way the economy is going to be organized and it makes sense. These new businesses have helped facilitate that. And so, that's really important if this is the new normal in terms of work and and lifestyles. But probably not for reversing the productivity growth slowdown that's been going on for the last couple of decades.

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However, we've also seen, not just in the surrounding counties, although we've seen in terms of downtown areas, but actually across the nation, a surge in businesses in the innovative intensive industries, exactly the same kind of innovative intensive industries that played such a big role in the productivity surge in the 1990s and early 2000s, particularly the information sector and the professional, scientific, and technical services sectors. Those are those are sectors that are STEM intensive sectors. And if we just ask ourselves what sector is now, in the most recent data, the kind of the most important sector in terms of where business formation is coming in, it's actually professional, scientific, and technical services.

It's worth noting, and I'm not saying this is all AI, but new AI businesses they're going they're going to be classified either in the information sector or actually many of them are classified in the professional scientific and technical services industry. So, I don't actually have the microdata to tell you, oh, yeah, this is AI. But I can tell you these are exactly the sectors that surged in the 1990s with all that productivity growth. And again, the last time we saw anything like this was the 1990s.

And so, to the extent that we regard a surge in entry in innovative-intensive sectors as a leading indicator of possible future innovation and productivity growth, this is a good sign.

So, my two-part story is on the one hand, I think some of this is reshuffling—restaurants and gyms and other kinds of support services for the people working from home. And the other part is a surge in entry in innovative intensive sectors.

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**EDELBERG:** So, I want to come back to the 1990s, which you've mentioned a couple of times, and whether or not we can learn anything from that period as to why why this surge in business formation might or might not be temporary as that one was temporary. So, I mean, you talked about one way in which this might be all a temporary phenomenon if it's a response to us all wanting to work from home. I mean, I think I'll note that I'm doing this from home, betting you're doing this from home. After we get to some new equilibrium where the businesses are now in the right geographic locations, then presumably we would be done with this great increase in business formation. So, so that would be one reason why this would be a short-lived phenomenon. But are there lessons from the 1990s that we should be looking to for why this might come to an end?

**HALTIWANGER:** This is a really hard question because economists are still debating very much about what happened in the 1990s. I think an open question



amongst economists is, how long should we have expected the surge in productivity in the second half of the 1990s through the early 2000s has lasted.

So, some economists like Robert Gordon would argue enormous innovations were made, huge surge in productivity, but this was not this was not like other general purpose technologies that had really long lasting effects. It's kind of a pessimistic view about ICT, but maybe he's right.

**EDELBERG:** ICT? ICT ...

**HALTIWANGER:** Information and communication technology, all the Internet and all of the things that really sort of change ... the digitization of everything that's occurred and allowed many different sectors, not just high tech sectors to do amazing things, but retail trade completely transformed over this period of time. Right? This was the period of time where we moved completely to scanner technology. Everything's got a UPC code on it now. Completely changed the way that retail trade firms organize themselves and their business model. And lots of evidence that was very productivity enhancing. And from Gordon's perspective, that was great, but it was short-lived.

**EDELBERG:** It was no indoor plumbing.

**HALTIWANGER:** Yes, or or electrification is the point. So, those are like major changes in general purpose technologies.

Now, alternatively, I think lots of us have wondered whether there were headwinds that started to make it difficult in spite of continued changes in technology that we just weren't adopting them nearly so quickly. And so, so that's a view that it wasn't that ICT kind of ran out of steam, but the economy started to have headwinds on all kinds of different dimensions. And so, that's why this is such a hard question. What led to the productivity slowdown? Did we run out of ideas, or are there headwinds? And I I think there's arguments in favor of both.

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So, now let's go to now. And again, this is a really hard question. What I do know is the evidence from the 1990s and earlier periods—there's very nice work by Gorton-Klepper on this—literally for the last hundred years, is that when the economy or a sector goes through innovation, a leading indicator for that is a surge in entry. And it's not surprising. I don't think ... I don't want to make the case that the entrants are the ones that create all the innovation. More they're drawn to the innovation. I think they are important for creating the innovation, but they're drawn to the innovation.

The research I've done suggests that when we saw the productivity surge in the 1990s, actually in some sense well before the productivity surge, we actually saw a surge in entry. And interestingly, at kind of the detailed industry level, when we saw the surge in entry, the first thing that happened was not an increase in productivity growth. Actually, it was a decrease in productivity growth, and an increase in productivity dispersion, very much consistent with this notion of experimentation.

So, the entrants all came in, trying all kinds of different things. Many of them weren't working out very well. We were trying to figure out how to use computers and the

Internet and the like. We weren't particularly good at it. So, actually, productivity growth slowed slightly, but dispersion went way up. And then there was a shakeout process, and the successful entrants, but also successful incumbents that were adopting to the latest technology, took off. And that's where the productivity growth came in.

And Gorton-Klepper's work for the last 100 years suggests that those lags can take a long time. So, what do I know about the current period? Not that much. All I know is a surge in entry, particularly in innovative intensive sectors, is a leading indicator for future innovation and productivity growth. How long this is going to last? Huge open question. I don't know.

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**EDELBERG:** All right, and then the million dollar question. I suppose with inflation, that now has to just become the billion dollar question. What lessons should policymakers take away from all of this? What can they do to keep business dynamism going at this higher level, given all of the positive benefits from that?

**HALTIWANGER:** So, I think policymakers, not just now, but but historically, have not paid enough attention to young businesses and startups. So...

**EDELBERG:** Wait, but I want to be really clear for our audiences. You mean young and not small.

**HALTIWANGER:** Yes. So, that's exactly the distinction I want to I want to draw out. So, we have a Small Business Administration. I think they do many good things. There's lots of policies that are out there targeting small businesses for arguments that are related to arguments that I've made. But critical point is just what you said. Young businesses are small, most small businesses are not young.

Now, the small but mature businesses are often playing a critical role in the economy. They're often literally, you know, the corner store that we all like to go to in our neighborhoods and so on. And by the way, many of the startups we're talking about in terms of the surge today are going to turn into these small, mature businesses.

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But part of the reason we care so much about startups is historically, a small fraction have grown very rapidly and they disproportionately account for job creation, innovation, and productivity growth. And that was the story back again in the 1990s and in earlier eras. It's this right tail of very fast growing young businesses.

Again, if you want to go find where the high growth in the economy is, typically it's young businesses. And when you have fewer of them, that's partly the problem in the post-2000s. So, so part of the message to policymakers is, with all the attention you pay to small businesses, pay at least as much attention, maybe more, to young businesses.

I talk regularly with colleagues at the SBA, I think they do wonderful things. I often say to them, I think it would be better if they were either called the Young Business

Administration or maybe the Young and Small Business Administration. And it's not to not to knock the important role the small mature businesses play, but but to the extent that the, you know, oftentimes the policy makers say, well, small businesses are the primary creators of jobs and they're so important. I would say, yes, it's the young small businesses that are so important.

When you think about it this way, you say, well, how much trouble do you get in by paying attention to small versus young? Why I I think we need to remember that lots of well-intentioned policies that subsidize, in some way, incumbents—whether small or large for that matter—actually tend to deter entry, because it enables those businesses that are incumbents to, in some sense, to do better and not open up the competitive possibilities for for startups to come in.

So, one big message for policymakers, I think, is pay attention to them. And as you literally, on a policy-by-policy basis, think about what the impact is not only on the incumbents, but on the young businesses. And remember, the young businesses who haven't come in yet, they don't have a voice. Right? There's no constituency out there. That's a big problem.

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A second message to policymakers is actually related to macro policy. So, we know that one of the challenges in the current economic environment is as we've emerged amazingly out of this pandemic and very rapid growth is, inflation has taken off. And the Federal Reserve, it's their job is to try to combat inflation. And so, they've been working very hard to do this and they're trying to do this in a way, obviously, to not stifle economic growth and particularly not to lead to a significant contraction and lots of lost jobs and so on.

I think they should also be looking to see what what they do to to young businesses. So, we know historically that young businesses are especially vulnerable to cyclical variation and they're especially vulnerable to adverse financial markets. In many ways, the part of the reason that we we recovered so slowly from the Great Recession is that startups just got clobbered in the Great Recession and came back very slowly. In many ways, they never really recovered until now from from the Great Recession. And I think that this contributed to the slow growth we saw on the United States economy from 2010 to 2019.

So, the Fed has an enormously challenging job, but my hope is that when they meet, they obviously talk about the latest inflation numbers, I know they talk about the latest employment numbers, I think they should be paying attention to the latest startup numbers.

And in some ways, we're in a particularly vulnerable position right now, because we've got this huge new cohort of startups. And it's possible that the Fed could actually just clobber that wave, because young businesses under 5, under 10 years old, one of the biggest constraints that they face is what's going on in financial markets.

You asked earlier about whether this is going to last long. One quick way this is not going to last very long is if we, if unfortunately we have a significant economic

contraction, that would be bad for many reasons. Obviously, the loss of jobs that goes along with recessions and the scarring effects of that and so on. I think those are huge effects. But I also think that losing a cohort of brand new entrepreneurs would be a would be a significant adverse effect.

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**EDELBERG:** So, it's interesting, it's like the main ways that the Fed is going to lower inflation is by slowing the economy, the real economy, in various ways. Slowing demand for labor, slowing economic growth.

And I guess the impossible ask of the Fed would be figure out a way to bring about that that slower economic growth in a way that doesn't target young businesses. You don't want young businesses to be doing all the work to slow the economy. You want—

**HALTIWANGER:** Exactly.

**EDELBERG:** You want to slow it on a different margin. But of course, they're generally because they're young, the most vulnerable. That's a that's a tall order.

**HALTIWANGER:** It is a tall order. Having said that, the Great Recession, I think we learned that it didn't work out so well for young businesses. It's not so surprising in the height of the Great Recession, with financial markets collapsing around, housing prices collapsing, market values collapsing, that young businesses got hit really hard.

But then in the period post-2008, and as we move to 2009, the Federal Reserve and actually the entire banking system, they're very nervous about making sure banks were solvent and lots of stress tests and so on. And so they, on the one hand, they were trying to encourage the economy recovery, but on the other hand, they were like, okay, we want your books to be really solid.

And so, small business lending took a big hit for a long period of time. And evidence that I've worked on is it was especially the young businesses that got hit hard. It's not so surprising. Right? Because the young businesses, they're the ones who are... Why are they the most vulnerable? Because they have no history. So, they are sort of beg, borrowing, and stealing to try to get going. You know, they're trying to get financing, trying to get equity financing in a variety of ways. You know, of course, the right tail businesses are trying to get from the VC market. And I think that's a really important market. But the businesses that start up at 10 and grow to 150, maybe they're not the next big thing. But they are important high growth businesses as well.

And again, those businesses got hit very hard. There's lots of evidence that small business lending collapsed in the Great Recession and took just years to recover. So, it's a margin, I think, both the, I'll say, the microstructural policies that we worry about. We should pay attention to young businesses. And I actually think for macro policy. In many ways, the Fed's not used to, in many ways, worried about the pace of innovation. Right? It's not on their mandate. You know, it's price stability and full employment.

I think they have an impact on innovation. I think especially they have an impact on innovation through the impact on young businesses.

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**EDELBERG:** All right, well, let's leave it there. This was this was super. I found this conversation really informative and I hope our listeners enjoyed it. And thank you again to John, for joining me today.

**HALTIWANGER:** Thank you for having me.

**STEINSSON:** Once again, I'm Jón Steinsson.

**EBERLY:** And I'm Jan Eberly.

**STEINSSON:** And this has been the *Brookings Podcast on Economic Activity*. Thanks to our guests for this great conversation and be sure to subscribe to notifications about new releases of this podcast.

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