Chief economist's comment

Investment – are we missing something?

Chief Investment Office WM | 7 September 2017
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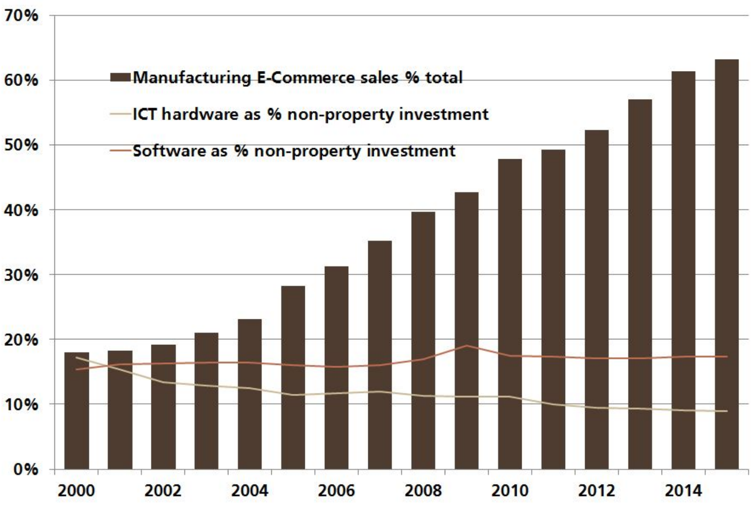
- Companies are doing more and more online. They are spending increasingly less of their investment budgets on technology. How is this consistent?
- Companies are relying on their employees to use their own devices for work. They can invest less in technology and instead have their employees subsidize shareholders.
- Consumer spending on technology does not necessarily rise. Instead consumers use their own devices more intensively. (The capacity utilization rate rises.)
- This is just the start. The recent UBS Nobel Perspectives Live! event stressed that technology is important for how it changes established ways of working. Investors need to understand that old-fashioned data does not necessarily reflect the modern world.

The changes to today's world economy are truly revolutionary. While many people get excited about the latest model smartphone or other technological leap, economists do not. For an economist, it is the way technology changes society and the structure of the economy that is the exciting story.

E-commerce has grown dramatically in business. In the US the proportion of transactions that use it has soared. A negligible part of US manufacturing in 2000, it now makes up the overwhelming majority of transactions in the sector.

US e-commerce explodes as technology investment weakens

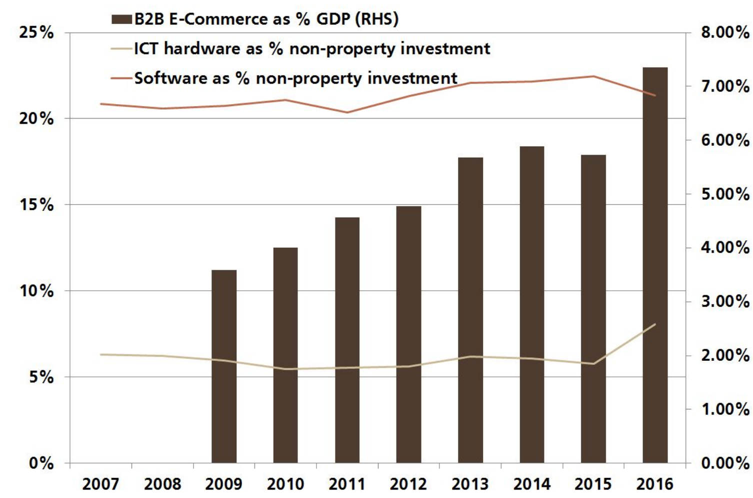


Source: OECD, US Census Bureau, UBS calculations

There is something very odd going on in the data. More and more of what companies do depends on the internet and other electronic-based ordering. At the same time that computer-based transactions are rising in importance, US companies are dedicating less and less of their investment spending to computers. They have also failed to increase their share of investment spending on software.

This is not just a US phenomenon. The total value of European business-to-business e-commerce transactions has grown significantly as a share of GDP. (This is a different measure than what is used in the US but makes the same point). At the same time, investment in technology and software by companies fails to reflect this. An increasingly large share of investment spending is being dedicated to non-technology investment.

UK e-commerce is among the most prevalent in the world, but technology spending has not matched it



Source: OECD, Eurocommerce, UBS calculations

Data from a simpler age

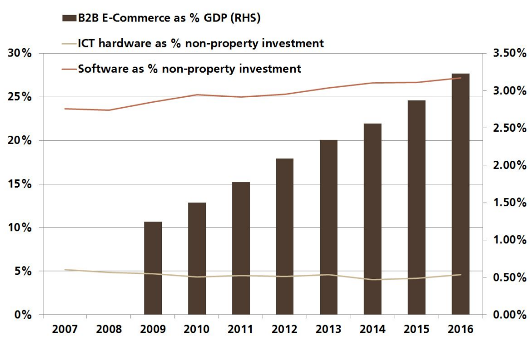
What is happening? Increasingly, investment in technology simply fails to appear in the data. The origins of economic data lie buried in the 1930s. Back then, it was pretty clear what was investment and what was personal spending. Today that is not so clear.

Bring your own device (BYOD) is now an accepted part of modern business. People access work emails over their personal phones. Tablets are used for business as well as for leisure activities. This practice is now so widespread it has its own label – "IT consumerization." Companies are able to rely on employees to provide the capital needed to do their job. Employees are, in effect, subsidizing shareholders.

In economic data this will show up as reduced investment spending on technology. Investment in software may or may not increase, depending on whether the company provides the software applications for their employees' devices.

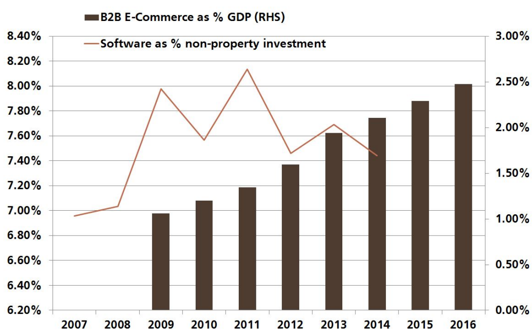
Consumer spending on technology need not rise. Instead, consumers increase the amount of time they spend using their personal devices by adding work tasks. (An economist would say that the capacity utilization rate of the personal device increases. Economists often say things like this. It is best to just accept it and move on.)

French e-commerce outpaces technology investment



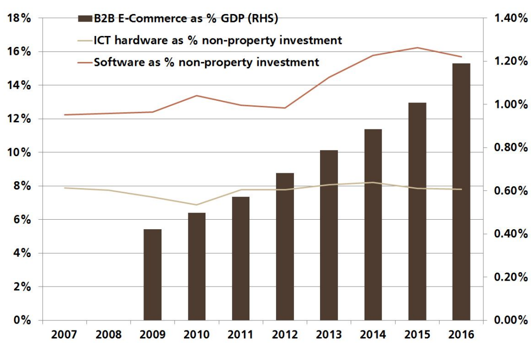
Source: OECD, Eurocommerce, UBS calculations

German e-commerce rises as software investment spending stagnates



Source: OECD, Eurocommerce, UBS calculations. Data for hardware spending is not available

Italian e-commerce share of GDP more than doubles as relative hardware investment falls



Source: OECD, Eurocommerce, UBS calculations

Some surveys suggest that certain employees will spend over half their time using their personal devices for work tasks.[1]

This means that investment is disguised as consumer spending. The total amount of spending will be lower because people use their devices more efficiently. This is compounded by other trends like cloud computing – where investment in one country can be used in another one.

Unfortunately, there are even more problems with the data. In the US, a laptop bought by a consumer affects real GDP differently from an identical laptop bought by a company for an identical price. Logically one might suppose there was no difference, but there is.[2]

Moreover, the way a mobile device is treated is different from the way a computer is treated. If we see investment spending shifting from businesses to consumers, or from laptops to mobile devices, GDP will be affected even if nothing else changes.

Times They Are a-Changin'

The recent Nobel Perspectives Live! event stressed that technology changes the way that we work. It is already blurring the distinction between work life and personal life. The antiquated philosophy that underpins much of our economic data means that investors may be missing out on key parts of the story. If companies rely on employees to provide some of the technology they need to do their jobs, then distinguishing investment from consumer spending becomes less helpful. If the same piece of technology is assumed to have a different value for economic data, depending on whether it is bought by a business or a consumer, it makes the situation even more confusing.

Investors need to think hard about this topic. IT consumerization is just a foretaste of the structural changes that lie ahead. Blind faith in data that fails to change with the times is a dangerous approach to investing for the future.

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[1] See, for instance Meske, C., Stieglitz, S., Brockmann, T., Ross, B. (2017) "Impact of Mobile IT Consumerization on Organizations – An Empirical Study on the Adoption of BYOD Practices," Springer International Publications

[2] This is because the price deflator used for consumer spending on a computer and for investment spending on a computer is calculated using different methods. Though the price paid by a consumer may be identical to the price paid by a company, the data is subject to different adjustments to attempt to capture the change in the quality of the technology. A third method is used for mobile devices, so that the purchase of a mobile device with the same retail price as a computer will generate a different impact on the real GDP data.

Appendix

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