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FINANCIAL CAPITALISM AND THE DIGITAL ECONOMY

A Potentially Explosive Combination

AT A GLANCE

A direct connection exists between the financialisation of the economy and the commercialisation of the internet. Since decades, the demand generated by the financial markets has been driving the development of digital technologies. The roots of some of the central new economy business models can be traced back to the financial sector. Another element the digital economy has inherited from the financial markets is the central role of private venture capital in financing digital start-ups– along with the associated systemic risks.

Silicon Valley likes to describe the rise of big tech as a story of creative, risk-taking entrepreneurs implementing daring “new combinations” (Schumpeter 1983). In this popular narrative the history of the commercial internet began around the mid-1980s, and unfolded largely independently of other developments in the political economy.

We know today that this narrative distorts the perspective on important drivers of digitalisation. First of all, the beginnings of the digital economy are intimately bound up, as Dan Schiller (2011, 2014), Mariana Mazzucato (2014) and others have demonstrated, with an entrepreneurial state supplying the seed capital behind most of the basic innovations associated with digitalisation. Additionally, the great restructuring trends within capitalism that began in the 1970s (automation, globalisation) were intimately bound up with the application of digital technologies and contributed to the rise of the technology sector.

What we still lack is a systematic understanding of what is probably the central – but long-ignored – driver of internet capitalism: the ties between digital commerce and the financial sector. The latter represented the most important source of investment in and demand for digital technologies, and formed the paradigm for central business models of the commercial internet. As such, it passed on a hefty portion of its own systemic risk to the digital sector.

A GROWTH TANDEM

The concept of financialisation is used in sociology and political science to describe changes in the patterns of capital accumulation in the developed economies since the late 1970s, as the growth of the financial markets outstripped agriculture, industry and non-financial services. Financialisation describes a process where the real economy, states and individuals incur increasing debt to finance their investments, while returns on financial investments have grown apace (Sahr 2017).

In historical terms financialisation has gone hand in hand with the rise of the commercial internet: On the one hand, digital technologies played an enormous role in enabling the rise of the financial sector; on the other the financial sector invested enormous sums in digital and internet technologies to develop its own infrastructure and drive innovation. One such innovation was automated high-frequency trading, which required investment in computing power, programming and hardware: products and services from the technology sector. And the search for opportunities in growth markets represented another reason for the steady expansion in investment in information and communication technologies by banks, investment funds and venture capitalists since the 1970s.

During the 1980s, when the financial markets were deregulated, US banks' spending on digital terminals and software rose at an annual rate of 19 percent (Schiller 2014: 50). Even until quite recently the financial sector represented the second-largest source of demand for IT products and services (Schiller 2011: 925). In other words, financialisation and digitalisation co-evolved. The functioning of the financial system is characterised “by electronic and digital technologies, by

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the maximum integration of information processing and telecommunications" (Vogl 2011: 105).

Financialisation also played a decisive role in the establishment and expansion of the material infrastructure of the internet – and vice versa. In 2010 for example, US-based Hibernia Networks laid the first new transatlantic cable since the dotcom crash of 2000. The new cable knocks five milliseconds off the delay incurred in transatlantic data transfer, a minute gain in speed that is largely irrelevant to most users. But accelerations of that kind are decisive for financial capitalism, for entities specialised in high-frequency trading (Schiller 2014: 55).

The needs of the financial sector drove the growth of infrastructure for digital capitalism in numerous other spheres too. For example network infrastructures and software-controlled financial products and methods created the backbone of the global financial system (Schiller 2014: 47).

CUT FROM THE SAME CLOTH

The connections between the financial sector and the internet economy extend far beyond capital flows from the former to the latter in the form of investment in and demand for digital technologies. Other central aspects of the commercial internet reveal how internet corporations learned their business methods from the financial markets.

One example is found in the structural similarities between the markets for online advertising controlled by Google and Facebook and the complex markets of the digitalised financial sector before its temporary collapse in 2008. In both cases the primary products – e-mail accounts, social media accounts, internet search etc. in the case of internet corporations, credit in the case of the financial institutions – are not the central source of profit. Instead the business models are based in decisive respects essentially on secondary utilisation: Google and Facebook collect data from users of their free services in order to exploit it to sell personalised advertising.

A very similar logic applies to the banks, for example in the infamous field of derivatives trading: "derivative" is the umbrella term for a multitude of contracts that deviate from the classical lending model. The instruments include options and futures, which permit future transactions to be realised in the present. Such methods have been in use for a long time and there are naturally many contexts where they are useful, but until the 1990s they played only a marginal role. And it was only in the 2000s that they became the biggest sector of the global economy in terms of capital (Arnoldi 2009). The boom in derivatives needs to be understood as a shift in the focus of profit-making from primary to secondary utilisation. For while the value of classical loans ultimately derives from the expectation of repayment with interest, derivatives permit profit to be generated by wagering on the repayments of third parties. In other words, analogously to online advertising, the good generated and traded by the business is other users' data; in the case of derivatives, borrowers' data.

A second parallel is that the financial markets are structured by highly automated transactions, very like the case of online advertising. Their role has grown continuously in

recent years. In 2010 computer algorithms accounted for about half of American stock market transactions (Lange 2016), automatically monitoring market trends and buying or selling shares and currencies according to predefined criteria. Similarly the decisions to buy and sell advertising space in the on-line markets are also highly automated, structured by algorithmic calculations of risk and profit.

While automated financial transactions can be longer-term ("systematic trading"), the most widespread use is in high-frequency trading, where transactions occur in a fraction of a second. This was also plainly the model for the modern markets for personalised online-advertising: Google sells advertising space in real time, with every user search accompanied by an auction mechanism involving high-frequency assessments of expected profit. So what we have here is a market in real-time bets borrowed from high-frequency trading, without which the profit models of leading internet corporations would simply cease to function.

PIKETTY IN THE INTERNET

Another important link between the financial sector and the internet economy is the role played by private venture capital. This specific form of capital has grown increasingly important in shaping the financial sector in recent decades, and has been involved in every major commercial development in the internet economy. Herein lies the Piketty element of digital capitalism: in a world where growth in wealth systematically outstrips income (Piketty 2014), there will inevitably be a growing quantity of capital seeking investment opportunities. Already during the 1990s the stock markets were unable to absorb all this capital, leading it to flow increasingly into more risky realms. That is how venture capital became one of the decisive vehicles for expanding private wealth since the 1990s, in a development that has unfolded especially in the internet economy.

New businesses – especially those pursuing high-risk business models – often find it difficult to secure credit from banks. That is the opportunity recognised in the 1990s by venture capitalists, whose specific business calculation diverges significantly from the traditional entrepreneurial perspective. While classical business start-ups generally aim to generate a profit quickly in order to repay their loans, venture capital thinks in longer periods of two to five years during which the aim is not necessarily profitability. The aim of venture capital is rarely a share of current profits. Instead the objective is capital-driven growth to turn the business start-up into an attractive proposition to sell to other investors.

Those who later buy shares in the start-up are the actual target group of the venture capital model. The start-up is a product that needs to be filled with positive speculative expectations if the plan is to succeed. The effect of strategies driven by the "exit orientation" (Kühl 2002) of risk capital is to introduce systemic risk into growth markets. As long as the hype functions – as it did in the 1990s internet economy – every start-up is potentially a "disruptive" game-changer, a realistic prospect of unreal profits. Even then that was not true – and the exit spirals turned into an avalanche of risk. Anyone left on board the sinking ship went down with it.

VENTURE CAPITAL SEEKING RETURNS

The importance of private venture capital has increased again significantly since 2008 – as again reflected most sharply in the world of technology start-ups. The amount of venture capital invested in the United States reached a ten-year high of about \$72 billion in 2017 (Richter 2018), representing double the figure for 2008 (about \$30 billion) and 4.5 times the figure for 2002 (about \$16 billion) (PwC n. d.). Alongside classical venture capitalists, giga-funds like the largely Saudi-owned \$100 billion Softbank are also in the game today. The enormous sums managed by funds of this type are reflected in the even more gigantic trends in market valuations. Between 2014 and 2017 the number of so-called unicorns (private companies with a market valuation exceeding \$1 billion) tripled globally from 83 to 224 (Stern 2017).

In international comparison of the major economies Germany is a relatively small market for venture capital investments. Nonetheless, the top one hundred German start-ups acquired almost \$4.7 billion in investment between 2009 and 2015 (Ernst & Young 2017: 5). And in 2017 in Germany as a whole almost \$4.3 billion was invested in start-ups, representing an 88 percent year-on-year increase (Ernst & Young 2018). Especially in Berlin, which attracted 70 percent of the venture capital in Germany, an identifiable start-up ecosystem has become established with significant investment sums and international investors and players of its own, like the controversial start-up incubator Rocket Internet.

DOTCOM BUBBLE 2.0?

Today business decisions are again shaped by the same exit calculations of venture capital as during the dotcom boom (Staab 2018). Start-ups have increasingly become speculatively traded commodities: 76 percent of start-ups that went public in the United States in 2017 had no record of deriving a profit from current revenues. That was the highest figure since the peak of the dotcom boom in 2000 (81 percent) (Roose 16 May 2018; Ritter 17 January 2018). Out of fifteen technology initial public offerings (IPOs) between January and May 2018, only three were able to show a positive record in this respect (ibid.). This is only one of many symptoms indicating a market based on speculative expectations, enabling venture capital funds to reap enormous profits from start-ups without a demonstrably functioning business model.

Alongside these obvious parallels to the 1990s there is also an important difference: despite a number of spectacular IPOs, the thrust of the exit phenomenon has shifted to acquisitions. This is seen very well in the example of exit events in Germany since the 2008 crisis: Between 2008 and 2016 only 5 percent of exits from technology start-ups were IPOs, 95 percent acquisitions (Staab 2018). This shift in typical exit paths is of great significance, because the market cleansing that burst the dotcom bubble ultimately occurred on the basis of the transparency and disclosure requirements associated with IPOs. Acquisitions are associated with considerably less rigorous transparency and the accounts of acquired start-ups are not subject to any disclosure requirements.

This permits potential risks to persist longer in the market because they are not dragged into the light by the transparency effects of IPOs. On the other side, the risk groups of online financial capitalism are changing systematically: whereas investors form the decisive initial risk group in IPOs and absorb the losses when profit expectations are exposed as entirely speculative, in the case of acquisitions it is the acquiring corporations and their employees who will bear the burden of later write-downs.

THE COMING CRISIS

Where the digital economy is structured by private venture capital there are two principal scenarios for a coming crisis. Firstly the prevalence of acquisitions over IPOs speaks against a quick bursting of the dotcom 2.0 bubble. If the rest of the economy absorbs the losses of the digital sector, this will suppress profit margins, wages and growth as a whole – but there will be no sudden crash. Where a crash certainly could be generated – in the second scenario – is the enormous market valuations of the “herd of unicorns”. If, as expected within the field, one or more of the leading unicorns experiences a seriously disappointing IPO in the near future, that alone could cast a serious shadow over the entire start-up world, pulverise market valuations, and burn credit lines. In that event, the digital capitalism of the commercial internet would then not only have exploited investment and demand from the financial sector for its own growth and structured its central business models on the example of the financial markets – but also acquired their affinity to crisis.

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References

- Arnoldi, Jakob 2009: Alles Geld verdampft: Finanzkrise in der Weltrisikogesellschaft, Frankfurt am Main.
- Ernst and Young 2017: Funding, Growth and Profitability: Tech Start-ups Finding the Right Balance: Venture Capital and Start-ups in Germany 2016, Berlin, http://start-up-initiative.ey.com/wp-content/uploads/2017/02/EY-Studie_Venture_Capital_and_Start_ups_in_Germany_2016.pdf (1 June 2018).
- Ernst and Young 2018: Start-up-Barometer Deutschland Januar 2018, Berlin, http://start-up-initiative.ey.com/wp-content/uploads/2018/01/EY_Start-up_Barometer_Januar_2018.pdf (1 June 2018).
- Kühl, Stefan 2002: Konturen des Exit-Kapitalismus: Wie Risikokapital die Art des Wirtschaftens verändert, in: *Leviathan* 30 (2), pp. 195–219.
- Lange, Ann-Christina 2016: Organizational Ignorance: An Ethnographic Study of High-Frequency Trading, in: *Economy and Society* 45 (2); pp. 230–250.
- Mazzucato, Mariana 2014: *Das Kapital des Staates: Eine andere Geschichte von Innovation und Wachstum*, Munich.
- Piketty, Thomas 2014: *Capital in the Twenty-First Century*, Cambridge, Mass.
- PwC n.d.: Value of Venture Capital Investment in the United States from 1995 to 2017 (in billion U.S. dollars), <https://www.statista.com/statistics/277501/venture-capital-amount-invested-in-the-united-states-since-1995> (1 June 2018).
- Richter, Felix 2018: Venture Capital Funding Climbs to Decade High in 2017, <https://www.statista.com/chart/11443/venture-capital-activity-in-the-us> (1 June 2018).
- Ritter, Jay R. 17 January 2018: Initial Public Offerings: Updated Statistics, https://site.warrington.ufl.edu/ritter/files/2018/03/IPOs2017Statistics_January17_2018.pdf (1 June 2018).
- Roose, Kevin 16 May 2018: The Entire Economy Is MoviePass Now: Enjoy It While You Can, in: *New York Times*, <https://www.nytimes.com/2018/05/16/technology/moviepass-economy-startups.html> (1.6.2018).
- Sahr, Aaron 2017: *Keystroke-Kapitalismus: Ungleichheit auf Knopfdruck*, Hamburg.
- Schiller, Dan 2011: Power Under Pressure: Digital Capitalism in Crisis, in: *International Journal of Communication* 5, pp. 924–941.
- Schiller, Dan 2014: *Digital Depression: Information Technology and Economic Crisis*, Champaign, Ill.
- Schumpeter, Joseph A. 1983: *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle*, New Brunswick, N.J.
- Staab, Philipp 2018: Exit-Kapitalismus revisited: Der Einfluss privaten Risikokapitals auf Unternehmensentscheidungen, Marktrisiken und Arbeitsqualität in technologieintensiven Jungunternehmen, in: *Leviathan* 2, pp. 212–231.
- Stern, Alex 2011: Revisiting the Unicorn Club: Get to Know the Newest Crowd of Billion Dollar Startups, <https://medium.com/startup-grind/unicorn-club-revisited-e641f9c80e8d> (1 June 2018).
- Vogl, Joseph 2011: *Das Gespenst des Kapitals*, Zurich.

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