OXFORD

Cambridge Journal of Regions, Economy and Society, 2023, **XX**, 1–12
https://doi.org/10.1093/cjres/rsad005
Manuscript

FinTech platform regulation: regulating with/against platforms in the UK and China

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This paper develops case studies of the UK and China to analyse divergent national financial regulatory approaches to FinTech as a novel political economy of platforms. Regulating with platforms is core to the approach taken in the UK, where start-up and early-career platforms are enrolled into an innovation-friendly financial regulation regime that promotes consumption and competition balanced with stability. In China, meanwhile, measures are being instituted to enhance rules and restrictions imposed on FinTech platforms. BigTech-led FinTech expansion was encouraged to expedite financial reforms to fuel economic growth and ensure authoritarian state control, but regulation is now shown to be working against the furtherance of platform power.

Keywords: FinTech, regulation, platforms, ecologies, United Kingdom, China

JEL Classifications: O16, P16, P52, G28

Introduction

'FinTech' has been defined as 'a set of innovations and an economic sector that focus on the application of recently developed digital technologies to financial services' (Wójcik, 2020a, 568). Typically accessed by users through mobile telecommunications, internet networks and smartphone applications linked to cloud computing, FinTech has grown dramatically across the globe in recent decades. This paper focuses on national financial regulatory approaches to FinTech. To date, economic geographers and social scientists have largely concentrated analytical attention on the technological, institutional and socio-spatial dynamics of relational and networked FinTech economies (for example, Lai and Samers, 2021; Wójcik, 2020a, 2020b, 2021). Research which has addressed issues of FinTech regulation is more limited, and tends to be animated by broader analytical concerns, such as underlining the territorial variegations of FinTech economies or the strategic place of FinTech within certain economic and governmental state strategies. For example, Ioannou and Wójcik (2022) highlight how national financial regulatory regimes in Latin America act to limit cross-border integration of FinTech economies on that continent. Hendrikse, et al. (2019) demonstrate how state policy and regulation in Belgium promotes strategic coupling between incumbent institutions and FinTech start-ups to bolster the competitive position of Brussels as a financial centre. In India, FinTech policy and regulation are revealed to be shaped by a post-colonial development strategy that features state-led data infrastructures for surveillance and taxation (Ertürk et al., 2021; Jain and Gabor, 2020). The taxation of mobile payments is also a contentious FinTech policy and regulatory issue of state-building in Sub-Saharan Africa (Mader et al., 2022). In China, the growth of FinTech economies has been understood as one manifestation of a deep synergy between financial market liberalisation policies and an authoritarian state. Rapid growth was permitted and supported by the state because it simultaneously consolidates the Chinese Communist Party's (CCP) legitimacy and ruling capacity, and helps to achieve its foreign policy goals (Gruin, 2019; Gruin and Knaack, 2019; Liu, 2022).

Building from this existing research, this paper aims to make three principal contributions. First, connecting with wider-ranging debates over the problems and prospects of regulation across digital platform economies (Flew, 2021), we investigate the ways in which financial regulators are responding to the challenge of FinTech as a novel political

Received: May 23, 2022; **editorial decision:** January 23, 2023; **accepted on:** February 21, 2023
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economy of platforms (Eichengreen, 2021; Langley and Leyshon, 2021). Applications of digital technologies in relational and networked FinTech economies can be understood to be producing an array of new 'ecologies' of retail money and finance across the globe, anchored in extant financial and technology agglomerations and featuring distinct institutional structures and cultures of innovation (Leyshon, 2020). Rather than comprising a singular global economy, the economic geographies of FinTech are better understood as a novel 'coalition of smaller constitutive ecologies … distinctive groupings of financial [and technological] knowledge and practices … in different places with uneven connectivity and material outcomes' (Lai, 2016, 28). These discrete, uneven and territorially variegated relational configurations of connections and circulations include payments, remittances, investment, insurance and credit of all kinds. However, the defining feature of FinTech ecologies is that they are platformed. They rest on the digital infrastructures and data flows enclosed and controlled by 'BigTech' firms, and which broadly comprise the 'platform ecosystem' (van Dijck et al., 2019). BigTech platforms have also moved into the business of FinTech, and broader political-economic processes of platformisation are key to FinTech ecologies (Langley and Leyshon, 2021). Extensive organisational and commercial experimentations are underway across FinTech ecologies with 'the platform', a socio-technical assemblage and performative business model of capitalist intermediary enterprise. BigTechs, start-ups, early-career firms, incumbent banks and telecommunications companies alike are engaged in experiments with platforms, often via institutional and technology partnerships. FinTech platforms are highly capitalised by venture capitalists, private equity and other forms of investment, and are premised on multi-sided mediation and multidimensional value extraction from the monetary and financial ecologies they configure, with rapid scaling to transform the competitive and organisational basis of retail finance. For national financial regulators, the emergence of digital financial ecologies poses a challenge that we foreground for investigation: *FinTech platform regulation*.

Second, the paper develops two case studies of national approaches to FinTech platform regulation. The UK and China are two globally significant sites of FinTech. According to the most comprehensive ranking to date (Ben, 2018), they are home to five of the top seven leading FinTech 'hubs' (London, Beijing, Shanghai, Hangzhou and Shenzhen). The growth of extensive FinTech ecologies in the UK and China is provoking specific, significant and wide-reaching responses by national financial regulators, and both cases are suitable for investigation to deepen understanding (Mabry, 2008). We have also purposively selected to develop case studies of the UK and China because, within these jurisdictions, national regulatory authorities are confronted by distinct platformed FinTech ecologies that have contrasting institutional structures and relations. FinTech platform ecologies in the UK feature a relatively large number of start-up and early-career specialist firms, whilst FinTech in China is dominated by 'super apps' operated by its leading BigTech platform conglomerates, Baidu, Alibaba and Tencent (Jia et al., 2022; Wang and Doan, 2018). For national regulators and state policymakers, the presence or otherwise of domestic BigTech firms as 'national champions' is likely to impact how they respond to the challenge of FinTech platform regulation (Bassens and Hendrikse, 2022; Hendrikse et al., 2019), and this is reflected in the case studies we have selected for development and comparative analysis. To assemble our cases, we combined secondary academic literatures with a qualitative approach primarily based on documentary sources and methods. Relevant policy documents, grey literature (such as consultancy reports, etc.) and online and print media reports were identified through structured searches of key state, industry and media websites, although these processes were circumscribed somewhat for the China case study due to linguistic barriers. Document analysis focussed on content to identify key regulations and initiatives by national authorities, and on discourse and communication to consider how these regulations and initiatives were represented in relation to broader state strategies (Prior, 2008).

Third, the paper's analytical arguments will stress divergent approaches to FinTech platform regulation currently being enacted by national financial authorities. We will characterise these approaches in terms of *regulating with/by platforms* and *regulation against/of platforms* (cf. Gillespie, 2017).[1] In the UK, we will show how FinTech platforms are being incorporated into extant regulatory regimes, precisely to adapt these regimes in ways that seek to improve the outcomes of financial markets for a disparate range of stakeholders, including consumers and incumbent financial interests in the London financial district. Authorities are enrolling start-up and early-career FinTech platforms into an innovation-friendly financial regulation regime which promotes consumption and competition alongside stability, not least because platformed data and analytics can ostensibly ensure innovative financial services firms are regulatory compliant. Core to the approach to FinTech platform regulation in the UK is thus regulation *with* and *by* platforms. In China, meanwhile, we will show how measures to enhance the regulation *of* FinTech platforms are now being instituted, reflecting a shifting state approach to the regulation of digital platform economies in the round. FinTech expansion led by Chinese BigTech national champions was previously encouraged to expedite financial reforms which fuelled economic growth alongside state control, but authorities are now regulating *against* the furtherance of platform power (Gruin, 2019; Wang, 2021). The remainder of the paper is organised as follows. Next, FinTech platform regulation is explained in the context of long-standing and pervasive problems of financial regulation. The paper then develops, in turn, case studies of FinTech platform regulation

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in the UK and China. The paper concludes by reflecting on the implications of our analysis for wider-ranging debates about platform regulation.

Financial regulation and FinTech

Spaces of financial regulation are largely sovereign-territorial geographies rooted in the public–private hybridity of modern capitalist money and finance (Harvey, 2010; Ingham, 2004). This means that despite aspirations of achieving binding global agreements that promote stability, 'financial regulation is often shaped by fundamental battles over ideas, cognition, and competing worldviews' that play out in struggle between different jurisdictions (James and Quaglia, 2022, 1). National regulations are therefore a key component of what Sam Woods—Deputy Governor of the Bank of England and Chief Executive Officer of the Prudential Regulation Authority in the UK—described as *geofinance,* the impact of 'borders, location and distance' on the 'geometry of finance' (Woods, 2017). As Helleiner (1994) emphasises, the international dynamics of financial regulation are fundamentally different to the regulatory dynamics of international trade: unilateral sovereign state decisions to deregulate finance and liberalise capital flows prompt the globalisation of finance, while the globalisation of trade requires interstate collaboration and multilateral regulatory agreements to dismantle tariffs, subsidies, etc. Meanwhile, the relative success of authorities in managing monetary stability in their national economies creates an uneven geography of investment in government debt based on prevailing rates of interest and inflation. These dynamics ensure international competition between national financial regulatory spaces, encouraging a general erosion of standards in response to regulatory arbitrage, or 'a race to the bottom' (Houston et al., 2012). Regulatory competition between London and New York as international financial centres, for example, has been key to shaping global financial ecologies for the last sixty years or so, as firms arbitrage the regulatory regimes of each financial centre based on perceived levels of permissiveness and oversight (French et al., 2009).

The temporal and spatial dynamics of financial regulation arguably set the stage for the global financial crisis (GFC) of 2008. In the decades preceding the crisis, US and UK state strategies regarded the expansion of financial services as core to national economic growth and development. 'Light touch' regulatory regimes were encouraged, focussed on permitting innovations such as widespread securitisation that freed up balance sheets and set aside concerns about financial stability or even malfeasance (Engelen et al., 2012, page 376). However, hubristic faith in the self-correcting stability of financial markets, and a complaisant belief that private institutions would not countenance deploying business models that might put their very survival at risk, was overturned as calamitous losses were racked up and private sector debts were absorbed by the state (Engelen et al., 2011). This in turn generated critical self-reflection within regulatory communities (Christophers et al., 2017), initially prompting debates about how to suppress risky innovation to 'get back to basics', simplifying banking and capital markets to promote 'socially useful' kinds of innovation while limiting the rest (Ford, 2017: 141). Reactive regulation saw new restrictions and demands for compliance imposed on banks to render them more resilient in event of a future financial crisis (Erturk, 2016).

Significantly, however, there was no similar post-GFC turn to reactive regulation in China. While the Chinese state had been reregulating its financial system since the early 1980s, moving it away from the Soviet model introduced in 1949, it took pains to ensure that regulators kept close control over most aspects of the actions of financial institutions (Lai, 2010; Tooze, 2018). As a result, the engagement of Chinese financial institutions with the financial products that triggered the GFC was limited because of the restrictions that restricted interactions with Western banks. Thus, while in the UK and the US banks were forced to rebuild both their balance sheets and reputations following government bailouts, in China the policy direction was very different. A radical loosening of monetary policy and banking regulations led to a lending boom to fuel a self-generated stimulus to compensate for the slowdown in its main Western export markets (Tooze, 2018). The divergent directions of financial markets in the UK and China after the crisis meant that there were different reasons why FinTech became a desirable policy object for financial regulators in each county.

FinTech as a regulatory object

In the UK, FinTech applications of digital technologies accelerated and gained considerable ground during the post-crisis period of regulatory push back. It is tempting, therefore, to regard FinTech experiments in economies such as the UK as merely another manifestation of innovation in the face of regulatory arrangements. Indeed, given the non-bank status of the vast majority of specialist FinTech firms, some political economy accounts have claimed that FinTech might be seen as a further manifestation of shadow banking innovation, where institutions operating outside traditional forms of banking regulation gain competitive advantage and capture business from incumbents (for example, see Buchak et al., 2018; Nesvetailova and Palan, 2020). But FinTech is better understood as a novel and highly capitalised political economy that seeks to fundamentally reintermediate money and finance through the infrastructures, socio-technical configurations and business models of platforms (Langley and Leyshon, 2021). Regulation is thus not merely a matter of reclassifying and folding FinTech firms into extant banking and financial regulations. In

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Ford's (2017: 25) terms, 'the challenge that innovation presents … is not just about regulation "keeping up". It is about regulation maintaining its bearings and its capacity to pursue its mandate even as innovation alters the terrain around it'. The changes wrought by the platform political economy of FinTech are raising 'basic definitional questions' for financial regulators about their existing approaches and formulations (p. 142). As Ford continues:

> That aspects [of FinTech] should be regulated is surely indisputable, but its imprecise boundaries have posed questions of who the regulator should be, which players or activities fall within this space, and what effective regulation would look like.

Rather than encouraging a narrow set of actions at the regulatory boundary between banking and non-banking, the platform political economy of FinTech is provoking significant and deeper responses from financial regulators who have increasingly become active participants in its development.

The emergent global regime of FinTech platform regulation is rendered highly complex, however, by both the discrete and territorially variegated relational geographies of FinTech ecologies and the sovereign territoriality of the extant financial regulatory spaces into which platforms have recently arrived. Coming together in place—in a hybrid of existing financial and technology centres, including New York, London, Paris, San Francisco, Shanghai, Singapore and Frankfurt in the former category, and Beijing, Mumbai, Berlin, Paolo Alto and Hangzhou in the latter (Haberly et al., 2019; Lai and Samers, 2021; Wójcik, 2020a)—FinTech ecologies are diverse combinations of financial and socio-technological knowledge, platform business models, pools of venture capital, and so on. Institutional structures variegate and differentiate FinTech ecologies in important ways, not least the extent to which BigTech platforms are present and leveraging network effects to offer retail monetary and financial services (Langley and Leyshon, 2021). How precisely national authorities apprehend FinTech as an object of regulation is shaped by the more-or-less distinct and evolving platform ecologies which confront them. At the same time, the sovereign-territorial geographies of financial regulation and international competition discussed above shape how FinTech platform regulation proceeds in different national settings. FinTech platform regulation is entangled with the persistent problems of how to regulate financial economies to enhance competition and consumption alongside stability whilst, at the same time, enabling innovation and appropriate risk-taking. It is also interwoven with related and more fundamental questions about the role of finance and financial regulation in state strategies for national economic development. The objectives of national financial regulators in one part of the world may not necessarily match those of regulators elsewhere, and even if they do, they are unlikely to have the same capacity to put them into effect.

Thus, the World Economic Forum, a high-profile advocate of smooth, seamless and frictionless global markets, has expressed doubts that a unified global FinTech economy is likely due to the United States, Europe and China having '[d]iffering regulatory priorities, technological capabilities and customer conditions' (McWaters and Galaski, 2017, 27). Indeed, they drew attention to the emergence of different regional models of FinTech platform regulation that are, in effect, grounded in the relational and sovereign-territorial geographical complexities noted above (Bassens and Hendrikse, 2022). This in part reflects the way in which FinTech is framed as a means of helping to deliver policy objectives within different development contexts. Ioannou and Wójcik (2022, 58) argue that this distinction broadly conforms to a geographical divide between 'developing and developed markets, with FinTech focusing on "banking the unbanked" in the former and "transforming banking" in the latter'. In the following two parts of the paper, we further interrogate and analyse the divergent forms of FinTech platform regulation, beginning with Europe's leading FinTech economy, the UK.

Regulating *with* platforms

FinTech platform ecologies in the UK are multiple and dynamic, covering all sub-sectors such as payments, savings and investment, insurance, crowdfunding and peer-to-peer (P2P) lending, and credit for different and differentiated groups of borrowers. Ecologies feature a plethora of specialist FinTech start-ups and early-career firms experimenting with various business-to-consumer (B2C) and business-to-business (B2B) platform business models. As such, although the UK accounts for a 10% share of global FinTech activity, it is nonetheless home to relatively few of the world's FinTech 'unicorns' (that is, privately owned FinTech firms valued at over $1 billion) (Kalifa, 2021, 6). By virtue of its dense 'ecosystem' of interconnected and interdependent firms, London sits near the top of various rankings of the leading global FinTech hubs (Ben et al., 2018).[2] Meanwhile, according to the EY Global FinTech Adoption Index 2019, 71% of the UK's digitally active population make use of FinTech platforms, placing it 10th in a set of rankings dominated by countries from the Global East and South (EY, 2019).

For UK regulatory authorities and governing elites, FinTech platforms are widely held to provide technical solutions to deliver a national financial system that successfully balances innovation, competitiveness and economic growth with financial stability. Christophers notes that the British government has put on record its belief that platforms possess the capacity to act as effective regulators of

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a wide range of activities, and in ways that might supplant traditional forms of public supervision and oversight:

> In its January 2016 response to an EU public consultation on digital platforms, the government set out its stall with striking clarity. Not only, was it argued, did digital platforms deliver 'a wide range of benefits to both businesses and consumers', leading the government to categorically reject 'any form of regulation that would undermine [those] advantages; the government also laid out its belief that the new breed of *digital platforms themselves might actually serve as a quasi-regulatory force in the economy more broadly: they could do the work of regulators—and somehow do it better*' (Christophers, 2020, 203, emphasis added).

In the domain of financial services, FinTech platforms appear to have at least three inherent qualities that appeal to UK regulators.

First, in terms of consumer regulation, FinTech platforms are viewed as advancing an inclusionary approach informed by behavioural economics which, in the wake of the GFC, has held sway at key institutions such as the Financial Conduct Authority (FCA). When summoning up segmented populations of consumers as 'users', data-based platforms are held by regulators to be able to deploy algorithmic analytics which can more effectively 'know' consumers and better tailor products and services to their needs. This makes it much less necessary to devise regulations to counter poor consumer decision-making, grounded in perceived apathy, herd behaviour, and misunderstandings. For example, during his tenure as Governor of the Bank of England, Mark Carney (2017) argued that the challenge of consumer regulation is fundamentally different when '"robo advisors" are deploying algorithms to deliver affordable investment advice to retail customers', and when 'customers become more willing to delegate decision-making to machines' which ensure 'their funds and loans are being better matched with the best rates from around the system' (pp. 5-6).

Second, regulation with platforms is attractive because UK authorities sense the potential to further domestic competition by 'disrupting' the stranglehold on intermediation enjoyed by banks. The promise of FinTech here is delivery of a financial services market full of legacy-free, nimble customer-focussed firms that capitalise on data to better solve the chronic problem of information asymmetries in financial services. Increased competition in financial services is thus not created by rule changes and regulatory restrictions on incumbents, but in part by granting banking licences to B2C FinTech platforms which can operate as online-only 'app banks'. Moreover, the Competition and Markets Authority (CMA) (2016) proposed an Open Application Protocol Interface Standard for banks operating in the UK to promote 'rivalry' by freeing up access to market information. Open APIs enable developers from outside of banks to access data that can be used to enhance their own applications. This 'open banking' initiative, the CMA argue, will 'facilitate the growth of a dynamic intermediary sector … with the ability and incentive to help customers obtain better terms from their current providers or switch to new products or providers which offer better value' (2016, page 442–3). At the heart of open banking in the UK is a belief that innovation by agile FinTech platforms can be harnessed to advance domestic competition for consumer benefit, with the added benefit that 'FinTech could reduce systemic risks by delivering a more diverse and resilient system where incumbents and new entrants compete along the value chain' (Carney, 2017: 13).

Third, in terms of regulation for financial stability, FinTech platforms appear to be able to contribute to the production of a UK banking and financial sector that is 'compliance ready'. Indeed, one B2B sub-sector of FinTech is oriented precisely to the delivery of financial regulatory requirements: 'RegTech' seeks to deliver a competitive advantage to financial institutions in responding to and confirming compliance requirements (Wójcik, 2020b). Underpinning RegTech is the centrality of data and algorithmic analytics to all FinTech platforms. RegTech business models offer solutions that promise consistent, up-to-date and even real-time data in line with regulatory requirements. Traditional financial institutions are hampered in this regard by the constraints and limitations of often long-standing legacy systems (Duchamp, 2016). RegTech platforms have been enthusiastically supported by UK regulators who regard them as helping firms to meet their regulatory requirements and improve the quality of the information they provide, thereby making financial regulation more effective. For example, in conjunction with the FCA, the Bank of England has been undertaking a series of 'proof-of-concept' experiments with RegTech firms to identify projects and technologies that might be developed and distributed across the sector more broadly (Bank of England, 2019).

Significantly, it is this third quality of FinTech platforms that UK regulators see as key to providing the prospect of charting a path that effectively balances innovation and stability, such that regulation *with* platforms is key to nurturing a financial system that 'maximises the opportunities and minimises the risks for society' (Carney, 2017). Thus, innovations and regulations by FinTech platforms can be safely embraced as part of a territorial state strategy to relaunch the City of London as a centre for global financial services in the wake of the damage caused by the GFC, but especially the UK's exit from the European Union (Hall and Heneghan, 2021). Regulation *with* FinTech platforms in the UK is, at once, both socio-technical and political-economic. By 2021, this strategy became explicit as the UK government commissioned a review to, in effect,

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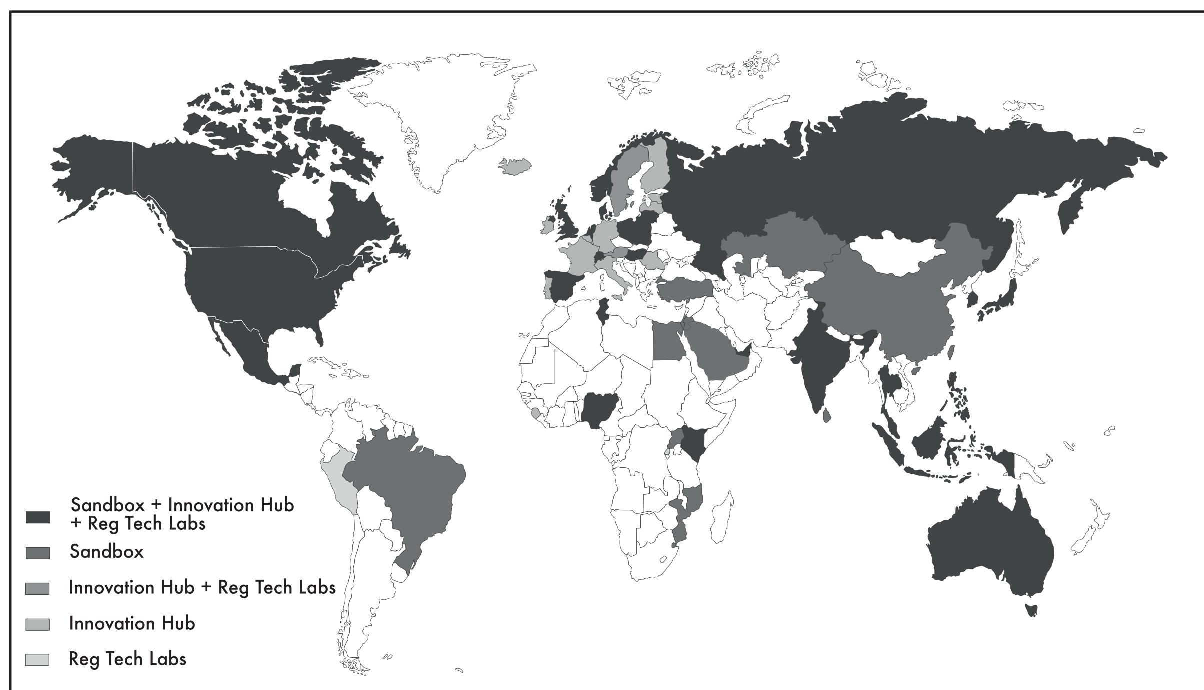

Figure 1. The global distribution of FinTech Sandboxes, Innovation Hubs and Reg Tech Labs, 2020 (Source: adapted from World Bank, 2020).

relaunch the FinTech sector following Brexit. The ensuing report, led by the former CEO of global payments technology company Worldpay (Kalifa, 2021), made an enthusiastic case for a series of policy recommendations to ensure that the UK emerges as a leading global space for FinTech. The areas covered by recommendations include skills, investment, internationalisation, national connectivity and, critically, policy and regulation. Key to the regulatory recommendations made by the Report is the notion of the 'scalebox', which both registers the success of the UK in initiating so-called 'regulatory sandboxes' (Eichengreen, 2021; The World Bank, 2020), and references the future challenge of tapping investment to scale-up the relatively small FinTech platform enterprises based in the UK.

In crucial respects, the pioneering of regulatory sandboxes exemplifies how UK authorities have turned to FinTech platforms to both address perennial problems of financial regulation and boost the international competitiveness of financial services. A 'regulatory sandbox', a concept drawn from computer science and software development, provides 'a controlled, time-bound, live testing environment, which may feature regulatory forbearance and alleviation through discretions' in which '[t]he testing environment may involve limits or parameters within which the firms must operate' (The World Bank, 2020, page v). It is a way for FinTech platforms to test innovative data-based and data-driven business models and products prior to commercial availability while, at the same time, ensuring consumer protection and regulatory compliance. New and potentially radical innovations have a chance to make their case, while bugs and risks can be tested and fixed. The intent is to create what is known as 'contestable verticals', markets in which innovative platforms can compete while being regulatory compliant and—critically—'safe' while delivering tangible benefits to consumers. While the efficacy of regulatory sandboxes has been questioned—e.g. Brown and Piroska (2021) argue sandboxes merely deliver 'riskwashing', wherein financial products or processes are merely given a patina of approval but not actually derisked—they have nonetheless provided an important totem internationally that registers the UK's regulatory embrace of FinTech, and recognition among other regulators that the UK is a key reference point in learning how to regulate with FinTech (Ioannou and Wojcik, 2022; World Bank and CCAF, 2019). Indeed, in the wake of their introduction in the UK, FinTech regulatory sandboxes have become widely adopted elsewhere, with the World Bank identifying over 70 examples in almost 60 countries at various degrees of development and comprehensiveness (The World Bank, 2020) (see Figure 1).

Regulating against platforms

FinTech is ubiquitous and widespread in China. The country leads the EY Global FinTech Adoption Index 2019 (EY,

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2019), with 87% of its digitally active population regularly making use of FinTech platforms:

> The rise of fintech in China has been unmatched elsewhere. Cash has vanished from cities, replaced by mobile and QR payments. Tech groups processed 210trn yuan ($32trn) in payments in the first nine months of 2020, twice the amount in 2016. Consumers often manage wealth products or buy insurance on their phones; borrowing to shop on virtual malls has never been easier. Tech firms helped broker trillions of yuan in microloans last year (The Economist, 2021)

Analysing the rise of FinTech in China, Gruin and Knaack (2019) identify an apparent contradiction critical for understanding how platform regulation has developed there. On the one hand, part of the narrative that surrounds FinTech platforms, often amplified and recirculated by firms themselves, is that they are 'disruptive'. Yet, given the long-term emphasis that the CCP places on social stability, why would such an authoritarian government support and align itself with a FinTech sector that seeks to outcompete the traditional banking sector which has underpinned and funded the economic transformation of the economy over the past 40 years? There would appear to be at least two reasons.

Firstly, FinTech platforms in China were considered necessary agents of transformation, bringing financial changes that would further the CCP's longer-term objective of economic development that justified and consolidated its power in all aspects of life. The post-GFC stimulus entrusted to the banks was being distorted by the traditional focus of the large state banks on China's state-owned enterprises, which meant that they were ill-suited to develop the kinds of consumer financial services that would facilitate retail consumption and a more autarchic form of economic development, that was less reliant upon international exports. As late as 2013 the antiquated nature of retail financial services in China suppressed consumption:

> Everyone went about their daily transactions paying in cash … Banks offered credit cards to only an elite few. All debit cards bore the mark of the only player in the market: a state monopoly called UnionPay, and most merchants didn't accept them. Cash was hardly a convenience. Fraud was rampant, and even the tiniest local restaurant would obsessively run any bills through a scanner to detect counterfeits (Chorzempa, 2022, 10–11)

Combined with the distinctive institutional structure of China's FinTech platform ecologies, this is material to the way FinTech is regulated. After an initial period of 'benign neglect' of technology companies in the first decade of the 21st century' (Chorzempa, 2022, 29), Chinese financial regulators began to support the growth of non-bank credit institutions—especially the three largest platform firms, Baidu, Alibaba and Tencent (or 'BAT'), which each developed FinTech spinoffs—because these firms shifted power away from China's large commercial banks and made credit more readily available and accessible to low-income groups, facilitated middle-class consumption, and supported economic growth (Gruin and Knaack, 2019).

The second reason was the data that FinTech firms routinely collect on their consumers, one of the key competitive advantages such firms hold over their rivals. BigTech FinTech platforms have been leading players in China's social credit scores which, through formal and informal cooperation with the state, has seen credit rating methodology adopted to create a broader range of social and political benchmarks to which citizens are expected to conform (Botsman, 2017; Kobie, 2019). For example, leading platform Ant Financial—the FinTech arm of Alibaba—developed its own private social credit scoring system Zhima Credit, more widely known as Sesame Credit, which is used by many local government authorities in China (Chorzempa, 2022; Kobie, 2019).

For much of the 2010s, then, although for somewhat different reasons to those identified by their counterparts in the UK, Chinese authorities enacted an approach to FinTech that sought to regulate *with* and *by* platforms. As in the UK, Chinese regulators regarded FinTech platforms as weakening the positions of traditional banks that were stifling competition and acting too conservatively in terms of financial inclusion and economic growth. But there is also an important difference: while China's large FinTech platforms may be seen as seeking to change the behaviour of individuals, and to encourage them to make 'better decisions', these decisions were not limited to the nudges and tweaks of behavioural economics as favoured by regulators such as the FCA in the UK. They also extended into other areas of life which the CCP wishes to control in the interests of social order, through the creation of a new form of algorithmic governance (Gruin, 2019; 3). FinTech regulation with platforms in China exhibited 'the Chinese political economy's distinctive traits of deepening marketisation combined with strong authoritarian state capacity' (ibid). Regulation by FinTech platforms delivered two outcomes: economic growth *and* government control (Wang, 2021). Growth was encouraged as FinTech firms not only accelerated domestic consumption but also 'banked the unbanked'. App use increased rapidly within all social groups (Chorzempa, 2022), while control was extended over the population through credit rating scores transforming into social credit analytics which encouraged expected forms of behaviour. Algorithmic governance also helped to further shift power from the large Chinese banks to the government, or at least its proxy in the form of financial regulators, because FinTech platforms worked

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much more closely with government to preserve their political support.

Nonetheless, at the same time, the approach taken to FinTech in China over the last decade or so has not simply been one of regulation with and by platforms. Prior to 2010, Chinese financial regulators were certainly permissive towards FinTech providers of third-party payments, such as Alipay and WeChat Pay, even allowing overseas firms to operate in an environment of relatively light regulatory oversight and permitting extensive innovation around new products and processes. But from 2010 onwards, and especially after 2014 (Wang, 2021), successive rounds of regulation have increased political control over the financial sector as a whole, excluding foreign capital, including the introduction of a new centralised settlement system through which FinTech platforms were forced to transact, so making their activities immediately visible to regulators (Liu, 2021, 982). Therefore, Chinese authorities have gradually moved *against* platforms and increasingly sought to enact the regulation *of* platforms.

One reason for this shift is the financial fragility produced by the prolific expansion of FinTech platforms. For example, much of the lending facilitated has been highly leveraged, particularly in the crowdfunding and microloan markets, which had previously been encouraged to address credit gaps among underbanked populations (Wójcik, 2020b). As Chorzempa observes (2022, 128–9), the rush to new forms of finance to encourage financial inclusion was permitted by lax regulatory oversight with regard to some forms of lending, such as crowdfunding, which expanded rapidly up to 2015. In 2016, over 1,000 small FinTech platform firms were identified as problematic, with the majority—more than 900—being closed the same year (Wang and Dollar, 2018). During this period, Chinese regulators were largely supportive of the growth of the FinTech subsidiaries of the giant platform firms which moved in to stabilise the market. However, by the end of 2020, attention was turned to what Liu identifies as the key 'steering object' of China's authorities' attempt to regulate against BigTech Fintech platforms, namely Alibaba's Alipay and ANT Financial (Liu, 2021, 984; Fried and Kamar, 2021). In November of that year, after its CEO, Jack Ma, made public criticisms of financial regulations operating at an international and, crucially, at a national level in China (Yang, 2020), the planned initial public offering of Ant Group, the financial spin-off from Alibaba, was cancelled by authorities. Ma was summoned for interrogation by regulators at the Shanghai Stock Exchange to address 'major issues' (McMorrow and Lockett, 2020).

This crackdown on Alibaba's FinTech business heralded a wider review of FinTech platform regulation that included new capital adequacy requirements to cover bad loans, thereby removing one of the competitive advantages platforms held over traditional banks. New regulations included: measures to reduce the role of leverage—and therefore risk—by requiring FinTech firms to cover 30% of all loans made (compared to 2% typical for the microloans brokered by Ant, for example); requirements to share all credit data collected for purposes of risk assessment with a central regulatory database; and a stronger role for state authorities in the regulation of FinTech platforms in the future. The latter of these initiatives will centre on enhanced use of regulatory sandboxes to not only test new FinTech products, but to do so with the statutory involvement of partners from the traditional banking sector with the overt aim of coupling FinTech platform innovation with the business of the large state banks (The Economist, 2021). Further pressure is also being exerted on Chinese FinTech platforms by restricting their ability to access foreign capital, and forcing Ant's parent company, Alibaba, to divest its media assets to reduce its broader influence among Chinese consumers (McMorrow, 2021; Sweeney and Davidson, 2021). These ongoing and intensifying regulatory moves against platforms have combined to create sharp falls in the market capitalisation of the major Chinese FinTech companies in the markets in which they were listed (Lockett, 2021). This process can be seen as part of a wider movement in China in which its version of platform capitalism has moved 'from the periphery to the center of Chinese state capitalism, while subject to the regulatory pendulum of the state' (Zhang and Chen, 2022, 15).

Conclusions

Debates about platform regulation have come to the fore across the globe since the mid-2010s (Flew, 2021; Törnberg, 2023). In the prevailing critical and popular imaginary, the regulatory authorities of sovereign-territorial states across the world are now grappling with the economic power of a handful of global BigTech companies that dominate platform capitalism. Given the first-mover advantages and network effects of platform economies, longer-standing tendencies to the concentration of corporate power crystalise with particular force as the leading private platform companies have rapidly become the providers of public digital infrastructures (Grabher and Konig, 2020; Kenney and Zysman, 2016; Langley and Leyshon, 2017; Peck and Phillips, 2021; Srnicek, 2016).

Set in this wider context of public and academic debates about platform regulation, our analysis of FinTech platform regulation has underscored how economic geographies matter in crucial respects. First, we have shown how platform regulation is shaped by existing regulatory problematics, authorities and arrangements that already govern economic domains in which platforms have recently arrived and are rapidly becoming the dominant business-organisational form. The novel platform political economy of FinTech is being variously absorbed into the existing practices of national financial regulation that, to some degree at least, it seeks to challenge and circumvent.

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It, therefore, tends not to register as a separate and distinct focus for regulatory attention. But this is far from uncommon in platform capitalism. In his overview of platform regulation, Flew (2021) argues that once we move beyond the prevailing 'techlash' imaginary of sovereign states versus BigTech platforms, a veritable array of overlapping institutions, interests and ideas frame the problem of platform regulation in very different ways, and typically pose solutions which are equally heterogeneous. This is partly a consequence of the ways in which platform economies have developed across and between multiple economic domains. Intellectual property regimes and media and communications policies may be core to the governance of concerns about privacy and security, personal data, algorithms and so on which have been provoked by the power of BigTech platforms (Flew, 2021: 72–133). However, rules on taxi licencing, short-term housing rental and sickness and holiday pay can, for instance, be highly significant to platform regulation within and across economic domains (Graham et al., 2017; Vallas and Schor, 2020).

Second, our analysis has stressed how national platform regulations are produced at the intersection of relational and sovereign-territorial economic geographies. As we have shown for FinTech platform regulation in the UK and China, the distinctive institutional configurations of variegated relational platform ecologies and different territorial state regulatory and economic strategies can combine to produce divergent understandings of platforms and their regulation (Zhang and Chen, 2022). Key to regulating *with* and *by* platforms in the UK and the regulation *of* and *against* platforms in China is not merely contrasting territorial regulatory regimes and state forms, but also the presence of particular and discrete institutional structures and relations in each of these countries' FinTech ecologies. More broadly, as Flew (2021) highlights, platform regulation is taking place in a far from homogenous global digital economy. This is a consequence of geo-political competition, tendencies towards the so-called 'splinternet' and how different kinds of platforms are emerging and developing in different economic-geographical contexts. Territorially variegated institutional structures shape the ways in which platform ecologies are absorbed into existing national regulatory practices.

Alongside these implications for wider-ranging debates about platform regulation, our account of divergent approaches in the UK and China also has analytical and political implications for engagements with more specific issues of FinTech platform regulation. Financial institutions traditionally depict regulatory practices pejoratively as 'red tape' that 'get in the way' of innovation and expansion at the margins of private banking. But financial regulation is much more than that. It is fundamentally political, crucial to balancing different interests and stakeholders, including: financial capital; the economy in general; civil society, and; the state itself. As such, regulatory responses to FinTech set the stage for different kinds of platforms and ecologies which can be seen as reflective of different understandings of the way in which the monetary and financial economy works and *what it is for* (see, for example, Tooze, 2022). In the UK, at present, FinTech regulation with platforms offers up hope of a kind of automated regulation, a *deus ex machina*. If the ground rules are set and it can be ensured that the products and services are risk-tested beforehand, then financial services might be released into the world that are compliant with the main goals of financial regulation and also international competitive. But the politics of this approach to FinTech platform regulation is opaque, submerged in the less-than-transparent rules and guidelines of regulatory sandpits. In China, meanwhile, FinTech is also being used to deliver political ambitions for the economy, but here the politics are more clearly on display as authorities increasingly shift to an approach of regulating against platforms. The CCP would seem to take a far more instrumental 'means justifies the end' view of FinTech platform regulation, as Johannes Petry has argued in relation to the regulation of its financial system more generally (Petry, 2020). It may well, therefore, be that FinTech platform regulation is becoming increasingly significant to the politics of finance at a global scale, wherein surface similarities across national regulatory responses to the rise of FinTech mask fundamental differences which revolve around the social and economic purpose of money and finance.

Endnotes

1 Gillespie makes a similar distinction between regulation *by* and regulation *of* platforms, but his focus is restricted to platforms that host shared content and social exchanges, and in particular on the regulatory frameworks imposed on platforms, seeking to determine how 'the major platforms enact those obligations and impose their own on their users' (Gillespie, 2017, 255).

2 See also, for example, Findexable's Global FinTech city ranking for 2020. https://findexable.com/wp-content/uploads/2019/12/Findexable_Global-Fintech-Rankings-2020exSFA.pdf [Accessed 4 March 2023].

Acknowledgements

We are grateful to Karen Lai for inviting us to give a provisional version of this paper at a workshop on Emerging Production Networks of Fintech, hosted by the *Global Production Networks Centre,* National University of Singapore. A long gestation period saw the paper appear at numerous fora over the intervening period, and we thank Mia Gray for inviting us to contribute to this theme issue, giving us the motivation for a full revision. We also acknowledge the very helpful comments of the referees of the original submitted version that helped improve the overall argument.

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