
The Working from Home Evolution

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Michael Brennan, Chair

Thank you to Jason and RMIT for having me here today. Of course, when I say 'here', I am speaking figuratively – like a lot of people on the eastern seaboard I am in fact at home. But unlike others on the eastern seaboard, I have only been in lockdown for a few days – so working from home still feels a bit unfamiliar.

Historically, the concept of working from home should be very familiar. Because 300 years ago, most people worked from home: as farmers, weavers, blacksmiths and other skilled artisans, as well as doing backbreaking household chores and child rearing. They were also, by today's standards, extremely poor.

It was, of course, the industrial revolution that increasingly drove us to the centralised workplace – initially the factory and the mine, later the office. Such that by 1900 most people in Britain and the USA worked in a location other than their home.

The move to the central workplace was driven by economic forces. New production techniques changed the business model – it became necessary to combine labour with large and expensive machinery, with a single source of (steam) power. The factory provided a means for bosses to co-ordinate activity in real time, supervise workers and it also provided an efficient way to share knowledge, as did the office.

In many ways, the central workplace reduced transaction costs, but imposed transportation costs – mainly on workers who had to get themselves from home to a central location. And for most of the 20th century, it got radically cheaper to move people around via steam, electricity, the internal combustion engine and the aeroplane.

So technology drove and reinforced the role of the central workplace. And as often happens, other institutions (we can call them inventions) co-evolved, including intangible ones: like the limited liability company, which provided a basis for new businesses to form, as did more sophisticated capital markets.

So the big question is: Are we at a turning point?

For the last 30 years or so the cost of moving people around has stopped falling, or at least stopped falling at anything like the same rate. We seem to have hit physical

limits on speed, and congestion has meant that today it takes longer to move around our cities than was the case a few decades ago.

Meanwhile the cost of moving information has plummeted, thanks to innovation in computing and telecommunications. Just as industrial technology drove us physically together into the central workplace, could it be that modern communications technology is set to drive us apart?

The British economist and journalist Frances Cairncross said in 1997:

In half a century's time, it may well seem extraordinary that millions of people trooped from one building (their home) to another (their office) each morning, only to reverse the procedure each evening... One building – the home – often stands empty all day; another – the office – usually stands empty all night. All this may strike our grandchildren as bizarre.

Perhaps so, but interestingly, until now there has been very little change to that pattern that commenced with the industrial revolution.

Census and HILDA data show that rates of working from home between 2000 and 2019 were low (around 5 per cent) and fairly constant. If anything, over that period, Australia's CBDs became more significant as centres of economic activity and engines of productivity growth; and we saw the rise of conspicuous monuments to agglomeration economies: from Silicon Valley to the City of London.

Why is it so?

One possible reason is that no technological trend works in isolation. Other forces have been at play. At the very time that information technology was improving, and the cost of communicating at a distance was falling, the nature of work has also been changing.

US Economist David Deming showed in a recent paper that as machines have replaced routine tasks, modern jobs have come to require more open-ended decision making, critical thinking and adaptability. He illustrates a remarkable fact: in 1960 the income of a typical worker in the US peaked in their late 30s, whereas today it peaks in the worker's mid 50s – a change he attributes (through detailed econometric work) to the rising importance of decision making on the job.

One hypothesis is that these skills – those quintessentially human qualities of adaptability, decision making, judgment – are best developed and honed through in-person interactions: like the serendipitous encounter or the tacit knowledge we absorb through observing those around us.

Perhaps we are seeing the tendency pointed to by futurist Roy Amara, namely that we tend to overestimate the impact of new technology in the short run and underestimate it in the long run.

But it is also hard to escape the likelihood that the COVID-19 pandemic has created a stark discontinuity. The pandemic forced, and continues to force, a mass experiment: in working from home, in remote medicine; in online learning; in the adoption of digital technology generally. We have learned things that we won't unlearn.

When it comes to remote working, survey evidence suggests that, on the whole, it has been a positive surprise. Hence it is unlikely that the amount of remote working will fall back to its 2019 levels even in a post COVID-19 world.

In coming weeks, the Productivity Commission, will release some research on working from home: what it might mean for cities, for our work health and safety regime, the workplace relations system; what it might mean for productivity.

We analyse these things from an economic perspective, and our starting point is a fairly conventional neoclassical framework. Hence, we think about the considerations that motivate workers (the commute, greater flexibility, the loss of social interaction in the workplace) and how they might trade these things off. Likewise for firms: the capital cost savings versus the productivity implications. And we think about how these different preferences could be reconciled via negotiation and market processes.

The conventional economic framework is useful because it helps us think through the forces acting on wages, rents, productivity and – importantly – overall wellbeing. But I do think that to really understand the path of digital technology and its economic impact you really need to combine those traditional neoclassical insights with the insights gleaned from a more evolutionary approach.

Which is why it's great that RMIT is undertaking this project.

The evolutionary approach to economics – of which Jason Potts is a leading practitioner – eschews that narrow profit maximising assumption in favour of the more realistic view that firms face uncertainty – both about the state of things and the future – and do their best to navigate their way through the fog.

The evolutionary approach stresses the importance of variety – the idea that different firms make different bets based on their subjective hypotheses about what will work; with these experiments submitted to the test of the market and society. It stresses that variety can foster novelty. It is not an aberration, but that it's actually fundamentally important – particularly in the early stages of a new technology.

In our work, we have talked about work from home being characterised by two experiments: the first one being the forced experiment of firms and workers having to embrace remote work; and the second experiment being the array of different models tried by different firms: fully remote, fully centralised, and the endless possible versions of a hybrid model.

The first experiment forced change on the economy from the outside; the second experiment will generate change from within, which is where the evolutionary approach is at its strongest.

We have tried to consider the role of learning – another element that the evolutionary economics approach takes seriously. Learning happens at the level of the individual and the firm; but it also happens at the level of the economy and society as a whole, as different methods are tried – some succeed and some fail.

So the evolutionary approach, with its focus on novelty and variety rather than representative agents; knowledge rather than efficiency; change rather than equilibrium and taking its inspiration from biology rather than physics, is a powerful complement to the traditional tools of economic analysis, especially where technology, innovation and entrepreneurship are concerned.

I wish RMIT and the team all the best in their endeavours.