Cross-Border Coffee Break
The Economic and Business Impacts of Artificial Intelligence: Reality not Hype

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1. **From your research, would you say that the benefits of AI outweigh the shortcomings?**

Yes, we work with all kinds of statistical techniques to be able to predict businesses economic indicators etc., and that's very valuable. The combination of advanced statistical techniques, with all the data that we have available, is really very neat. I have a lot of respect, and a lot of appreciation, for the very fantastic work that researchers have done in creating AI as far as it has gone. It's a very nice technique to have and I think that we need to increase its diffusion through the economy.

2. **What would be the direct impact of AI expansion to business schools, and business education, in general?**

I think AI is part of tools and the techniques for business schools and business education. There are various tools that you can use for decision making, and part of business school education is to help business leaders and entrepreneurs to make better decisions. So, AI is one of the things in the toolkit, though we should be careful not to allow machine learning and prediction to substitute good science and rational thinking. I think that that always remains the goal.

Good evidence-based decision making and artificial intelligence is one of those techniques that can help with business product prediction. We can also create new types of products that can help with the improvement of products. For instance, in certain branches like in manufacturing: using AI could create a digital twin and create a digital environment in which products or factory design can be tested.

I also think that with AI, you could also start doing things with innovation and predictive innovation without shifting through huge amounts of data. With all kinds of technology, whether it was electricity in the 19th century or whether it was the power looms in the 18th century, technology and also the way in which we drive tech, is an important task in business and business leadership. Global business schools should really take care to

understand it, but also to make sure that the discussion is fact-based. We should really scrutinize the technology and find out where the strengths and weaknesses are.

3. **Is there science that looks at all human cognitive capability and sheds light into the potential of AI beyond the four application areas you mentioned?**

I think this is really important research. I'm sometimes afraid that people may think that it only has to be machine learning type of techniques, and this look into the human brain. This is really in terms of cognitive neuroscience. The human brain is the most complex thing in the universe. If we are clever enough to understand the brain, maybe the brain is not so clever. So, we are all in this conundrum. It's really at the frontiers. Research is taking place that would allow us in the future to recreate the human brain, but at the moment, I think the state of research is not yet there.

4. **What can governments do to ensure their nations are not "left behind" during this AI revolution?**

    Three things:
    - Counter the misinformation about AI that is commonly found in popular media. Providing objective, unbiased assessments of the state of AI and its potential will lead to more sober judgements and balanced investment decisions.
    - Educate! Two good initiatives are the public AI education courses offered in Finland and the Netherlands, whereby any citizen can for free follow an online course on AI and obtain a certificate on understanding AI.
    - Help to "standardize" and raise quality of data. AI, being deep learning, relies on data. The quality and veracity, and flow of this data is important. This will require international cooperation.

5. **Which countries (outside of Europe & North America) have you been impressed with in terms of their AI strategy?**

    - None.
    - AI is currently driven by only a few large firms (and not governments) with global reach.
    - China's strategy is probably an example of what the rest of the world don't want (a surveillance state).

6. **Do you see any possibility for developing some actionable set of basic rules that avoid some of the worst consequences of the use of AI? Or is more like an inextricable jungle what's coming?**

- There are already basic rules in place – they are called the legal system! So whether someone uses a firearm or an AI to rob someone, it is still a crime! Basic human rights are well defined internationally. Property rights, also over data and intellectual property, already exists and can be protected through the courts. Companies who misuse their power to gather data in contravention hereof do already face legal consequences. If products based on AI cause consumer harm, manufacturers can face penalties, just like they can if their products are faulty for other reasons.

- The situation is however more complex regarding for instance use of AI in development of autonomous lethal weapon systems. International law and international treaties were needed to halt the proliferation of nuclear weapons, and this may perhaps also be the case for AI weapons.