Brexit and Tech

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The Treasury analysis of the costs of Brexit seems to have largely ignored network effects, despite the fact that these are crucial to the IT industry.

Network effects are where a transaction's value depends on the number of people doing related transactions, and are one of the reasons our industry is full of monopolies. Facebook beat Myspace and Friendster because people want to be where their friends are, and it's extra bother to use several platforms. Auctions are dominated by eBay, as buyers go where there's the most stuff for sale, and sellers want the biggest crowd of buyers. There are more Windows machines than Apple because software markets work the same way.

We've got to understand network effects fairly well over the past 25 years. The basics of network economics were explained in the 1990s [1], and since 2001 we've learned that network economics explain much of what goes wrong with security and dependability in large systems [2]. There are now hundreds of people studying the economics of networks, games on networks, and how online networks interact with physical networks such as the clusters of firms in cities, and how network effects impact international relations [3].

Four things need saying about Brexit and the tech industry.

First, the idea that a UK government can "take back control" goes against experience. Back in the 1970s, ministers tried to bully universities into buying computers from ICL (a company nationalised by EU opponent Tony Benn); academics refused because the software we used mostly ran on IBM instead. A UK that makes up 1% of world population and 3% of world GDP has little influence on IT markets; a post-Brexit Britain would have even less. Most software markets have been global for decades.

The EU has real clout though. From the viewpoint of Silicon Valley, Brussels is the world's privacy regulator, since Washington doesn't care and nobody else is big enough to matter. Brussels also calls the shots on competition policy. The reason you get offered a randomised choice of default browser when switching on a new Windows PC in Europe is that the EU competition authorities insisted on it. This was punishment for Microsoft using its desktop monopoly to trash Netscape – which was an offence in the USA too, but the Bush administration couldn't be bothered to prosecute it. If you want someone to police the side-effects of network effects and globalisation, the European Commission is just about the only sheriff in town.

So regardless of whether a post-Brexit England were like Switzerland (in the Single Market but with no MEPs), like Albania (following Single Market rules but no MEPs) or like Kenya (neither in the Single Market, nor any MEPs) the rules and standards set in Brussels would have huge and continuing influence on our IT industry [3].

Second, privacy and data protection will be a test case. Margaret Thatcher brought in the first Data Protection Act because without it UK companies would not have been able to process personal data on Europeans – so London banks would not have been able to use their UK data centres to maintain account information on customers in Germany. She did so through gritted teeth (the then Home Secretary David Waddington admitted "Maggie doesn't like data privacy; it's a German idea, like ID cards") but there was no choice then, and there isn't now.

Post-Brexit, a tech startup in England might be pressured to keep the personal data of EU customers in a data centre in Europe. The "Safe Harbour" provision, which let US companies pretend to be European, has been struck down by the European Court, as it gave citizens no real redress. The USA is scrambling to put together a replacement but is hitting heavy weather; an England on its own would be in a much weaker position.

The same goes for many other international treaties that IT people find annoying, from the WIPO treaty on copyright to the Wassennaar Arrangement on export controls. The IT and telecoms industries have lobbied heavily in the last 15 years against creeping extension of copyright rules; in the NGO world, we set up European Digital Rights to coordinate lobbying in Brussels, as European institutions are the only real counterweight to the copyright lobby. An alliance of the free software movement, the telcos, car parts makers, generic drugmakers and consumer groups drastically amended the IP Enforcement Directive a dozen years ago; the key moment was when Microsoft decided it didn't want patent infringement to be a crime in every country in Europe, and swapped sides. That's how the game of international trade regulation is played. Sure, the many international treaties that affect our trade can be obstructive and sometimes infuriating; they are the negative network externalities of the information age. But the Brexit idea that Britain could simply press a magic button and ignore all this "red tape" is deluded.

The third point follows: Brexit will make UK tech startups more expensive. The need to comply with EU privacy law will hobble startups that serve consumers directly. Startups that sell to businesses already find their initial customers are usually among US firms rather than in Britain – so they need an American sales office from day one. And perhaps you'll have to keep more of your development staff overseas if visas get harder. A PhD student of mine had to turn his thesis into a startup in Seoul, with a sales office in Vancouver, when the Home Office wouldn't give him the visas. This can only get worse if there is a Brexit vote.

Startup costs matter even more in tech because of network effects. When a new market opens up, there's often a market race where the winner takes all – and the winner is often the first firm to get network effects running in its favour. Britain does indeed have some success stories, like ARM. But most of the big winners have been American, as their bigger market lets startups get network effects going faster. In fact, the reason Margaret Thatcher pushed for the Single Market was to help level the playing field.

Fourth, tech firms tend to cluster. In the San Francisco area, in Boston, and in Bangalore there are thousands of engineers for hire. There are specialist subcontractors, good universities, venture capitalists and a thriving tech social scene where entrepreneurs, engineers and marketing people can meet, swap ideas and hatch new ventures. Britain has a tech cluster in Cambridge and London that's created tens of thousands of jobs. But we're already hamstrung by the difficulty of getting visas. I've already lost one research student (an American!) and had another start a term late because of visa issues.

Brexit campaigners say that an “independent” Britain could give visas to Indian engineers instead of Polish plumbers. But the government is already free to issue as many non-EU visas as it wishes. And the world has seen that Brexit only started to draw level with Remain once they started banging on about immigration, using xenophobia that has spilled over into naked racism and now into violence. If the English people now say at the ballot box that they prefer xenophobia to rational self-interest, it’s hard to believe that future English governments will be more liberal on immigration. Bill Gates himself is pessimistic; he said in the Indy last Friday that Cambridge would be a less attractive place if we leave, as it would be less open to foreign staff.

That’s the demand side of the labour market. The supply side is that Britain would also be less attractive to foreign staff. First-class engineers earn good money and can live where they please. So tech clusters happen where it’s nice to live – San Francisco, Boston, Bangalore and (still) Cambridge or London. Researchers have noted that these are always open and liberal places, where it’s fine to be from an ethnic minority, an immigrant, or gay [4].

What would the world’s engineers think about moving to Britain after a high-profile vote for xenophobia? American state and federal governments have spent billions trying to create tech clusters in conservative places like North Carolina or Texas but they’ve struggled. The houses in red states may be cheap and the sun shining – and you might even go there on vacation – but would you actually want to live there? States that prefer restroom laws to investment find tech firms’ dollars going elsewhere.

Finally, this is not just about IT, but about services generally. The authoritative study of why some cities became global magnets while others didn't showed that the winners are precisely the good places for a company to locate its global or regional headquarters [5]. They’re the cities with dense networks of banks, lawyers, accountants, advertising agents, IT people and all the other specialists that a large or complex firm might suddenly have to call on. A London that declares immigrants unwelcome will become a second choice not just for Indian web designers, but also for American lawyers, German bankers and Chinese manufacturers. Our loss will be Berlin’s gain. This is not just about money; it’s about who we are, and also about what other people perceive us to be. If we are no longer seen to be an open society that welcomes able people regardless of their background, it will cost us.

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References

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