Ep. 33 Productivity Puzzles podcast transcript

Business Dynamism: is turbulence good for productivity?

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BvA: Why do firms have very different productivity levels, it's today's dispersion between high and low productivity firms too big. Are we still creating enough productive firms which create good jobs and do we need a bit more turbulence in business dynamism to get productivity to go up again. We're going to find out, welcome to Productivity Puzzles [music].

Hello and welcome to the third season of Productivity Puzzles, your podcast series on productivity brought to you by The Productivity Institute. I am Bart van Ark and I'm a professor of productivity studies at the University of Manchester and I'm the director of The Productivity Institute, a UK-wide research body on all things productivity in the UK and beyond.

Welcome to the first episode of a brand-new season of Productivity Puzzles, we've taken a short winter break but we're now all ready for twelve new episodes during 2024. We will again travel through productivity lands to get the latest insight in stories from experts in academia and think tanks, as well as practitioners in policy and in business. For this year, we are going to somewhat tweak the format, instead of somewhat randomly making stops on our productivity journey, we will adopt a somewhat more structured approach and present our podcast episodes in a trilogy of three episodes on a particular theme where we will look at the research perspective, the business perspective and the policy perspective in subsequent shows.

We will start our series with three episodes on the productivity of firms but later in the year, we will also do a series on productivity and people and one on productivity and places. Of course, we will also leave a few episodes

for whatever hot topic emerges and no doubt there will be a few again in 2024. The other change to our format is that for each episode, I will be joined by one of my colleagues from The Productivity Institute who is an expert on the specific topic to help me with the discussion with our guest speakers.

This way, we can go a little deeper with the expert and I can just sit back and play the bystander role and also folks, a little more on trying to understand myself and perhaps help you as a listener as well, on what this all means. Anyway, hopefully you will enjoy this new series of Productivity Puzzles again, thank you for your kind feedback which we received from many listeners, we are always open to suggestions on topics and guest speakers. So, just send us an email at tpi@manchester.ac.uk.

Today we start off with a series of three podcasts on productivity and firms, a good topic to start with, we thought because after all, it is firms that are the key to our national and regional productivity growth performance. Firm performances are so important because we have seen some interesting things happen to firms since productivity growth has begun to slow in recent decades. First, we have seen an increase in inequality in firms' productivity performance, sometimes called the greater productivity dispersion and second there has been less churning in terms of more or less productive firms and jobs and resources and people moving to the most productive ones.

So, this combination of more inequality between firms and less churn maybe due to a lack of business dynamics and importantly it seems strongly correlated with slow productivity growth. Now this is an important topic because even if correlation is not causation, this seems that part of the answer to get productivity to grow again is to raise business dynamism again. The good news is that there is more and more good data to figure out relationships between productivity and dynamism more precisely.

So, in this podcast, we're going to talk about what the mechanisms are between productivity and business dynamism, whether there are big differences between countries, whether the UK is a special case or not and whether and how we can get a bit more turbulence in the economy. So, we're going to discuss this with two very experienced guest speakers, John Van Reenen and Javier Miranda who I will introduce in a second, a little later but as mentioned earlier, I'm going to do that with one of my TPI colleagues, Rebecca Riley.

Rebecca is The Productivity Institute's lead on our measurement and method theme, overseeing a lot of the data work on firm-level data and she is a Professor of Practice at Kings College in London where she is also the Director of the Economics Statistics Centre of Excellence which is a Concertina Partner in The Productivity Institute.

Rebecca, welcome to the show, so get us a little bit going on this topic, just very briefly, what is business dynamism, it's one of these terms we're throwing around but what does it mean in this discussion and why does it matter?

RR: I mean basically the way I think we think about business dynamism is it's basically the churn in the population of businesses in the economy. So, at any one point in time, we have in the economy, a set of businesses or firms if you like, so in the UK, for example, recent figures suggest there is around six million businesses in the private sector, although if we count those with employees, it's closer to two and a half million or with more than ten employees, it's more like a quarter of a million.

Basically, business dynamism is then a measure of how that population of businesses is changing over time, so say over a year, from one year to the next or over a few years. So, the question is, do we see new firms coming in, do we see older firms with more outdated technologies maybe, exiting the market. Do we see the churn in terms of the expansion of firms, contraction of firms as they respond to new technologies or other changing circumstances.

So, do we see new jobs being created, old jobs being destroyed as workers move between firms. So, that's the concept of business dynamism and when you say, why do we care about it, well why do we actually need this churn in the business population. Well, we care about it because of course we want new firms to come to the market, they might bring new ideas to the market, we want start-ups, we want the competition that is created by that churn.

The churn or the business dynamism also supports the diffusion of ideas, of new technologies, business practices across the economies, we want that churn and basically, this churn or business dynamism is helping the process of allocating economic resources to where they might add value. So, if what we're seeing a decline in business dynamism or the economy somehow becoming more sclerotic, that worries us because it means that these mechanisms that support growth aren't really working.

BvA: So, we've given this podcast a title, Is Turbulence Good for Productivity, so you are talking about a churn being important as part of the business dynamism story, but when you talk to business leaders, they sometimes think there is a bit too much churn, too much turbulence but what's your take on this, how do we have to distinguish good dynamism from bad turbulence, if you like?

RR: I think the ultimate test of that is whether the dynamism that we see results in higher productivity. So, there is some concern that there is a reduction in business dynamism and there is lots of theories, which I'm sure we'll talk about, what that means for productivity or how potentially that maps

productivity. I think the ultimate test of whether the dynamism is good or bad is whether it results in good productivity. There is plenty of turbulence in the economy, that's unhelpful for growth.

So, when we're facing turbulence in the forms of huge exogenous shocks to the economy, creating uncertainty that tends to stifle business dynamism or it creates business dynamism perhaps that is somehow unwanted. But ultimately what we are interested in is business dynamism that leads to growth.

BvA: Okay, we need to talk a bit about how do we measure business dynamism and whether it has fallen, which is one of the claims that we will discuss here. How does it differ between countries and at the end of this podcast, we will also talk a little bit about what can businesses and policy-makers do to create a bit more action, I guess a prelude to raise business dynamism in our discussion with business and policy-makers in the next two podcasts.

So, let's bring in our two guest speakers, who I already briefly mentioned, John Van Reenen is the Ronald Coase Chair in Economics at the London School of Economics where he was also a Director of Centre for Economic Performance and currently, he is the Director of the Programme on Innovation and Diffusion, called POID with which The Productivity Institute closely collaborates. John has extensively written on this topic, for example, as part of work he did for the Institute for Physical Studies review of inequality which was led by Professor Angus Deaton and you can find a reference to that work on firm inequality by John and colleagues in the show notes. John, welcome to the podcast, thanks for joining us.

JvR: Thanks for having me, Bart, it's a pleasure to be here.

BvA: Great and then we have Javier Miranda and Javier is a Professor of Economics at the Friedrich Schiller University in Jena and he is the Head of a newly established centre for factor market transformation and productivity growth at the Halle Institute for Economic Research in Germany. He is also the co-director of The Competitiveness Research Network or CompNet where he works in the areas of competitiveness and productivity including the running of a large micro-based competitive data sets for European countries which is described in his latest paper together with other colleagues which is also shown in the show notes. Javier, thank you for joining us today here.

JM: Delighted to be with you, thank you for having me.

BvA: So, Rebecca, let me hand over to you and let's get going on this discussion, has business dynamism, how is it measured and has it declined and why, over time?

RR: Yes, well I mean so there are lots of different ways of looking at business dynamism, we touched upon a few, there is the expansion and contraction of existing firms, there is the entrance to the market et cetera. John, what measures would you look at, specifically in this context and what are the patterns that we see?

JvR: One of the measures I like to look at and we looked at a bit of this in the quality review was just the spread, the inequality between different businesses. I mean we're very used to thinking about inequality between people in terms of their incomes, what fraction of total income does the top one per cent have or what's the difference between the rich and very rich. You can use similar ideas when you think about firms, so for example, you can say, what fraction of the economy, fraction of jobs or fraction of sales goes to the largest firms in the economy.

That's a very simple metric of concentration and if you look at that, you see quite remarkable things. So, take the United States, for example, just look at jobs, that's a nice, easy thing to measure, in the mid-1980s, about twenty-eight per cent of all jobs went to the largest…say a large firm is over five thousand employees, about two thousand firms in the US, twenty-eight per cent of all job went to those mega-firms, if you like. By today, that's gone up to thirty-five per cent, so it's a seven per cent point increase, more than one in three of all jobs are in these very big firms.

That's a massive shift towards these very large firms and then if you look at sales revenue, that shift is even bigger. So, if you think about many of the really big firms today, I used to call them the gaffer firms, Google, Amazon, Facebook, Alphabet, I call them the Magnificent Seven now because we've added Tesla and Nvidia. Nvidia is worth over two trillion dollars actually, it's an extraordinary market valuation.

But if you look at and think about these very large firms like Google, the sales are actually way larger than their employment is, so they are sometimes described as these firms as scale without mass, they don't have all the people but they have huge amounts of sales. So, if you look at, say measures of concentration, so the sales in the industry or in the economy as a whole, that has also become very concentrated.

So, in size you've got this spread which has increased in the UK as well, another measure you can look at is productivity. So, if you look at the differences of productivity between firms who are at the top of the distribution, the most productive and the middle, you see there is this pattern where the tail of the productivity distribution has become wider over time.

So, that inequality of productivity also seems to have expanded and again there is a pattern you can see, not just in the US but in the UK and in most other countries as well. So, those are cross-sectional snapshot moments,

if you like and that inequality has increased as well and interestingly, that has gone hand-in-hand with increases of things like wage inequality as well, which in my view, those two are related trends.

BvA: So John, these very large firms which you've talked about a lot in your work, you sometimes call them superstar firms where you can explain briefly why that is but also these firms, I mean we think of Google and Amazon but it's not just Google and Amazon we are talking about, what kind of firms are we talking about, these really very productive firms, give us a few examples?

JvR: Well, I mean, you can see these very productive firms in all industries, so as you say, Bart, when we think of these, we tend to naturally think of the digital giants and they are very large but if you look across almost all sectors of the economy, you see the growth of these large firms. So, for example, if you think about, in retail, retail groceries, in the UK you would have the big four, I guess you could include Aldi and Lidl now but they dominate the entire market, they are super-large, you see in the US, Walmart and Costco.

If you think about the banks, obviously we're very familiar with finance, how that's become more dominated by large firms and don't worry about too big to fail, that's one of the reasons that some people think that sparked the financial crisis. If you think about logistics, you think about FedEx, so I think almost every sector you look at, you see evidence of these firms.

BvA: Why are these firms called superstar firms, what is super about them, except that they have high productivity?

JvR: As a purely descriptive statistic, you could say that they are big firms but people dislike it when I call them superstars because it makes them sound particularly great and obviously there is a lot of hate that gets directed towards them but big firms are big for a reason, typically. So, a lot of firms have grown large and the reason they've grown large is because they can offer something to consumers that consumers like. So, they are either offering products at cheaper prices like some of the big supermarkets are, maybe they are offering a new product or a new service, a bit more innovative high-technology company.

So, they offer to grow and for reasons, because they have some…they are offering something which people want to buy. So that's the positive spin on superstar firms and you might say, well okay that's fine, they've grown large and these firms are offering us lots of things that we like, Microsoft, Tesla, Google and so on. But the concern is of course that well maybe they have got to these positions of power for reasons we don't like so much.

So, maybe they have got to their positions because they can use their market power in order to keep their rivals at bay or out of the market that consumers get locked in to using some of these because they have high

switching costs. Maybe they can lobby government to change the rules of the game to make it easier for them to maintain their dominant positions.

So, that's one the worrying things potentially, that maybe they've got some of the power through these things which we think are going to be bad for productivity and maybe there are other factors. So, maybe it's harder, there is more…I think Javier has this phrase, frictions in the market are things which are throwing grit or sand into the natural forces of creative destruction in the market place and if you do that, it gives advantages to some of the very larger firms.

RR: So, I'm going to turn to Javier because you've both looked at different metrics of business dynamism and Javier, in particular, you've done this really interesting, harmonised data collection exercise across many countries. So, we're very interested to hear what you have to say about patterns you see there?

JM: So, in my work, we see declines along several dimensions, long trend declines with acceleration post-2000 I'm going to say. In terms of start-up activity, so there are fewer firms every year, a separate portion of all firms, and so the start-up rates have been in decline for a very long time in the US. We see this decline also in Europe through this harmonised database that you were just talking about but it's not just start-up rates, it's not just there is fewer businesses entering, these businesses tend to not grow as much. So, there are fewer businesses and fewer of them succeed in terms of reaching high grown rates that we were used to.

In addition to this, businesses are also becoming less responsive, so it's not just that there is fewer start-ups, the businesses that are already in the economy are increasingly less responsive. They're not as responsive to the environment, so this is another important metric that we care about. What do I mean by they're not as responsive, so we expect businesses that are doing well, we expect them to grow and businesses that are not doing well, we expect them shed workers and decline.

Now this is still happening today, just as it was previous to 2000 but what we're seeing is that businesses are much more mirrored in their response to their environment. So, we are seeing declines across all industries, across all geographies, all firm-sized classes and we're also seeing particular strong declines for young businesses, I mentioned already high growth. So, in particular, in the high-tech industry we see these large declines, but also large businesses more broadly. So, there is long trend declines, that have been happening for a long time, particularly post-2000.

RR: Yes, so I'm really interested in these different concepts, so Javier is saying that there is the decline in start-ups, job reallocation, that firms are less responsive to technology shocks, John is talking about a different set of metrics around inequality across firms in terms of their wages and

productivity and this prevalence of high performers who seem to be outpacing everybody else.

I would be interested to hear your thoughts, John and Javier, about how do these concepts relate, are they part of the same story and I guess partly in answering that, that gives us maybe an answer as to why we see these patterns in the data. I mean why do we think these things are happening.

JM: Sure, I mean one of the things that we worry about with these superstar firms is their impact on the competitive environment, so if you think about a firm, a new entrepreneur that has an idea, has a really good idea for developing a product that is good quality, they might observe this superstar firms that are so dominant in so many ways, including because there are lots of people that use their products. We worry that the smaller businesses, these young innovative businesses are just not going to want to compete.

So, there are these stifling effects that we are very worried about when it comes to these superstar firms. There is no effort anymore, at trying to go after them, even though there is a natural evolution of technology and there is new ideas and it might be possible but it just stifles the competition. Importantly, when that happens, where there is less competition in the market, the incentives for these firms to keep innovating and pushing technologies forward also declines.

So, it has its own disincentive effects rather than maybe developing new technologies, they invest in creating new patterns and pattern figures that make it harder for other companies and innovators to jump in and compete by raising costs, you have now this complex set of technologies. So, these are all reasons why we worry about these firms that are taking the lead so far ahead because it might have anti-competitive impacts on innovation and under the next set of innovations.

BvA: I get that point but at the same time, I would say, sure we want more competition, competition is good, at the same time these firms produce a lot of products and services and technologies that other firms can use, quite often off the shelf increasingly at lower and lower prices. So, to some extent, you could say superstar firms are creating these anti-competitive effects but then on the other hand, maybe the problem is more with a lot of catching up firms that are not adopting these technologies quickly enough in order to become more productive and more competitive.

JM: So, two things, I'll say, if you look at the data and of course we're going to start missing the data and cutting the data a little bit more carefully but when you look at large firms, large firms in the US, over the last, I'm going to say, ten, fifteen years, the largest firms, their productivity growth has actually declined more, it declined more than it has for the smaller business. So, again it points to there is something going on with innovation inside of these

firms, sure Bart, there might be some that are doing great but the reality is, is that on average, large firms are not doing that great.

Productivity growth within these firms is actually slowing down quite dramatically. So, we go back to reallocation, what is reallocation, why is reallocation important, because it should be the case that when firms stop improving, there should be other competing firms coming up with new products and overthrowing these firms. It seems to be that this process is just slowing down.

RR: We keep coming back to these large dominant firms and this sense that they've become somehow more important, why would that be the case, I mean what would be the reasons that we see that change in behaviour. I mean there are theories about the nature of production, the types, the complexity of technology, the use of intangible capital creating such large entry costs, for example, that you have to be very large and innovative. There is stories about globalisation, the size of the market place, being a different one. John, what is your take on why we're seeing these patterns in inequality and emergence of these superstar firms?

JvR: My personal view is that I don't think there is one size fits all, so it's not like Lord of the Rings, one ring to bind them all together, there are different things happening in different industries and different parts of the economy. But just going through the potential explanations, so I think that one important part of this is how technology has changed and I call it the Google effect, if you like. So, the Google story is that network effects of various sources have become much more important, especially in these digital industries.

Once you start getting a firm position in the market the more the market tips to you. So, I think of this in search, if you have got a search engine and it gets a little bit good like Google did, the more people who use the search engine, the better data you get on those people, so you can create even better algorithms and the better the algorithm is, the more people want to use the search engine.

So, it's a chicken and egg effect which makes it very hard for a new search even like Bing which has Microsoft behind it, to make many inroads into that. If you think about social media platforms, we want to be on the same social media platform as our friends and our family, so the more people that use the social media platform then more people join them, the more people who join them, the more attractive it becomes. That competition for eyeballs can be monetised aggressively as it is through advertising, it looks like it's free when you use these things but you are selling something and you are selling yourself, you are selling your data.

That is what is the secret sauce in many of these companies, is having access to data which they then use to monetise it. So, that's one aspect

and that's part of the way that technology is developed and those, what my colleague calls it, endogenous costs is the John Sutton term for this but you can see it's this network chicken and egg thing. So, that's one thing, call it the Google story if you like.

The other part of the story and I mean there has to be another part of the story because this type of phenomena isn't there in every industry, like Bart said, is this idea that there has been an increase in fixed costs and this is part of what is the Walmart story or the Tesco story, that if you are grocer, for example, the way that you can make these hundreds or tens of millions of pounds or hundreds of millions of pounds investments in enterprise software which can enable you to track your inventory in your country and around the globe, you can have just in time distribution, you can monitor your inventory on the shelf.

This enables you to sell goods and offer things to consumers that a small mom and pop store independent chain has no hope of doing. So, that software advantage and that's one example of intangible capital that you mentioned, Rebecca, the adoption of that gives a big advantage to some large firms. So, I think those two types of logical changes are part of what's happening and part of what is giving these advances to very large firms. There are others, that you mentioned, globalisation that also has a winner takes all effect.

So, those are all things which are the way that the nature of technology and markets may have changed. The more worrying thing is, is this fact that some of the advantages large firms are getting are due to some of the actions which may actually undermine the ability of rivals to compete in the market place. So, let's say one point that Javier said on patenting, so you might say, look at these big firms, they are powerful and very innovative, they have lots of patents, that's great and part of that is good.

But if what they're doing is using their intellectual property to make it hard for other firms to copy them, so Bart, you were talking about confusion, that's the copying of the technologies of the leaders. If you have very strong intellectual property protection and you have a very strong legal department, that's another big fix cost, you can make it very hard for other firms to imitate what you are doing.

So, that control of intellectual property could be one of the factors which makes it harder for other firms to catch up. So, could be thinking about AI, so if you can hoover up all the best AI engineers in the world, it makes it very hard for other firms to compete and catch up with you because the top people are all being caught up in other firms. Even let's say a firm does start looking good, it starts becoming a rival, maybe you buy that firm up.

So, maybe you just acquire that firm and if you go back twenty years and talk to many start-ups, the venture capitalists would be saying, okay, there

are these two exit strategies, one strategy is become an IPO, become the next Facebook or Google or so on. The other exit strategy is to be brought up by a superstar firm and these days, if you talk to venture capitalists, the exit strategies are all to be bought up.

There is much less of a desire to be an IPO, that you are trying to sell yourself, you're aiming to sell yourself to a bigger firm. Maybe that's not all bad because it gives you some incentive, on the other hand, my view is that many of these companies who have been bought up, could have become independent companies which would both have created more competition and therefore being better for consumers and put pressure on the leaders. It may actually have created more efficiency, so if you are doing it yourself, there is often more incentives to innovate than it is if you are being part of the bigger bureaucracy.

I remember talking to one Silicon Valley executive when we were over, as part of the MIT delegation and just bought up this new AI start-up in Silicon Valley and he was saying, what's happened to this company, we bought them six months ago and I haven't seen the CEO of the company, he was meant to be working for us and his deputy said, oh I'm sorry but the guy just called in rich. He meant by that, that once this guy has been bought up by this big company, there just wasn't so much incentive anymore to create the new innovation to have his or her name on that company.

So, I do think there is a worry about this lack of dynamism because we have less of this, the start-ups wanting to become the next superstar and more wanting just to be bought up by the superstar. In fact, the worse thing of course, is that superstar buys you up and kills your technology off, that's another thing which also happens, the so-called killer acquisitions that sometimes just kill the innovation off.

BvA: We have already covered a lot of stuff, inequality in productivity between someone who is a very high concentration with these superstar firms that we talked about a lot. There are some good things to that but there are also some worrying reasons that the superstar firms themselves are slowing down and the transmission of their productivity gains in the rest of the economy doesn't really happen and as a result, we don't have these reallocations that we need in order to create a productivity economy.

So, we're going to pick up some of that after the break, we're going to talk a little bit more about differences between countries because not everywhere is the same and we also need to talk a little bit about how does business and policy have to respond in order to create this more dynamic economy. But before we do that, let's first hear about what else is happening at The Productivity Institute.

[Advert] The Productivity Institute is a UK-wide research organisation that is dedicated to understanding and improving productivity. Research covers a

wide range of topics including business investment and innovation, skills and further education, foreign direct investment and trade and the transition to net zero. The institute also provides detailed analysis of productivity in the English region, Scotland, Wales and Northern Ireland. Visit www.productivity.ac.uk to access The Productivity Institute's resources including research papers, blog posts, insights and regional productivity score cards.

BvA: Welcome back to Productivity Puzzles, in the first episode of three on productivity in firms and here we speak with Javier Miranda and John Van Reenen and with the very able support from my TPI colleague, Rebecca Riley. So, Rebecca, there was a lot covered already in this first segment but I think there are still a few issues we need to go through, one is that I'm interested, we talked a bit about the US but that seems very different from some of the European countries or the UK.

So, I would like to understand some of the differences between countries but I would also like to talk a little bit about causality and correlation, I mentioned this earlier, it seems that slower business dynamism that we described and slower productivity are correlated but obviously the causation might very well go in two different ways. Maybe we can chat a little bit with that, with John and Javier in this next segment.

RR: So, so far what we've heard is that it sounds like there are some very generic cross-country explanations for some of the patterns that we're seeing, so changes in technology, driving the different business models and creating new business demography. So, in some respects, these look like things we're seeing in the UK and elsewhere and indeed, Javier has shown that there is many commonalities in what we have seen in terms of business dynamism and John, you as well, in the UK as in other countries.

At the same time, I mean are there any differences in the UK, I mean we know for example, that the productivity slowdown in the UK, for the last ten or fifteen years or so has been maybe a bit on the less positive side than many other countries. So, where would the UK stick out in terms of these patterns?

JM: There is a lot of commonalities across all developed economies, whether in Europe or the US, I've not looked at Asia but surely, we are still seeing this tend decline, this common patterns across the board. We see a lot more reallocation in general in the US and I think that's related to the framework conditions in the US verses Europe. One of the things that we haven't talked about might be important, certainly in the US is those frictions, those adjustment costs related to hiring and firing. So, those things, those are big differences between Europe and the US and in that sense, I think the UK is a little bit more similar to the US than it is to Germany, let's say, or France or Spain where there is just tremendous amounts of hiring and firing regulation.

JvR: So, I'm always surprised whenever I look at work on dynamic reallocation, that given all the hiring and firing costs and everything, you actually see quite a lot of reallocations happening in countries where you think, like France or Italy, where you think these frictions would stop you from doing that. I agree they're greater in the US but you do see a lot of churn and dynamism, even in countries you might think, these are hopeless, hopelessly scholastic countries.

JM: You do seem more differences in reallocation, right and given your level of how close you are to the technology frontier, even within Europe, there is quite a bit of difference between Eastern Europe and Western Europe, between Northern and Europe and the South, there is quite a bit of difference, theory would suggest that a little bit of a catch-up process, the further away you are, the more opportunities to introduce these new technologies that are all around. You see more opportunities for reallocation, countries that are further away from the technology frontier should be catching up by introducing technologies, importing technologies, buying technologies from these more advanced countries and firms.

So, if you adopt these technologies, you should be able to grow and displace other companies that are not adopting these technologies. We've looked at these things and indeed, we see that countries like France and Spain that have a lot of frictions, a thick regulatory environment indeed display, given their GDP level. They display reallocation levels that are quite muted and indeed they are displaying less GPD growth.

JvR: I mean going back to Rebecca's question on one of the things which is very striking, as she said, about the UK relative to other countries is that although since the global financial crisis, almost all countries have had some slowdown in productivity growth, so GDP per outwork. The UK stands out as having had a particularly bad slowdown and if you think about where productivity growth comes from, then traditionally, we think, well there is slowdown on the frontier and we see this that the US has showed down and maybe that is one of the reasons that the UK has slowed down as well, is a global type of slowdown of growth, that's true.

But the second thing is just that the input may have slowed down, so investment has been slower and capital accumulation has been slower in the UK. Then the third element is this, whether the residual, what is sometimes called total factor of productivity, whether that has also slowed down and how much of that is to do with these forces of reallocation.

I don't think people have fully understood this yet and I think there is a sense in which those trends have gone hand-in-hand but how much of the slowdown is due to reallocation verses other factors, I think is not one. I think there certainly seems to be a connection but the magnitude of that connection, I think is still something we don't really fully understand.

BvA: But one thing I picked up from your paper, Javier, was that when productivity shocks happen or big innovations happen, that the dispersion of these innovations has slowed down. You do identify that in the UK, this has been particularly strong, so it goes a little bit to a lot of points that John is making and that we are documenting in The Productivity Institute and in POID and in all the work that has been done in the UK.

It seems to be reflected in the micro-data that we get a good innovation or invention; we just don't disperse it as well for the economy and therefore we don't get this productivity increase. That is something that is clearly seems to come out of your data, I think you make the specific observation on that as well?

JM: Yes, so we see the UK displaying declines in responsiveness, so business research is not responding to their environment as much as they used to and there is also increased dispersion. So, there is an increasing gap between those at the top and those at the bottom, part of this is reflected again by some of what John was mentioning earlier, we see very sharp declines in high growth firm activity. So, the share of activity that is accounted for by young firms that are high growth is going down quite rapidly.

So, all to say there are fewer start-ups and fewer of them get to grow fast, what does that mean? There is not as many people that are employed in these types of businesses, if you compute this metric, the share of activity that is accounted by innovative high growth firms, this is going down very rapidly, which tells you something about the ability of these new innovative firms to scale up and gain market.

JvR: When we economists talk about churn and creative destruction and reallocation, we all think it's a positive thing, you are moving things away from less productive to more productive firms but there is an implicit assumption there which we often don't state which is the assumption that that process happens without those resources being unemployed. So, if what happens is that when you get a shock and a lot of people leave an unproductive firm and we hope they join a more productive firm, that's great. But what happens if those people leave a job and they actually stay unemployed or they leave the labour force because they become sick or they go on disability leave.

BvA: With the rising inactivity rates in the UK, it seems to very visible, right?

JvR: Well, that's certainly something which has happened in the UK recently after COVID and the broad point is that what you want is an economy which is good at reallocating people, the resources from one place to another. If what happens is, that many of those resources just are not employed, that's

a really bad thing for both the economy and obviously for the people themselves, suffering not being able to get a job.

That complicates all these things that we're talking about, so one of the things over the long-run, over the last fifteen years in the UK, for example, is that the employment rate, until COVID, was actually relatively high compared to many other countries, so thinking about France or Spain. So, the unemployment rate was a lot lower, there were a lot more people in jobs. Broadly, that's a good thing but of course, when you are comparing across countries, that flatters the productivity position of other countries like France or Spain where the unemployment rate is much higher.

That also has implications if you think of this, then maybe you have a long tail of unproductive firms and people. But if the alternative was not having those people employed or having those resources not used, that makes these cross-country comparisons particularly hard to do because you've got this selection effect complicating the overall picture. So, I do think when we're making these comparisons, I mean always we should remind ourselves, the economists, that reallocation can be a very painful process and I think we've underestimated that in these professions. The forces of globalisation have left lots of people out of the labour force and suffering.

RR: From what we've just been talking about, it sounds like, well I'm going to say, it's not clear from the data that the UK is an outlier in terms of trends in business dynamism and productivity growth has been or has slowed down, maybe a little bit more than in some other countries, although as John points out, these cross-country comparisons are rot with difficulty and one should probably look at a broader set of metrics when making those comparisons.

So, I guess the big question that remains really is, we talked about, Bart, at the beginning, how much churn is good and my answer to that was, well churn that leads to growth is good. So, I guess the question that remains is, is the right policy response to resolve some of these issues around business dynamism, will that lead to stronger productivity growth or is what we're seeing just part of a bigger picture and really to improve living standards, we need to look at other policy issues.

JM: I mean how much churn is good and is there a happy equilibrium here, this is a really hard question to answer, thinking about this is important and is there too much turbulence sometimes and can this be negative. So, I think this is important when we think about young businesses, right and particularly new innovative businesses. These businesses and John mentioned the importance of it in tangibles, this is increasingly important as we all know, these are forms of capital that are not physical.

They are very hard to collateralise, so financial frictions and frictions in financial markets in this regard is important and increasingly so, for young

businesses and even more so for young innovative businesses that need lots of large initial investments to develop technology products, before they even reap the benefits. So, I think in this regard, it's important to recognise that these businesses are particularly vulnerable and face particular challenges and faced with shocks, these businesses are extremely vulnerable.

So, access to finance for these types of innovative young businesses is something that is important and that we might want to think a little bit about. There is plenty of programmes in the US, policy programmes that recognise this, that turbulence for these businesses is potentially very, very bad. So, the small business innovation research programme, the small business technology transfer programme, the SPS small business loans programmes, all these programmes recognise that young businesses are particularly vulnerable and in the face of turbulence, they might need support.

JvR: I agree, Rebecca, that churn itself is not a good thing or a bad thing, the question is, do you want to have churn which relates to higher growth fundamentally because that's what drives higher living standards for people. So, I think the broad conception we should have been thinking about things and policies which help create more growth and I do think one of the areas around creating more growth is, the ability to move resources around the economy in a more flexible way.

So, I think in that sense, you want to think about policies which support business people and workers to be able to move more easily, to expand more easily into markets and move more easily between firms and don't have policies or have too many policies which slow that process down or keep many inefficient, unproductive firms on artificial life support policies at the expense of younger firms and new firms and growing firms.

So, for example, when we think about policies towards helping people and industries, which are declining industries who have had negative shocks, we should be thinking, not just trying to protect the existing jobs but trying to give people skills to move to new jobs, new parts of the economy, to create what the Danish call flexicute security systems where you have generous unemployment benefits but part of those unemployment benefits are active labour market policy to help move people into these new industries.

We have to worry about, we did a lot of protection for firms during the COVID period but we have to now allow some of those firms to shrink and exit and the new firms to grow. So, I think those are important competition policy, I think is also very important in this regard. I do think that we need to worry about the power of some of these very large firms and we should allow a greater ability of other firms to compete.

So, for example, we have to think about data-sharing agreements to allow greater interoperability for data which is the source of the power of any of these businesses. We have to make competition more future-looking, rather than backward looking. So increasingly, in our modern economy, when firms merge, what matters is not the current market shares, if you think about Facebook and Instagram, Instagram has a tiny market share when Facebook took it over but it could have become potentially a platform which competed directly with Facebook.

So, I think that we have to have a much more forward-looking type of competition policy focused around innovation and future competition rather than backward looking and looking at current market shares. So, I think that's a broad example about creating equality of opportunity whether it's for firms or whether it's for individuals.

JM: I think in this regard, I think it's important to think about policies that equalise the playing field between superstar firms and these younger, smaller businesses that are trying to catch up. We talked a lot about patent tickets, we talked a lot about the development of patents incremental innovations that we call that are not particularly radical. So, policies that encourage forms of more research and less patent development. So, what do I mean by that, more fundamental research of the type that young firms are particularly good at.

We know young firms are particularly innovative in this regard, is important when we think about R&D, we might want to think about subsidising R&D, particularly for research, more research, particularly for this young firms and less development and less incremental innovations.

BvA: I wish we had another hour for this podcast because I would have loved to talk about this large group of firms that are not superstar firms but are still not young innovative firms but where lots of people are being employed, an indication in the UK where you see a lot of slowdown there but that's for another discussion. So, I'm sure we will get to that as well but look, this is an extremely complex topic but it's clear that the declining business dynamism and slow productivity growth go together and we need to think about ways that we can get this business dynamism go up again.

There has been some suggestions from both of you on this, we will pick that up with policy-makers and business leaders in follow-up podcasts so we'll get a little bit more granularity even around these kinds of thoughts and ideas. But this was a really good start to get going. Rebecca, thank you for helping to guide us through this discussion which is complicated enough and John and Javier, thank you for all your thoughts and insights [music].

Our next episode of Productivity Puzzles will continue on the topic of firm productivity and look more at it through the policy lens. I will be joined by

my TPI colleague, Stephen Roper, from the Enterprise Research Centre at Warwick Business School. I will speak with some policy-makers about key policy areas such as business support, skills and training but also competition and fiscal policy.

So, join us for the second episode of our trilogy on firms to be released next month. You can sign up for the entire Productivity Puzzle series through your favourite platform to make sure you also don't miss any future episodes. If you would like to find out more about upcoming shows or any other work by The Productivity Institute, please visit our website at productivity.ac.uk or follow us on Twitter and Linked In.

Productivity Puzzles was brought to you by The Productivity Institute and this was me again, Bart van Ark, of The Productivity Institute, thanks for listening and stay productive [music].

End of transcript