

General Discussion: Increasing Differences Between Firms: Market Power and the Macroeconomy

Chair: Kristin J. Forbes

Mr. Feldstein: This was very interesting material for somebody who doesn't think normally about these micro industrial questions. But I'm struck by Chart 8 on the U.S. labor share in which there's been a dramatic decline from the early days to more recent, but it seems to have happened almost exclusively after 2002. What happened in this last 15-year period that brought about this sharp decline in the U.S. labor share?

Mr. Haltiwanger: This is a really nice paper and a great discussion. What's especially nice is it tried to bring all the facts together. I think there still are some missing pieces of facts that you need to add, and I think you could make us even more puzzled. One missing piece, and it is an important component for those of us who have been studying this declining dynamism, is the declining responsiveness. That is, what we find is, as you noted, rising productivity dispersion across businesses, but interestingly what we're finding is that businesses with high realizations of productivity are actually less likely to grow, particularly in the post-2000 period, and also low productivity businesses are actually less likely to contract and exit. So the relationship between growth and survival and productivity realization has diminished. That's hard to reconcile with the more optimistic views you've expressed.

Second, I want to add to, and I think this is related to multiple papers here today, the great skepticism about whether the so-called markups of De Loecker and Eeckhout are markups. What's the problem? John Van Reenen hinted at this, and indeed I actually think your paper provides—and I think you should push it in this direction—part of the reason we should be so skeptical about using this methodology. As you noted, what you need to do, even if you use the more sophisticated De Loecker and Eeckhout method, is a stable production technology. And indeed what we often do is we assume that all firms in the same industry had the same production technology. Now they had different productivity and different management practices, but the same production technology. I think you're all about the fact that the firms are actually quite different production technologies and there's enormous reallocation away from some kind of production technologies to others. I think it might be that what we're picking up here is changing production technologies and not changing markups.

Third, I want to emphasize that we really need to do the kind of detailed industry studies that Valerie Ramey talked about. I looked at concentration rates and detailed industries in the sector where you thought it would be moving the most, the information sector. Five of the 11 four-digit industries in the information sector actually had declining concentration post-2000, not rising. Again that raises questions about what's going on.

Mr. De Gregorio: I like this paper a lot. It's very persuasive your story that increased concentration is the result of this winner takes all competition and technology globalization. And this is extremely beneficial for consumers. However, my concern is how do you see this will evolve in the future? What we may face in the future would be very high concentration with high barriers to entry, highly concentrated markets, and this may result in increased monopoly power hurting consumers.

Mr. Signorini: First, a great paper. As you rightly say, even if one believes the optimistic story 100 percent, this does not mean there are no issues for regulation or public policy. Let me point to two on which I would like you to expand. The first is similar to the one

that has just been mentioned. Even if the increasing concentration is all due to superstars, more productive firms increasing their market share, the fact remains that ultimately this might lead to a situation of monopoly, especially considering network effects, a kind of new-style natural monopolies. Examples spring easily to mind of the possibility of this coming true. Could you say a bit more about what your idea is of what public policy might do to enhance competition for the markets or across markets when competition in the market becomes less relevant.

The second point is that the distributional effects of a superstar economy may go beyond labor share and concerns inequality more generally, including inequality in labor incomes. And of course, there's an issue about the 1 percent, or the 1 percent of the 1 percent. But, as you point out, there is an issue of labor incomes in superstar firms more generally. The issue of a potential trade-off between efficiency and equality is hardly new. But how would you frame it in the context of a superstar, winner-takes-all, global economy?

Mr. Mooslechner: From my point of view, this is really a very important and interesting paper on a fascinating topic. Two short questions: In parallel to the developments you have described so well, what we are seeing on a macroeconomic level in most advanced countries is that the corporate sector overall has shifted from the traditional net investing position to a net savings sector, showing a permanent financial surplus in the financial accounts. Is there any evidence that the existence and growth of superstar firms has contributed to this development?

Second, the existence of superstar firms is not evenly distributed globally, far from that. Under these conditions, isn't it surprising that we do see the economic effects of the superstar firms then almost everywhere, say in small European countries as well as the United States?

Mr. Shapiro: I'm a guest from the land of antitrust. I want to pile on with what John and Valerie have said and commend the paper. I think it's an important antidote to a lot of what you might have read about increasing concentration being very worrisome in terms of monopolies. First, the concentration increase is actually very modest. If the four-firm concentration ratio goes up from 30 to 35 percent

you start to think about what that means. That's nowhere near a monopoly. Second, the superstar story John developed is well supported in the evidence. In antitrust, we tend to think about the competitive process, and if that process leads to some larger firms having large market shares, due to scale economies or firm heterogeneity, that's not an antitrust problem. To the contrary, that is welcome, although it has other implications we need to deal with, such as the need for tighter merger control. We saw this same pattern 100 years ago when national firms sprung up. There is one puzzle Valerie touched upon, the substantial rise in corporate profits and persistence of profits, which I'm sure has implications for macro policy. It's also a bit of a puzzle for us working in industrial organization and antitrust. Why isn't entry eroding those high profits? Whether the answer is barriers to entry, declining dynamism, or the presence of very efficient "superstar" firms, I don't know. But I would also focus attention on the persistence and concentration of corporate profits.

Mr. Hubbard: I wanted to follow up on Carl Shapiro's line about skepticism here. The traditional analysis of monopoly from an era that had much less competition, analysis going back to Harberger, concluded there was a very small welfare cost a monopoly. Now, the current re-inspection of that result emphasizes intangibles. That leads me to two questions and points. First, on antitrust. I'm not so worried that large and tangible investments have led to platform success and superstars because first, others have tried to sink costs to develop the same intangibles and lost, and we have seen a dynamic competition, where one platform supersedes another. There could be monopoly profits for a period of time, but one should not be overly worried about those profits. The one area for intangibles that might be more worrisome is brands or intellectual property, but I think of that concern as having to do more with pharmaceutical innovation than the technology sector.

Second, regarding monetary policy, I agree that the discussion in the paper is not probably a first-order concern, although it is very interesting. The area in which it might be related is in transmission mechanism. Intangibles tend to have very high implied depreciation

rates. In terms of a usual Jorgensonian user cost, one would expect less sensitivity to monetary policy actions in such a sector.

Mr. Van Reenen: Marty Feldstein, your question was on the time series of the labor share and whether it was all in the 2000s? The fall does seem to speed up a bit in the 2000s in this series, but there are different ways of measuring the labor share and they show slightly different paths. I think we do generally see some change since the early 1980s. There was a period in the late 1990s, which was discussed in the previous presentation, which actually offset that. You can say the roaring '90s, as Alan Krueger has mentioned. One hypothesis we considered, was whether in the 2000s Chinese competition was driving things, because this is when China joined the WTO. When you dig into it, it's not really driven by China. I agree with you, it's interesting that this process seems to definitely speed up in the 2000s.

John Haltiwanger had a series of important questions, and I should mention that he and Steve Davis have been pioneers in emphasizing the importance of reallocation here. One reason for the declining responsiveness—the fact that firm employment growth is less responsive to TFP shocks in the past—could be related to the increase of markups I have documented. And it relates to what Glenn Hubbard said at the end. If you think if there are higher markups when there is a fall in cost due to a TFP shock or indeed due to the cost of capital, firms will take some of that in terms of higher profits, this could mean that they become less responsive to those different shocks. So this means that firms may be less responsive to changes in Central Bank's influence on interest rates, which is worrying. Now that's a kind of partial equilibrium type of effect, and maybe in general equilibrium that could be offset. But the partial equilibrium response for higher markups may mean there's less responsiveness to different shocks and that is an important possible explanation for some of the things John and others have documented.

I agree with the comments of the difficulty of measuring markups. That's why in the first version of our paper on the labor share, we didn't try to do it, but now, partially stimulated by comments and discussion we have done more on this. Despite all the difficulties in

measuring markups, my reading is that looking at this in many different ways, whether it's the labor share, whether it's the production function estimation or just looking at accounting profits we do see higher aggregate markups. The important thing, and this is something we've all been stressing, is that again, most of this, like the labor share, is coming from reallocation rather than the general increase of markups. In other words, there has been a shift in market share towards superstar firms who have always had much higher markups than other firms.

There are a lot of questions about competition and antitrust policy and how we should think about it. My sense, and Carl and others mentioned this, is that when we think about antitrust policy, we should be thinking very much about the competitive process and whether it's possible for new entrants and new competitors to challenge the position of superstar firms. That, I think, is the kind of critical thing we should be looking at. I guess the concern is that a lot of the way antitrust policy operates in practice is to focus too much on the current state of competition. So, for example, if we think about merger policy, what typically happens in high tech is that there are many very large tech firms who take over small new entrants. And from a position of current competition, that looks like no problem because these small firms have very low market shares. They didn't look like a current competitive threat. But it's possible that some of these startups, were they allowed to remain standalone firms, could have become threats to the platform of the dominant firm. For example, if you think about the Facebook/WhatsApp merger or the Facebook/Instagram merger—none of which I was personally involved with so I have no dog in this fight—the concern there is that maybe some of these startups could have become competitors to the platforms of Facebook in the future. So that's my kind of concern. You know, when we think about antitrust, the burden of proof is often very strongly on regulators and the antitrust authorities to really prove there may be no threats to competition in the future. And like Jean Tirole, who writes about this in his new book, I think the burden of proof should be shifted a bit more on to firms themselves to say, you know, what are the great benefits of this merge vs. the risk to softening future competition. So that's the practical competition

policy thing I think I would look more carefully about in terms of the burden of proof.

Finally, on the inequality issue, of course if the labor share is falling, and the share of profit in capital is rising, this in terms of overall income inequality is going to be a force for increased inequality because most lower-income and middle-class people rely on the earnings in the labor market to get their income. If more and more of the economy is going toward capital income, this will be a force for increasing overall household income inequality as the rich have a much greater share of their income in the form of capital as Thomas Piketty and others have pointed out.

I think the other aspect of where this links with inequality is by looking at which firms people work for. A dramatic fact which has emerged from this new paper by Song and co-authors, is that just about all of the increase of wage inequality between individuals is not to do with the differences of inequality within firms; it's all between firms. So increasingly people have been sorted into two types of firms. You can think of this as kind of McKinsey versus McDonald's with skilled workers working together and unskilled workers working together. So this growth of superstar firms where people are generally paid quite well has been, at least in an accounting sense, a force for increased inequality between individual workers' wages. And that may have implications of how we think about inequality developing over time.

Ms. Boone: It's a really great paper. We're obviously very grateful that you are highlighting the OECD work in such an extensive way. I have comments and questions to make which is linking your work with our aggregate view. First, Valerie mentioned the reallocation of capital to a high productivity firm: when we look at the firm level, it is not so much reallocation of capital that dominates but rather the entry of new firms who are very productive with high markup, but a lower labor share. In addition, as there is not enough competition, these firms are not displacing the less productive firm, so that at the aggregate level these new very productive firm do not manage to boost the overall productivity level.

The second point is that the labor share does not decline uniformly across OECD countries. In particular, where you look at some European countries like France or Italy, the labor share has not declined and in some cases has even expanded. And when we link that to the fact that it's also the country where you see the lesser number of very productive firms with high markups and extensive use of technology, this suggests that the adoption and diffusion of technology may be more restrained than it was in the earlier stage of ICT.

And that's my third point: where we have highlighted at the OECD the wide divergence between super star firms, very productive and at the efficiency frontier in the ICT sector. But we also see a large gap between the ICT sector and other sectors, which may be due to the complementarity between technology and intangible capital, and in a way you alluded to that at the beginning of your presentation when showing the diversity of management skills, organization, and I think also high-tech skills. And again, we will see less of those in those countries where the labor share has not declined so much and productivity is low, which is also highlighting the lack of diffusion of new technology across sectors.

And one last point about discussing concentration. I was surprised that there was no discussion about the usage of consumer data. I know it's a very sensitive topic, but a lot of the concentration in the market come from the access to data which is also something that is dividing the United States and sometimes Europe. And just lastly, research from the OECD looked not only at markup but also at a wider variety of measure of concentration and all of them go in the same direction, even if we do not like markup as a measure of concentration.

Mr. Blinder: In addition to adding my compliments to the two presentations, I want to note that nothing suggested that these are transitory phenomenon that are about to disappear, but rather long-lasting things. And that prompts two questions. First, what happened to the idea that ICT would make comparison shopping vastly easier and therefore squeeze markups? We're going to have a paper on the Amazon effect later, but I'm experiencing cognitive dissonance on those two thoughts.

And second, if I may paraphrase Irving Fisher, if indeed profit margins are permanently higher, does that mean stock prices are now on a permanently higher plateau?

Mr. Costa: I want to link some of the points made by Professor Van Reenen. Before that, I would like to underline the importance of the seminal work done by you and Professor Boone and others. Some comments: First, we need to put together quality of management, capacity of companies to generate radical innovation and/or capacity to integrate radical innovation. Secondly, we need to acknowledge that radical innovation creates competitive advantages and necessarily generates imperfect competition. Thirdly, new technologies require scale, which in turn implies a certain level of concentration. Concentration needs to be seen in terms of the relevant market. Market power as a way of guaranteeing survival is not only the result of market share or scale but depends also on contestability by new actors. The latter depends on innovation and incorporation of knowledge by other economic agents. It means that we need to know if the public policies favor contestability—which depends on the efficiency and openness of the national innovation system—to better understand if we can stimulate competition and radical innovation. Therefore, I think that it would be very interesting to establish a link between the seminal work about quality of management, integration of radical innovation and Professor Mariana Mazzucato's thinking on public action on promotion of an efficient and open innovation system as a public good.

Mr. Cavallo: Great paper and discussion. I want to build on one of Laurence Boone's comments about the data, and the importance that it seems to have in the concentration and power of these firms. For many of the areas where you mentioned that these large firms have an advantage in, such as better use of IT and management practices, the ability to replicated them depends on the availability of data. Sure, you can copy an algorithm, but without the right data you can do basically nothing with it. So I wonder whether you think in different industries, the move toward more data-intensive technologies is giving these firms an advantage and whether regulation at all should have a role in that process.

Mr. Bajari: Let me offer a little perspective from inside of industry. It feels like in the last five years one of the things that's really changed about technology is how focused it's been on data with the rise of machine learning and artificial intelligence. These things are very, very early in their diffusion and adoption cycle. So looking backward may not be the best indication of where it's going. When I think about what these technologies actually do, one of their first-order effects, is they make decision making more rational inside the company. You're applying the scientific method more systematically, and some basic economic reasoning says that should be a plus for productivity and allocative efficiency over the long run. From a competition viewpoint, a lot of what's happening is so-called technology firms are diffusing this through cloud computing. We're taking the stuff we do internally and making it available at a very cheap rate. And I have a hunch, I could be wrong, that when we write the history of this era that the benefits of these technologies to the broader economy may be the highest where decision making is the current the worst and allocative efficiency is the poorest, e.g. industries such as ag, construction or transportation.

Mr. Van Reenen: These are great, challenging and interesting questions. Alberto Cavallo, Pat Bajari and Ms. Boone all talked about this issue of data and access to data and the importance that has for superstar firms. It's very clear that it is important when you think about Google and search. One of the advantages Google has is the more people who search, the more data you get on people; the more data you get on people, the more effective search engine you have. That kind of feedback loop is very important for its success and this is true of many other digital platform companies like Amazon and Microsoft. I think access to data is a very important part of this. And I do think both from a privacy and an antitrust point of view, ways in which we can enable that data to become more accessible to other firms and people is a way of creating greater contestability of markets. I don't know institutionally what is the best way to do that, but I do think some of the policy innovations in Europe in terms of people controlling access to data are, in my view, positive things.

I also think there should be ways in which we improve the access to data, especially for startups, as a way of enabling competition for the markets to continue taking place. My view is that, as Pat said, many of these innovations of artificial intelligence and machine learning are going to be beneficial things for productivity. We're only seeing the start of this. I think the jury is still out on whether they will fundamentally shift the dial on macro productivity growth. My sense, being in MIT, is that they're huge. However, often we think that there's going to be massive productivity increases and these take a long time before we actually observe them because we need to make in firms the organization and managerial changes to make best use of this. This is the lesson from electricity, computers and earlier wave of general purpose technologies. And this actually could take quite a long time before that plays through.

Alan Blinder asks a question related to this, although I will not take up the challenge of predicting stock prices! On the issue on ICT, I do think there is a paradox. People often thought at the beginning of the ICT revolution that this would lead to much greater competition. I think there is some element to that. I think that now there is some areas like hotels, where we compare much more this has fostered price competition. But I also think what's happened is that companies have become very effective at using this information as a method of price discrimination. And I think one of the reasons why profits are so high at many of these firms who are very good at using ICT very well is that they become much more effective at kind of price discrimination between different types of consumers. Think about airline travel as an example, where dynamic pricing is used effectively as a way of increasing profitability. That may not necessarily be a terrible thing of course, and price discrimination has this ambiguous welfare effect. But I think clearly as a positive statement, digital information has fostered greater price discrimination and boosted company profits.

On the question of the data, absolutely. It's very important to look at data and this is very challenging. I think in terms of reallocation we have to think both the entry and exit margin, but also of the reallocation of market shares among incumbents within industries that I think is almost equally important as the entry/exit that I mentioned.

On the labor share stuff, there are somewhat different trends in different countries. The consensus is that as Valerie said on average there's been a general decline in the labor share in many countries since the early 1980s, but this has for sure happened as a different rate in different years when you look across nations. But it has a general phenomenon. You also have to be very careful when looking at the data. In the U.K. where I looked at the data very carefully it initially appeared that the fall in the labor share wasn't at all dramatic. But when I started digging into this—and this is work done by my co-author Brian Bell the way that labor share is measured in the U.K. is compensation share. And compensation includes nonwage benefits, which you might think is fine. But part of nonwage benefits is pensions and many large British companies have huge liabilities to former workers who have already retired that gets counted as current compensation. British Airways, for example, has a huge legacy pension. A lot of the money they make is to pay off those legacy pensions and that gets included in labor share. Now that is clearly not part of the kind of variable cost of production. That's just an accounting convention. When you take that out, labor share has fallen in the U.K. like it has in most other countries. So when you actually probe the data carefully, this kind of fall of the labor share does appear to be a more general thing than just the United States. I don't know about Italy because I don't know the data so well. But I can certainly say the countries I've looked at, when you really push the data, you see that this fall of the labor share looks like a real general phenomenon.

Ms. Ramey: I just wanted to follow up on Alan Blinder's nice questions, particularly the one asking why ICT isn't squeezing markups by facilitating comparison shopping. If you look at the teeny, tiny graphs by industry in De Loecker and Eeckhout, you see their measure of markups has not gone up in retail. And there's a recent paper by Rebelo and Wong that has proprietary retail data that also find basically no secular trend. So ICT might be working for the retail trade. So your intuition might be right there.