

Interview with Dr. Jonathan Haskel, Professor of Economics, Imperial College Business School, co-author of the book *Capitalism Without Capital*

What Does “Capitalism Without Capital” Look Like?

By Japan SPOTLIGHT

We are increasingly seeing a rise in intangible assets and are curious about what the consequences of this will be for capitalism. As the coronavirus pandemic continues and the use of software related to IT rises significantly, its impact could be enormous. To talk about this issue, Japan SPOTLIGHT held an interview with Prof. Jonathan Haskel, who recently co-authored the book *Capitalism Without Capital* on the intangible economy with Dr. Stian Westlake, senior fellow at Nesta, the United Kingdom’s national foundation for innovation.

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The Rise of Intangible Investment

JS: What has changed the nature of investment from the tangible to the intangible these last three or four decades? Is the IT revolution the only reason or are there others?

Haskel: It is a good question to understand why the economy has become intangible and I think there are at least two reasons. One, the rise in information technology is deeply complementary with intangible capital. Complementary is a term in economics which says that if you have inputs used in production like fast computers, they are going to need software and databases and may need the restructuring of businesses in order to become more effective. Two, the nature of business organization, especially in developed countries, has changed. A lot of the production process has been sent offshore, for example from the City of London to East Asia and to closer countries like Eastern Europe. Those companies have become different kinds of companies – they are not really doing manufacturing at home anymore, rather they are organizing and coordinating and managing. That requires a much more intangible group of assets such as the organizational capital, reputation, and all the knowledge that goes into coordinating large supply chains. That change in the nature of businesses has increased the amount of intangible capital that they need.



Dr. Jonathan Haskel

Measuring Intangible Investment

JS: Your book tells us that investment in intangible assets is significantly increasing, and in some developed nations has become key to economic growth. How can we quantitatively compare tangible and intangible investments?

Haskel: Let us start with national accounting. For national accounting, that is compiling GDP, we have got a lot of experience in measuring investment. We survey firms and ask them how much they are investing in plant, equipment, and vehicles. Firms are

used to answering those kinds of questions. More recently, firms are also investing in intangible items such as R&D and software. One way is to ask them the same kind of questions, and many companies can answer these questions. Software, for example, is quite often bought either off-the-shelf, or firms might be renting software services from the cloud, and so on. That is one approach. Where that gets more difficult is that for many intangible assets, especially R&D and market research, these are quite difficult for firms to buy in. They want to do somewhat the opposite, which is to develop them internally so that the secret of R&D or knowledge of the market does not leak out. So, if you take a conventional questionnaire and ask “How much are you spending on buying this in?”, firms don’t know what to do with that. So in terms of how we are going to measure the intangible assets, we have to get a bit cleverer when we ask firms, and that is what statistical agencies do. They ask how much

they are spending on the internal generation of these assets if you have a unit of your firm writing software, for example. We have to ask what costs were incurred in that unit. That is one area around national accounting and GDP, and what statistical agencies are doing is to increasingly move to count these intangible assets.

Regarding company accounting, company accountants are very reluctant to count intangible assets. They dislike putting it on the balance sheet essentially because those internally generated assets are very difficult to measure. It is a situation in which national accounting is going a little bit faster than company accounting and for that reason we think a problem with company accounts is that they are not very informative about a very intangible intensive business because they are limited in the extent to which they count these intangible assets.

Impact on TFP

JS: Turning to total factor productivity (TFP), many people seem to be irritated about its low growth, especially governments, but this should not be the case given the technological advances in software. How can we take account of these intangible assets for TFP?

Haskel: You are absolutely right that the performance of productivity growth and in particular TFP growth has been very disappointing in more or less all countries since the financial crisis. This is a great puzzle because it does seem like we have wonderful new technologies, for example those that help discover a vaccine for coronavirus, which should speed up TFP growth. So there are a number of things going on with the fall in TFP. One possibility is that we are having to do as a society a lot of investment in technologies which have not yet brought about the goods we are hoping for. An obvious example would be driverless cars; lots of companies are spending money on software but so far, at least in the UK, we don't have any driverless cars on the road. The trouble with this hypothesis is the evidence suggests otherwise. There is a lot of spending on software and these other goods, but even if you were to include that spending in various ways into GDP, you still don't get much boost to GDP.

Another hypothesis is that productivity growth has just finished. We were very lucky as a society over the last 200 years; we had an industrial revolution and an information technology revolution but now that's all finished, and we have nothing left. A third hypothesis is around intangible assets and starts with the observation that since

the financial crisis, the pace of investment in intangible assets has slowed down. In the countries where it has slowed down the most, those are the countries that have had the biggest falls in TFP – the UK and Finland are two examples. Maybe what is happening is that with the slowdown in investment in intangible assets, there is less productivity coming, and if that is true it might be quite optimistic for the future because if we can raise investment in intangible assets we would therefore be able to reverse this and restore productivity to higher levels of growth.

Key Characteristics of Intangible Assets

JS: You describe the four key characteristics of intangible assets as sunk cost, spillover, scalable and synergy. How might these characteristics increase uncertainty and conflicts?

Haskel: Intangible assets have got these interesting economic properties. You can scale them up; they can spill over from one firm to another; if you combine them, they are very powerful. They are often sunk costs that are difficult to recover. They also raise a big puzzle – in an intangible economy with lots of spillovers, companies can copy intangible ideas from others. For example, when the iPhone first appeared, within about 18 months every smartphone looked like it. Before the iPhone, smartphones had little keyboards and aerials sticking out and so on but in 18 months that was all finished. This is a clear example of a spillover where an idea can be used by others, the idea being the design in this case, which is an intangible asset. You might conclude from that that intangibles are a great force for equality, because firms can converge in the type of products they offer. On the other hand, what we have seen is a divergence between the performance of the top firms and the lower firms. What is going on here is that the other properties of intangibles are forces for inequality. For example, scale means that if you have a very valuable intangible you can scale up. Apple has a very valuable intangible asset called reputation, so it can scale up and make not only phones but watches and other goods too. Synergies mean that if you combine the intangibles together you are even more productive. Google, for example, has the intangible asset of an enormous database that everybody is searching and they can combine that with maps, to offer programs for navigation, or could offer advertising. So the force of spillovers is a force for equality, while the force of synergies and scale is a force for inequality, and it looks like the force for inequality is winning out at the moment.

All of that combined together means that you get the kind of

conflict referred to in your question. If you have a very unequal distribution of firm performance, those high performing firms probably might be more profitable, probably attract more workers, and probably the types of conditions and economic circumstances involved in those firms are going to be more if you hold stocks and shares in those firms, or if you have a job in those firms. So the conflict might come from the outcome of those very different intangible forces.

JS: Intangible investment would be high risk with high returns, because it has high sunk cost and high scalability. So if you are smart enough, you can earn lots of money, but if you are not smart you would lose money. This could be a source of conflict and uncertainty.

Haskel: I agree, and it makes these kinds of intangibles deeply complementary to talent and skill in the workplace. I mean the kind of talent and skill that can combine those intangibles together. What is interesting is that you can imagine a very talented chemist might have the talent and skill to combine chemistry elements together, gain the synergies, scale up and do very well in the intangible economy. On the other hand, maybe a very talented person who is not a brilliant scientist or mathematician can bring together the designers and scientists and marketing people and succeed greatly in the intangible economy. So the skill to succeed in the intangible economy is the skill that combines those intangible assets together.

JS: Synergy, for example, could create monopolies, as with the GAFA companies.

Haskel: Let us talk about Amazon. One of the great synergies it has is its own platform. It has an enormous database, so if you are a company selling shoes and brown shoes happen to be doing better than black shoes, you know that as a company because you know what your sales are, but so does Amazon because it has that information too. The synergies that Amazon has are that information, and the network of other information and computer programmers, so they can then enter the brown shoes market and grow very big because they have that information combined with the other things they can do. That would appear to be a situation in which Amazon would get a permanent monopoly. In order to do that it might be able to offer them cheaply, or deliver with other items, for example. There are two forces – one force for monopoly because of the synergies, but the other force is that if they can scale up and offer these more

cheaply, that might be beneficial. We don't quite know how this is going to work out. There is some academic research evidence on the Amazon side that it does indeed enter into the markets where it gets the information, but it does offer very cheap prices in those markets where it enters. These different effects would give you more types of monopoly, but it might end up with consumers getting a better deal.

JS: Another possibility might be caused by massive spillover. Would that force firms to strictly protect their patents?

Haskel: That is correct. In all developed countries we have a well-established intellectual property protection system which is controversial in some ways. Everybody accepts that if you are a company and you spend billions developing a vaccine, for example, you need protection from other companies copying that vaccine, otherwise you would not spend billions in advance. On the other hand, we have seen companies using patents in a somewhat strategic fashion, for example taking out lots of patents in technologies that they might not use, making the ownership of patents extremely complicated. That means that other companies that want to either license or use information from those patents to develop other medicines or products might find it very difficult to do so and if they are challenged on a legal point of view, that may take away from the amount of follow-up information. Many people take the view that maybe as a society we might have gone too far in allowing companies to patent in a way that would stop this kind of follow-up innovation. In the book we are cautious about having more patenting, because of that possible bad effect.

Significant Impact on Macroeconomy

JS: The macroeconomic impact of this intangible economy does seem to be enormous, because low investment and low interest rates and low growth rates in the long run could be explained by rising intangible assets. Would you concur with that view?

Haskel: Yes, we think that is part of it. As you observe, one of the great puzzles for current day economics is that investment and demand in economies seem to be extremely low, even though interest rates are very low. Usually when interest rates are low and profits are high and there is lots of technology, you would expect a lot of investment by companies to take advantage of these conditions. The puzzle is that over the last 30 years, interest rates

have been falling and falling with no apparent offsetting rise in investment. We think that part of the answer may be that the change that there has been to a more intangible economy has meant that the investment climate for firms has got riskier.

When we say investment interest rates have gone down, we typically refer to the interest rates on safe assets like government bonds, but the interest rate that companies face has gone up somewhat for reasons we don't quite understand, but it could be partly to do with the more risky type of economy in the intangible assets area and might mean the firms require a higher hurdle rate of return. Therefore, all those safe interest rates have been going down, and investment has not been going down for that reason.

JS: Do you think this issue is known by macroeconomic policy practitioners such as central bankers?

Haskel: Not so much. I think that mostly, central bankers look at the fall in real interest rates over the last 30 years and describe it as being to do with demographics, namely more people coming into the labor market and saving for their future. We think that an additional element is the rise in intangible assets which has raised the risk hurdle that firms have to cross.

JS: During the pandemic, with working from home and IT utilization, the intangible economy has been rising further. Does this mean an economic depression would negatively affect economic growth?

Haskel: A few thoughts on this question. What we have seen especially in developed countries is a gigantic switch to working from home. Before the pandemic in the UK, we had about 12% of the workforce working from home; now we have 30% or possible 35% working from home. How did we achieve such a considerable structural change in the economy? If we go back to industrial times when people mostly worked in factories, if you were to have a third of the factory workforce working at home, they would have had no machines to work with and the output of the economy would collapse. We have not had a total collapse of output and so the transition to working from home has cushioned the economy slightly, and so it is a source of some resilience because some people have been able to leave their factory as it were and carry on working from home. In terms of the role of intangibles, the capital – the machines they work at home on – is not old-fashioned capital like blast furnaces or diggers; they are using their MacBook and their

Internet connection, and the software has to power the connectivity that brings all that capital together. The ability to work from home is deeply connected with the intangible economy. The intangible economy has given us some resilience in the economy and protected us from some of the worst effects of the pandemic.

What does all of this mean in the future? One thing we do know is that productivity growth and innovation and improvement do not drop out of the sky – firms have got to spend money on it and experiment and spend actual resources. The pandemic has helped more people work at home but has been very difficult for firms financially and to plan in the future. The fall in investment would be bad news for productivity and so everything hinges on whether investment goes up and bounces back, and will that burst of intangible investment bring some more productivity growth? We don't know the answer to that yet but the faster we can roll out the vaccine and get back to normal, the faster that would be a possibility.

Income Inequality

JS: On the question of the possible expansion of income inequality due to the expansion of the intangible economy, this inequality will happen not only between companies but also between individuals. That would affect democracy. The intangible economy has a deep impact on the economy but also on politics. Would you agree?

Haskel: I think that is a very interesting point that we don't cover in the book. You are absolutely right that the growth in inequality in the intangible economy might be very considerable. My favorite example coming from Britain is the great British invention that everybody in the world has heard of, namely Harry Potter – and if you ask who has got rich from Harry Potter, the answer is the woman who wrote the book, J. K. Rowling. What asset does she own? She owns a very valuable intangible asset which is the idea behind Harry Potter and the copyright to the books. That asset has been combined with other intangible assets like the software that generates the computer things in the movie, or the design to make a theater performance. It's a sort of case study where the ownership of that asset and the combination of the assets have given you something extremely valuable. That leads you to an unequal world, but it leads you to an unequal world on the basis of an asset that everybody likes in the case of Harry Potter.

The political aspect that follows is that, if we have societies where campaign finance is extremely important, then we have the

possibility that richer people might be able to influence economic policy in a way that might be felt to be undesirable, and this is taken up in Thomas Philippon's book where he argues that the importance of campaign political finance in the United States leaves its anti-trust and other systems very vulnerable to spending by very rich people, and then for putting influence on the law. Part of the difficulty is that the increase in inequality possibly from intangibles – if it breaks down the political consensus around anti-trust and other types of public policy – could be very difficult.

Impact on Other Public Policy Issues

JS: Regarding the intangible economy's impact on a wide range of public policy issues, could education policy or infrastructure provision policy also be affected? How about human resources and business management?

Haskel: There are lots of implications for education and managerial policy also. As part of the intangible revolution, the whole structure of delivering education itself has surely completely changed – the use of online resources. Maybe it is time to change the education business model, if I may call it that, and do something different. There is a wonderful illustration in the front of a very good book by British writer David Willets called *A University Education*, and it is an illustration of a university lecture in Italy in the 16th century. In other words, 500 years ago. It has a lecturer standing at the front and students sitting at the front paying attention and other students sitting at the back fast asleep, having a drink or not paying any attention. We have had exactly the same method of teaching, the same business model for 500 years and so maybe it is time to do something different with teaching and the Internet. That is one thought on how intangibles affect education.

Another thought goes back to what I said earlier on. You might say that from an education policy point of view, what we need to do in an intangible economy is for everybody to become a scientist or a computer programmer. You might say that because perhaps everybody needs to be writing software and discovering new chemical compounds. That is surely what a knowledge economy is about – there is no need for historians and poets because they have no future in this kind of economy. We reject that hypothesis quite strongly. The reason is this. If you have a lot of synergies in the intangible economy, that is to say combinations of intangible assets – going back to Harry Potter, the terrific script and the software and the design – then valuable people in the economy are those who can

combine those synergies together, work with different people and in a team, with human communication and motivation skills. These are going to be very valuable people in the intangible economy so let's not have a complete shift in education policy only to scientists and only to chemists and biologists. Let's have other people as well.

JS: The intangible economy has a wide range of implications for politics, economy, business management, and so on, and your book is invaluable for pointing these out. But maybe the next step would involve specific solutions for the issues arising from the intangible economy. How do you assess your book's contribution to the future of the intangible economy and how would you elaborate on your contribution from now on?

Haskel: Thank you for the question. I would say two things. Firstly, we hope the book has raised a set of questions and helps people to understand an economy that a lot of people find very puzzling. Why it is that Harry Potter is so successful and more traditional companies making cars and steel are not so successful? They don't understand why it is that Apple is so dominant and more traditional companies are not. It is helpful to think about those companies and individuals as having very valuable intangible assets. We hope it contributes to thinking about these kinds of issues.

The second thing is that in terms of understanding what is going on in the future, the biggest issue is if we end up with a very divided society. Then the consensus around the type of economy and democracies that we run in developed economies – open, fairly liberal market economies – may run out. So understanding that kind of conflict is very important. What follows from that is if I had to think of one thing, I just wonder whether something about the financial system is going to be very important in the future. At the moment is very difficult for an intangible intensive company to borrow money and start up. If you are company that has a building, then you can go to the bank and offer the building as security and they will give you a loan. If you are a company and you have an idea for a movie or some software, banks will find it more difficult to lend to those kinds of companies and so we may be holding back those companies from starting up. That passes the advantage to the existing companies and so understanding how we can improve that could turn out to be very important. **JS**

Written with the cooperation of Joel Challender who is a translator, interpreter, researcher and writer specializing in Japanese disaster preparedness.