

Christopher Pissarides: ‘The more I study AI, the more optimistic I get about the labour market’

*The rapid developments in artificial intelligence have been causing fears that many jobs will disappear. But **Christopher Pissarides** sees reason for optimism. In this Q&A with **Maayan Arad**, he says that the need to deal with new technologies will lead to new jobs, with new skills in demand. We can no longer learn a skill early on and apply it to our jobs for the rest of our lives.*

QUESTION: What recent work have you done on labour and the future of work?

I’m doing more and more work on how new technologies are affecting the labour market. Recently the subject has become even more fashionable. In the past we used to talk about technology in a not so big way, until computers came along. But even with computers it was easy to see where it was all leading to. This was in the 1980s. Now we have robotics, automation and especially artificial intelligence creating a lot of uncertainties. At the same time, [these technologies] are changing a lot more things in the labour market. And that’s why the World Economic Forum and many others are calling them the fourth industrial revolution. [AI] has the status of an industrial revolution, like the steam engine had in the first industrial revolution, electricity in the second, computers in the third, and robotics AI in the fourth – although some people would say there isn’t much difference between the third and the fourth. But it definitely has the status of a revolution.

Q: What things have you discovered recently?

It’s very difficult for an economist to say, “I made a new discovery”. We don’t, because our purpose in life is exactly what the LSE motto is, learning the cause of things. Now, if you learn what’s causing certain things in the labour market, it’s not like you made a

discovery in the way a medical scientist or a physicist will do, “I discovered a new planet” kind of thing.

But I like to think that what we are learning and understanding influences human life a lot more than what physicists do when they discover some planet that is thousands of light-years away. I’d say that the more I study artificial intelligence, despite, or maybe because of the wonderful things that it can do, the more optimistic I get about the labour market and about where we’re going. I wish I were young again and starting my career now, with all these new technologies available to me. I would embrace them, make full use of them and progress from there, rather than be fearful of them and think “oh my God, am I going to be left without a job because the machines will be doing all the work that I would be doing?” That will never happen.

Q: How have technological advancements in the past affected the labour market?

You can always find examples in the past that completely revolutionised labour markets. The most recent one is electrification. When electricity came along, it changed the way factories and households worked and opened the floodgates for all those consumer durables that do so much work for us: electric cookers, washing machines, vacuum cleaners, etc. In the early 20th century, say 1910, 1920, we didn’t have any of that. Well-off homes in countries like Britain or America would have four or five domestic workers, one to make clothes, the other to cook, a third one to clean, another one to wash clothes, and so on. Those were professions. You would pay them and that would be their job.

Then between that time and over the next 40 years, almost every home, definitely well-off homes, were full of electric goods. Just think how much work it took in the labour market to produce all those things. It was a period of economic growth. Industrial jobs come along, wonderful times for everyone that will never be repeated. And I think that’s the biggest transformation that took place in the labour market. Before, the manufacturing industry employed maybe 10 or 15 per cent, at most 20 per cent of the labour force. Suddenly, over the next 40 to 50 years, from the end of the First World War to the 1970s and 1980s, it employed 40 per cent of the labour force.

AI is not going to do that. In fact, the fear with AI is that it’s going to go the other way, that employment will go down because machinery will be working on its own. But the transformations that are taking place are arguably of that scale in that we have to learn

new skills, there will be new types of jobs, there will be mainly service jobs because manufacturing can be automated more easily. When it comes down to it, we're not going to produce as many manufacturing goods as we produced when electricity came along.

Although I do think that there is scope to have another brief period of extreme boom in manufacturing associated with climate change, with the change from fossil fuels to electrification based on sustainable energy sources. A lot more jobs will be required to produce all those turbines and change the electricity grid, close down petrol stations and open electric charging stations. I hope we can do it. It will be a wonderful time for the economists, at least, to see, but of course, even more wonderful for the environment, saving the planet.

Q: Do you think that every time there's a major transformation people worry about their jobs and career prospects, or is this something unique to the current situation?

People are always worried about their jobs. A famous example is the Luddites. Although I should say, what the Luddites were worried about, more than losing their jobs, was that they were not getting paid well enough, because attention was focused elsewhere, and the other workers were getting paid more than the craftsmen of the First Industrial Revolution. But people are always worried about their jobs. What they really want is to learn a skill early on in life and then be able to apply that same skill to their job for the rest of their lives.

But when you reach the grand old age of 65 or whatever, and you look back, you see that you never spend your entire life applying the same skill. You're always learning. And the more open you are to learning, the happier and more useful you will be. But before you experience it, you're always worried about it. And that's what we are seeing now as well. But I think that is completely unjustified, all this concern.

Q: What is different about AI this year that everybody is talking about it?

The reason is that artificial intelligence can process data much faster and much better than any human being could with the old-style machinery that we had. They can do things that humans wouldn't be able to do on their own. And they can work out new pathways to follow in the economy that would be new to human beings. Now, the examples that people use sometimes to show how we might lose control of something

are things like playing chess, where a computer with AI will beat you now. I don't think those are good examples. Those are examples where there's a certain fixed rule that they follow, and they can work out more combinations than a human being can.

What's more worrying, in a way, is that we don't know where AI is taking us. Because if you read those who know the technology of AI, they will describe the things they do, which are almost impossible to comprehend because they're so complicated, with deep learning, machine learning, communication between the machines and so on. What people miss, though, and that's where they need the economist, is that we don't necessarily have to take on AI and do all the things that it is capable of doing. What we are going to do with AI is our decision, and companies will take these technologies on only if they improve their performance. If what the company wants is profit, it will take them on only if it's profitable. If it's more enlightenment that they want, and also to look after their employees and customers and consider them as stakeholders, then they're going to take on the machine with AI only if it can collaborate with the workers and others. They would take them on in a complementary way. The big difference that we have with AI compared with previous technologies is that it is opening up much bigger, much richer possibilities than before.

Q: How is the introduction of AI affecting jobs already?

So far it hasn't been affecting them very much because there's been a limited application of AI to work so far. The applications that we are seeing now are very small. They're not ones that will change completely the structure of jobs. Now if you ask company directors, they will say, oh yes, we use it. But they use it to a very small extent, like a bank, for example, which might very quickly find out about you if there are any suspicious circumstances about a large sum of money that you might be moving. They might find out very quickly using what you might call AI in that it analyses data about you from past transactions. But it's not something that is going to fundamentally change the way work has been done. That's coming in the future.

Q: How do you expect AI to impact different kinds of jobs in the future in different sectors?

I think AI will take over jobs that can be programmed, that follow a certain routine, that are based on the analysis of data that we already have. All our information is going to

come from AI. ChatGPT, for example, is already being put into practice as a way of generating information the way that Google was and still is. That's going to be the main impact. And that's why I'm optimistic. The manual work that robots are doing in warehousing or in production lines, those jobs are not particularly satisfying. Those have been taken over. Or the old type of work where you would go through massive volumes of past cases or examples or whatever to discover what information is relevant to what you're doing now, all that has gone and will be gone even more in the future. But it's not going to take over most of the jobs in the service sector that involve personal contact, jobs that require creativity, those will remain in human hands.

Q: Which type of professions do you think will benefit from this the most?

I think all professions would benefit. Take law, for example. The legal assistants who search for information in archives will be gone and now the information will be better, more complete and much faster. And it will help lawyers prepare a case one way or another in a much better way. Hopefully it will improve truthfulness in legal cases. Looking from the outside, we feel that there's a lot of information that is not given or is presented in a biased way in some legal cases. Hopefully that will be gone.

If you look at accountants, AI would be doing your accounting for you. It's already being done to a large extent. In teaching, we use AI a lot. We might start preparing our lecture notes using ChatGPT or other sources from the internet. In the medical profession, it's already helping a lot in diagnosis and various tests that are being done. It's not going to help the underpaid nurses, because there you need the human touch for care and attention to the special needs of every patient. And the last thing you want to do is to send a robot to do that for you. So, I can see benefits throughout the labour market, and I can see the possibility of robotics and AI working together with people. I hope that's how it is going to be.

Q: How will jobs in hospitality be affected?

Hospitality will always depend a lot on labour. But take some activities that labour does now, such as cleaning, delivering things, storing away, all that can be done automatically by machinery. Especially cleaning. Robots will clean the room for you. I've seen robots in hotels do deliveries in the rooms. They manage to open lifts and go up to the floor and stand outside the bedroom door and ring your phone and you open your door expecting

to see a person and you see a little machine standing there with your bottle of water or whatever you ordered. And after you get over the initial shock, you get it, and you press a button that you finished and then it goes off. Those things can be done.

Robots can help to run a hotel. But I don't see the machinery taking over in a big way in restaurants, for example, although there are many restaurants that put a tablet in front of you and you order your food from there. But people are social animals. If we go somewhere for entertainment, we like to have a friendly, warm welcome from someone and be offered a professional human service rather than trying to figure out how to work the machinery or robot to get what we want.

Q: Some jobs will be more affected than others. What impact do you think this will have on inequality and will AI help us have a more equal society?

Unfortunately, AI will not help us have a more equal society. The biggest worsening in inequality came in the eighties with computers. When computers came in, they helped the work of higher income groups, professional groups. They took over jobs from many types of workers who were younger, rising in the labour market, being involved in administration, in filing, data management, those jobs were lost. And many of those workers that were using that type of profession or occupation as a stepping stone to something higher, they've lost that. The middle was hollowed out.

Now with AI, there is fear that the jobs that will be taken over are more concentrated at the lower end of the income distribution. So those wages will either not be there for people to claim or will not rise along with the higher incomes. The worst-case scenario is what's happening in the United States where in recent years almost all gains in productivity at the national level went to the very, very top incomes and everything else has stagnated. That needs very careful planning from the government. It definitely needs state assistance and it's not easy for the government because of the vested interests that you have. There are wealthy groups that vote for them and they don't want to upset them. But when you get a government telling you that we cannot compensate our low-income health and education workers for inflation, because we cannot afford it, it's complete nonsense.

Q: And what could policymakers do to ensure that people who do lose their jobs don't fall behind?

It's not so much that people will lose their jobs that the government should be worried about, but it's whether they voluntarily leave their jobs in the public sector because the public sector cannot compensate them for the cost of living. Now it's essential for any government in an advanced rich country like Britain and the rest of Europe for that matter, that it should provide good quality public services, especially education and health.

Education and health are very similar. They're about the future of society. You need to have a healthy and well-educated society. And if you disillusion those who are providing that service to society because you don't want to upset those high-income groups that voted you in a few years ago, when we didn't know about these current problems, then it's not a society that will grow and provide the wellbeing that we're aiming for. We're not aiming just for a GDP increase on income. We're aiming to provide a society in which people are happy. If governments cannot do it and people leave their jobs, then you're not going to get that good quality service that you deserve.

This interview is transcribed from the LSE IQ Podcast [Is AI coming for our jobs?](#), released 7 September:

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