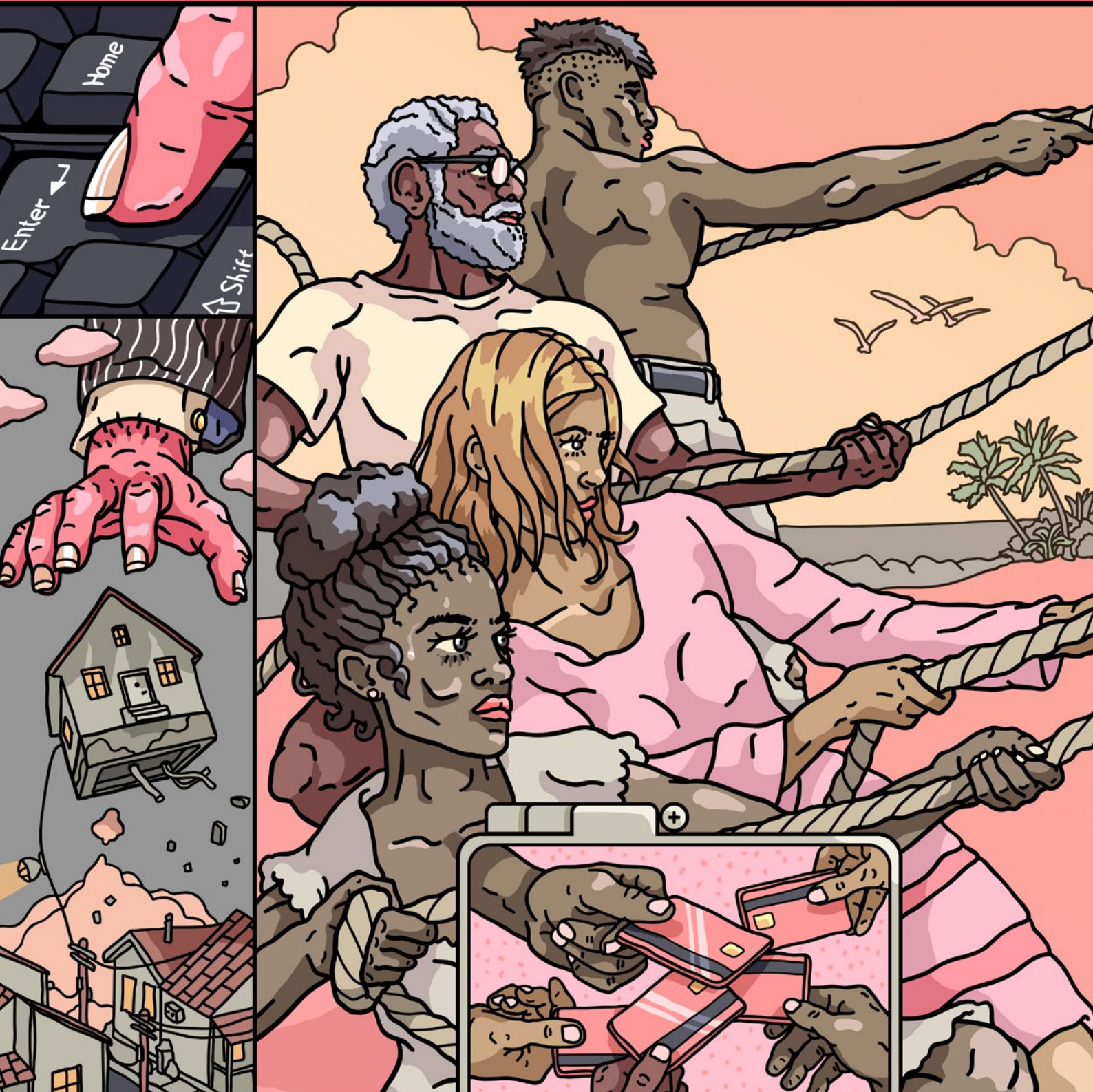
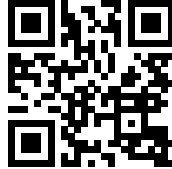


The Promises and Perils of Investor-Driven Fintech: Forging People-Centered alternatives



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Executive Summary

This paper examines the spectacular rise of 'fintech' (financial technology), an innovation that constitutes an historic discontinuity in the structure, operations and conduct of financial systems everywhere. The aim is to provide a much-needed corrective to the rapidly proliferating myths and falsehoods surrounding the capacity of fintech to address poverty and promote sustainable and equitable local economic and social development in Low- and Middle-Income Countries (L&MICs) by extending 'financial inclusion'.

We point out that the basic fintech model is actually an 'investor-driven' fintech model that has evolved to overwhelmingly serve the private enrichment and ideological agendas of a narrow global elite composed of venture capitalists and leading investment institutions, the world's major financial, telecom and digital payments corporations, the main international development agencies (especially the World Bank), well-financed digital advocacy bodies (notably the Bill and Melinda Gates Foundation), the major consultancy companies, and several leading governments in the advanced countries. We argue that the fintech model is being 'sold' to governments in the L&MICs on the basis of an almost entirely false premise – that it will deliver major economic and social benefits to *all* citizens – when the evidence suggests otherwise.

The poor have undoubtedly enjoyed many initial gains as a result of the spread of fintech applications, including reduced costs of, and greater access to, many important financial services. These are not inconsequential benefits. However, like many financial innovations, the initial gains for the poor in L&MICs are increasingly being offset into the medium-to-longer-term by a number of developments that work to undermine and block poverty reduction and sustainable local economic development.

These developments include:

1. overlending to microenterprises in the informal economy that has led to destructive competition, falling revenues and incomes, and unviable or short-lived microenterprises;
2. the use by crowdfunder and P-2-P lenders of impersonal algorithmic screening methodologies that are disembedded from communities, prone to damaging herd instincts, and driven by the need to maximise short-run financial returns. They avoid support for formal growth-oriented Small and Medium Enterprises (SMEs) that require 'patient' long-term, low-cost capital and a local eco-system of institutional support and that are better suited to contributing to sustainable economic and social development;
3. corporate exploitation of payments streams and remittance flows that undermine the functioning of important social solidarity networks;
4. massive expansion of individual over-indebtedness, particularly of young people, that leads to poverty, increased vulnerability and suffering;
5. the creation of a more sophisticated criminogenic environment;
6. above all, ushering in an entirely new form of 'digital extractivism' that is lavishly rewarding global investors and providing a boost to the advanced economies through profits repatriation, while hindering the development of the economies of the L&MICs and causing seriously adverse social impacts, notably rising inequality.

We end the paper by briefly discussing the potential of a practical alternative to the dominant investor-driven fintech model. The experience of a 'popular fintech' model that has been deployed since the mid-2010s in the city of Maricá in south-eastern Brazil shows how it is possible for basic fintech applications to be directly used to promote the common good. Piloted by the city government and involving a community digital currency, the *Mumbuca*, that is managed by the city-owned community development bank, the *Mumbuca Bank*, the emerging 'Maricá Model' has deployed basic fintech applications in such a way as to substantively address local poverty and rising inequality, promote sustainable local enterprise development, extend social justice through the retention and reinvestment of community-based wealth, and to enhance democratic participation in economic life. Maricá's 'people's fintech' model provides numerous pointers as to how governments in the L&MICs might deploy and manage basic fintech services on behalf of the many and not just the few.



1. Introduction

By exploiting technologies that were originally developed by the public sector, digital platform companies have acquired a market position that allows them to extract massive rents from consumers and workers alike. Reforming the digital economy so that it serves collective ends is thus the defining economic challenge of our time.

– Mariana Mazzucato (2019)

Innovation can have good and bad effects, and those positive and negative outcomes are typically unevenly distributed. Choices about innovation are therefore complex and often contested, and the selection environment that weeds out the 'bad' innovations is not something that can be taken for granted.

– Alex Coad, Paul Nightingale, Jack Stilgoe and Antonio Vezzani (2020)

(T)he history of financial innovation is littered with examples that led to early booms, growing unintended consequences, and eventual busts.

– Mark Carney (2017)

Financial technology, or 'fintech', is a widely celebrated recent innovation. Defined as '[c]omputer programs and other technology used to support or enable banking and financial services',¹ fintech comes in many guises. In its very simplest form – the subject of our analysis² – fintech involves a greatly enhanced ability to transact financial services via a mobile phone or smart device, making it easier, cheaper and quicker, for instance, to (1) obtain a loan; (2) make a savings deposit; (3) transfer and receive money; and (4) pay for and be paid for goods and services. Beginning with Kenya's M-Pesa in the late 2000s, along with major advances in fintech applications in China, the impression was created that technology, markets and finance were combining to significantly improve everyone's lives around the globe. Some of the most enthusiastic advocates even began to argue that fintech will re-engineer capitalism towards "sustainability, equality and the advancement of humanity as a whole", thus ushering in a new 'golden age' of abundance and prosperity.³

The excitement created among influential international development organisations was especially intense. Fintech appeared to open up an opportunity to massively accelerate sustained poverty reduction and local economic development throughout L&MICs. This goal would principally be achieved by achieving ‘full financial inclusion’. While several earlier ‘bottom-up’ interventions and innovations had failed to address global poverty in spite of significantly extending financial inclusion, most notably with the help of the now discredited microfinance model, this time would apparently be different. Given the right conditions and support, fintech could achieve ‘full financial inclusion’ almost everywhere. Promoting the right conditions for fintech to expand worldwide quickly became a high-profile area of operation, funding and lobbying among some of the most influential international development organisations. Global poverty seemed to be on its way, finally, to being consigned to history.

This paper explores how this seductive narrative is a fundamentally flawed and inaccurate portrayal of the emerging reality. While it is clear that fintech offers a major opportunity to improve the lives of the poor if done right, and it has had some important initial successes, its full long-term impact looks far less rosy given the way that it has been operationalised to date. Objective analysis of the empirical evidence and trends suggests that the initial ‘honeymoon’ gains are now beginning to be offset, if not entirely swamped, by the emerging downsides. These downsides arise, we argue, not because of the technological innovations that underpin the fintech model, which are clearly innovative and ‘work’ in a strictly technical sense. Rather, it is because the fintech model is structured almost everywhere to operate under a neoliberal governance framework. In other words, the fintech model is evolving in ways that overwhelmingly serve the narrow interests of a powerful group of investors, financial, telecom and digital payments corporations, international development agencies, philanthropic bodies, western governments, and other stakeholders also dedicated to advancing their own private enrichment and ideological agendas. What we might therefore term as the ‘investor-driven’ fintech model is being impressed upon governments in the L&MICs on the basis of a largely false prospectus.

The COVID-19 pandemic has also highlighted the importance of creating the right kind of financial support for vulnerable communities. Economic and social reversals are destroying lives and communities in many countries, especially in the lower-income nations. The fintech model was given an enormous boost when it was widely thought that it could play an important defensive role against COVID-19. Its perceived advantages included avoiding the use of potentially virus-contaminated cash, or the need to go in person to ‘brick-and-mortar’ financial institutions to obtain financial services. As a result, in a very short period of time, fintech has been significantly extended in almost every part of the world. This ubiquity has led a growing number of senior international development officials and other analysts to see it as playing a major part in the post-COVID-19 recovery.⁴ Now more than ever, therefore, we need to understand how and for whom the fintech financial model functions, and how it might play a positive role in the so-called ‘build back better’ effort in the wake of COVID-19.

The initial benefits of fintech for addressing poverty have been exhaustively lauded in a welter of publications produced, commissioned, funded and promoted by influential international agencies (notably the World Bank) and by other corporate, philanthropic and private supporters of the fintech model.⁵ It is true that easier, cheaper and quicker access to a range of financial services can open up new opportunities to improve the lives of all citizens and communities. Until recently,⁶ however, there has been very little policy-oriented analysis that critically examines the

potential longer-term downsides of fintech, particularly for people living in poverty. There has been even less discussion on whether there might be alternative models of fintech to the dominant investor-driven version and, if so, whether and how they might function better for the economy and society. This discussion paper seeks to address this research gap.

We begin by briefly outlining the history of fintech in the L&MICs and how it was that it went on to capture the interest of governments. We then go on to list the ways the investor-driven fintech model may both fail to meet its promises, and in the longer term, could undermine the lives and communities of those living in poverty. At the same time, there are other models of fintech from which we can learn. In the final section, we outline the emerging results of an experimental economic and social development model in the city of Maricá in south-east Brazil. This local model is built around fintech applications that function in a radically different way and has very different results. We might call this new 'people-centred' form of fintech a kind of 'popular fintech'. While still a very modest initiative with many strategic and operational issues yet to be fully resolved, it has nevertheless enabled a number of impressive local economic and social advances that have been consolidated and extended during the COVID-19 crisis. The 'Maricá model' shows that it is perfectly possible to deploy a range of basic fintech applications that support sustainable long-term local economic and social development while also advancing key objectives of social justice, dignity, equality, democracy and empowerment.



2. The origins of fintech: Out of Africa

It is widely agreed that today's burgeoning global fintech industry can be traced back to an experiment in Kenya that began in the late 1990s. The UK's bilateral agency (then the Department for International Development, DFID) was exploring how to improve access to financial services in African countries in which it had a presence. With many international development agencies, including DFID, then regarding the microcredit model as the required core of an anti-poverty policy,⁷ the plan was to see how more microcredit might be delivered to the remotest parts of Africa relatively unreached by financial services. Making more microcredit available to disadvantaged regions would supposedly result in more poverty reduction. As mobile phones were becoming very common in Kenya and, crucially, being used in a quite unconventional way to transfer money between individuals in the form of mobile phone time, it was realised that this spontaneous innovation might provide the answer. With a £1 million DFID grant to a team from the UK multinational Vodafone, a pilot product was developed that would use mobile-phone technology as a platform to deliver microcredit. Thus began the story of M-Pesa, Kenya's agent-assisted, mobile phone-based, person-to-person payment and money-transfer system.

Although M-Pesa was initially conceived as a way of providing more microcredit to the poor, it was soon found that many people were actually more interested in being able to transfer money. The focus of M-Pesa's activity therefore shifted in this direction. By 2005 a period of testing began and it was shown that the concept and technology would work well in the field. M-Pesa was then formally launched in March 2007 as a unit of the Safaricom company, in which Vodafone had a controlling share (40%) followed by the Kenyan government (35%), with the remaining 25% divided among a range of powerful (but initially un-named) Kenyan politicians and business-people (see Box 20) and several wealthy foreign investment bodies.

M-Pesa operates through a network of independent agents. These are individuals or small businesses willing to pre-buy mobile money that they (1) sell to customers wishing to transfer it elsewhere (termed 'cash-in'), or (2) exchange for cash money in return for mobile money that might have saved or been sent to them (termed 'cash-out'). Independent agents earn their incomes by servicing the needs of M-Pesa clients: the more clients and the larger financial sums an M-Pesa agent transacts, the more profit they earn. In order to maximise their incomes, these M-Pesa agents naturally tend to seek out communities with the most and/or wealthiest clients. Subsequently, the original aim to provide more microcredit was revisited, which resulted in Safaricom building on to

M-Pesa's money-transfer platform a dedicated microcredit facility, M-Shwari, which was launched in 2013. M-Shwari soon became one of the leading digital microcredit providers in the country.

Although an issue conspicuously ignored by virtually all fintech advocates, the almost instant commercial success of M-Pesa depended on it being gifted with a near-monopoly in Kenya for its services. Vodafone lobbied for this favourable market structure for M-Pesa. This involved the allocation of a sizeable volume of shares in Safaricom to a secretive Guernsey-registered shell company, Mobitelea Ventures, that was owned by a number of (then) unnamed Kenyan politicians and leading business-people. In return for being granted this stake in Safaricom, the shareholders in Mobitelea Ventures mounted a vigorous lobbying effort towards the Kenyan government to ensure a monopoly (see Box 20). Among other things, this market *unfriendly* tactic allowed M-Pesa to reach scale very quickly, and so keep its unit costs low, as well as making it possible for it to charge extremely high fees on its services (being forced by the Kenyan government to reduce them only during the COVID-19 crisis). Thanks largely to the contribution from its M-Pesa unit, Safaricom was soon enjoying rapidly rising profits. It quickly went on to become Kenya's largest company, eventually accounting for 40% of the total stock-market valuation on the Nairobi securities exchange. Growth and profits continued to shoot skywards. By the late 2010s, Safaricom was one of the world's largest and most profitable companies, delivering Wall Street-style financial returns to its shareholders and to its CEO and other senior managers (see Box 17).

M-Pesa essentially demonstrated the operational and commercial viability of four fintech-based services and the important advantages they offered to the poor:

Microcredit: a microloan can be instantly delivered to anyone who requires funds to start or expand a microenterprise or simply to better manage their daily cash flow.

Remittances: remittances and financial support from friends and relatives, wherever they are, can be easily and quickly sent and received through mobile money channels, thus heading off a personal emergency, allowing for a time-limited business opportunity to be exploited, or to underpin day-to-day spending.

Savings: savings are now more easily accumulated and are safer from common theft by the use of a secure internet-based account, which contributes to gradually reducing household vulnerability, promotes resilience, and makes funds available for business purposes or emergency needs.

Payments: payments for goods and services (especially wages) and other non-business financial transactions, such as social grants and pensions, are made easier and cheaper to send and receive, which reduces the costs of such services as well as helping to avoid problems of safe storage and delivery of cash.

M-Pesa's ability to provide these financial services to the poor through mobile phones and smart devices linked to a digital platform immediately confirmed that fintech was a major innovation with potentially significant implications for poorer countries. As it was a bilateral government agency, DFID, that took the lead in actually creating M-Pesa, this ensured that the wider international development community began to hear about this technological breakthrough and, crucially, its emerging commercial potential. Fintech was quickly portrayed as a way of bringing private-sector dynamism, foreign investment and new technological capabilities to 'developing' economies.

Inevitably, M-Pesa was anointed as the global 'best practice' example that governments should emulate.

Remarkably, although China was at the same time also heavily involved in promoting fintech applications, and was more advanced in many respects – an effort that by 2020 had made China the world's most significant adopter of fintech⁸ – the most influential international development organisations were largely dismissive of this progress. Among other things, China's fintech sector was (wrongly) seen as simply 'an extension of the Chinese government'.⁹ This gave rise to a fear that highlighting China's success might provide encouragement to governments in the Global South to also seek a more direct role for the state in promoting development and technological upgrades.¹⁰ Such a policy direction was something that the most influential international development organisations, especially the World Bank,¹¹ had long been trying to head off (and, despite its astonishing economic development success thanks to national and local 'developmental state' structures, even in China).¹²

By far the most immediate and very specific attraction of fintech insofar as certain international organisations were concerned was that it would add enormous impetus to their existing efforts to promote *financial inclusion*, defined by the World Bank as 'individuals and businesses hav[ing] access to useful and affordable financial products and services that meet their needs – transactions, payments, savings, credit and insurance – delivered in a responsible and sustainable way'.¹³ Born in the early 2010s, the narrative of wider financial inclusion was the response to the emerging reality that the microcredit model, once trumpeted as the most powerful anti-poverty policy of all time,¹⁴ was almost wholly ineffective.¹⁵ To ensure that its loss of validity would not fatally damage both the ideology of individual entrepreneurship and the legitimacy of corporate profit-making in the poorest communities, a replacement narrative was called for, which was found by simply extending the suite of financial services needed by the poor to include not just microcredit but also micro-savings, micro-insurance, micro-leasing, bank accounts, mobile payments, and so on. The term 'microfinance' soon came into vogue to describe this wider collection of financial services.'

Microcredit was still seen as of great use to the poor, but the emphasis on them *escaping* their poverty by using it to establish a microenterprise was largely dropped in favour of microcredit being just one of a range of financial tools the poor could use to better *manage* their poverty.¹⁶ Extending the range of micro-financial services to every poor individual around the world in this way was later on rebadged as 'financial inclusion',¹⁷ and thereafter this became the principal objective within the major international development organisations, led by the World Bank.

Rather awkwardly, however, the evidence that further extending financial inclusion would somehow positively impact on poverty was minimal.¹⁸ Indeed, even the World Bank's own evaluation unit was forced to conclude that it is "neither certain nor well understood" that financial inclusion can resolve poverty, "given the evidence that, in spite of modest benefits, the promise of microfinance pulling millions out of poverty has not been fulfilled".¹⁹

Nevertheless, 'full' financial inclusion became the central feature of the poverty reduction programmes deployed by many of the international development organisations, especially the World Bank. It was therefore seen as a wonderful serendipity that the emergence of the fintech model more or less coincided with the birth of the 'full financial inclusion' movement. The fintech model was instantly recognised as a brilliant way of securing this revised objective and, as a result, it soon became one of the most important areas of operation among many international

development organisations. Once again, the word went out that a massive reduction of poverty was just around the corner.²⁰

Poverty-reduction hyperbole aside, it was also critical to the widespread appeal of the fintech model that it could help achieve its newly declared ‘full financial inclusion’ objective while still generously rewarding the fintech-based institutions and their investors. In other words, while some pump-priming of public and international development investment might well be required to assist and de-risk initial investments in fintech, an investor-driven fintech industry would thereafter assume responsibility for its further expansion.²¹ While largely left unsaid, the fact that most of the profits were likely to be repatriated to the industry’s home-base in the wealthiest countries also enhanced the appeal of the fintech model to their domestic governments. Key governments were clearly interested in an ideologically acceptable, ostensibly anti-poverty, intervention that could be rapidly adopted in poorer countries, but which would also end up promoting opportunities for their own corporations and investors. (see Box 19).

Embedding the new fintech model in the Global South

By the mid-2010s, the fintech model was beginning to generate huge excitement in both the global investment community and among major international development organisations. Nonetheless, it was not a foregone conclusion that governments and elites in the L&MICs would welcome this innovation as much as had been anticipated. Many governments were inevitably fearful of any sort of continuation of the neoliberal corporate-enrichment Structural Adjustment Programme (SAP) policy packages that they had been forced to endure from the early 1980s and which caused tremendous damage to their economies and, especially, to their poorest citizens.²²

These fears led to a major coordinated lobbying effort designed to secure the support of governments and other key stakeholders in the L&MICs. Daniela Gabor and Sally Brooks describe this as a product of the ‘Fintech-Philanthropy-Development (FPD) complex’.²³ Spearheaded by the World Bank, particularly through its Consultative Group to Assist the Poor (CGAP) lobbying arm, the FPD complex also includes the US bilateral agency USAID, the G20 group,²⁴ the World Economic Forum (WEF), and the United Nations Secretary-General’s Special Advocate for Inclusive Finance for Development (UNSGSA).²⁵ As the world’s richest philanthropic foundation, and not least because it tends to view technology as the solution to almost all of the mounting problems of contemporary neoliberal capitalism,²⁶ the Bill & Melinda Gates Foundation (hereafter the Gates Foundation) has played a key role in the FPD complex. Inevitably, numerous large corporations promote the fintech model in order to directly benefit from it, irrespective of its impact (good or bad) on the global poor. These include the leading digital payments corporations (Visa, Mastercard and Paypal), a handful of the leading US and European financial institutions (for example, Citibank), the major telecommunications corporations (notably Vodafone), and the world’s largest consulting groups (McKinsey Group, for example, is already earning substantial fees promoting fintech on behalf of its major clients).²⁷

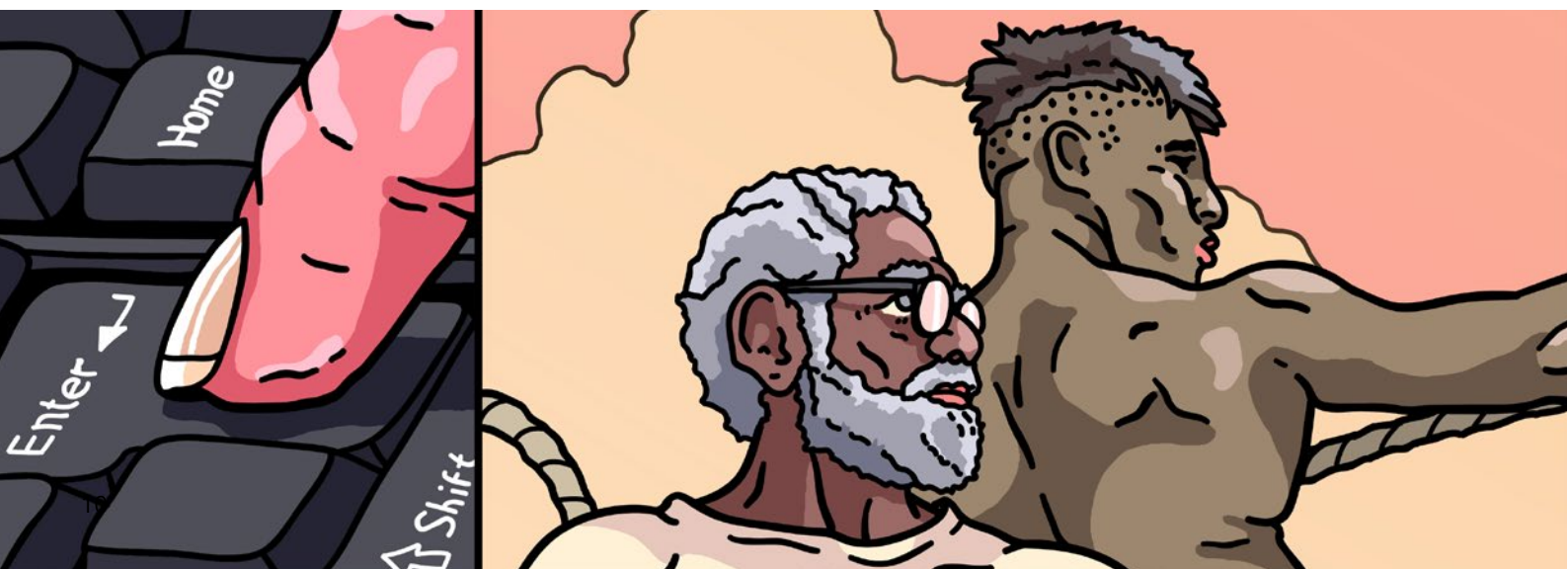
Importantly, the FPD complex has also helped to establish and finance a number of ‘astroturf’ lobbying bodies to aggressively promote the fintech model on its behalf.²⁸ The most powerful and best-funded of these are the Alliance for Financial Inclusion and the Better than Cash Alliance. On the pretext of ‘helping the global poor’ or ‘promoting financial inclusion’, and also using a number of false legitimising devices,²⁹ these two corporate lobbying bodies have managed to

insinuate themselves into the most important international policy-making circles, such as the United Nations and the G20. This has allowed them to promote, advise on and draft the fintech policies for adoption by governments in L&MICs that best reflect the ideological and commercial interests of their sponsors in the FPD complex.³⁰

A major part of the work of the FPD complex has been to produce a flood of publications along with holding conferences, workshops, training courses, and 'signature events' such as the Bali Fintech Agenda,³¹ all purporting to confirm that investor-driven fintech is hugely improving the lives and security of people living in poverty. The World Bank's staff and external collaborators have long been active in building support for the fintech model through its own high-profile publications, projects and lobbying activities.³² The Gates Foundation has also sponsored a large number of research programmes, academic studies, conferences and impact evaluations designed to celebrate and promote the investor-driven fintech model.

Many of the earliest publications that brought the M-Pesa model to the world's attention, for example, were produced by staff at the Gates Foundation.³³ Gates Foundation funding helped the US-based economists, William Jack and Tavneet Suri, to produce several influential early research papers advocating for M-Pesa.³⁴ This included probably the most influential output of all – their 2016 article published in the prestigious, peer-reviewed journal *Science* that concluded, '[A]ccess to the Kenyan mobile money system M-PESA increased per capita consumption levels and lifted 194,000 households, or 2% of Kenyan households, out of poverty'.³⁵ This central claim created a sensation among certain international development agencies, and it was thereafter cited in almost every major publication examining fintech.³⁶

The carefully coordinated efforts of the FPD complex ensured that the basic argument in favour of investor-driven fintech was taken directly to governments, politicians, the global media, the financial sector, and to key officials and influencers throughout the wider international development community. It soon became axiomatic to view the deployment of the fintech model as having a major positive impact on the lives and communities of the global poor.³⁷ Furthermore, the FPD complex gave an important impetus to the even more extreme objective pursued by a number of its core constituents – abolishing cash and replacing it with digital currencies that would effectively be controlled by the major private fintechs.³⁸ By the mid-2010s a global fintech industry was up and running fast. Its relentless advance across the world appeared to be unstoppable.



3. Arguments that fintech is an engine to reduce poverty and promote local development are deeply flawed

Similar to the fate of the once universally celebrated microcredit industry,³⁹ from the mid-2010s much of the material claiming that fintech was a major poverty-reduction intervention began to be exposed as fundamentally flawed. Many of the early arguments to justify fintech were constructed on (1) the mistaken belief that initial 'one-off' positive impacts will automatically persist into the long term; (2) strained logics linking cause to effect; (3) biased evaluation methodologies; and (4) manifestly unreal simplifying assumptions.⁴⁰ It was also perhaps predictable that the vast number of outputs extolling the benefits of the iconic M-Pesa were exposed as highly unreliable.⁴¹ Notably, this included the hugely influential claims in Suri and Jack's article in *Science*, which were found to be weak, illogical and, perhaps worst of all, possibly deliberately biased in order to show a positive impact.⁴² As a result, space began to open up for more accurate and honest appraisals of the impact of fintech in the L&MICs.

It is generally agreed that innovation is one of the most important driving forces behind economic development and growth.⁴³ However, as many of today's leading innovation specialists and financial experts also accept (see the epigraphs at the head of this paper), innovations can also produce bad results. Indeed, many recent social and technological innovations and the institutions to which they give rise not only fail to be beneficial for everyone, they can and have been deliberately and intensively exploited and abused by elite groups in order to advance their own narrow advantage.

Fintech microcredit lending exacerbates destructive competition in local communities

From the early 1980s onwards, many international development organisations adopted a range of policy interventions that reflected their neoliberal worldview. Broadly speaking, this held that capitalism required state intervention to be kept to a bare minimum and that individuals should be responsible for overcoming their own poverty through entrepreneurship and self-help.⁴⁴ The imposition of this neoliberal model of capitalism across the world began in the L&MICs when many post-independence reconstruction programmes and state-driven industrial development initiatives were replaced with SAPs, promoted mainly by the World Bank and the International Monetary Fund (IMF), along with the multilateral development banks (MDBs). The SAPs effectively reversed much of the progress that governments had made in previous years.⁴⁵ Important state-owned industrial capacity was privatised, resulting in workers being laid off and a surge in imports. Many public-sector bodies (such as government departments, schools, hospitals and research and development (R&D) institutions) were also forced to close down or accept cost-cutting redundancy programmes – with retrenchment adding to unemployment. The withdrawal of state financial and marketing support for agriculture also left many without work in the agricultural sector, which in turn intensified rural-urban migration.

Clearly, something urgently needed to be done to avoid a serious longer-term reaction, possibly violent, from millions of people now forced to try to survive on no earned income, generally little or no state welfare support and only temporary 'safety-net' programmes funded by such as

the World Bank designed to cushion the immediate pain. The sustainable solution was simple: it was hoped that the marginalised would find their own way out of poverty by entering into petty informal entrepreneurship projects of one kind or another.⁴⁶ Crucially, it was assumed that virtually all of the new microenterprise projects likely to emerge under such pressure would generate an income commensurate with survival, if not better than that. The poor just needed to commit themselves to the task.

This assumption, however, was largely false. As many path-breaking studies of the 'informal sector' highlighted,⁴⁷ the average local economy was already fairly saturated with informal businesses all desperately trying to survive in the nooks and crannies of the formal economy. This made it difficult for a new wave of individual entrepreneurship projects to find the local market space in which they could succeed. The result was inevitable; while a small number of informal microenterprises succeeded, most either failed outright or struggled to survive on a tiny financial reward for long hours of labour.⁴⁸ In addition, increased competition in the local labour market contributed to serious downward pressure on the revenues of existing microenterprises: falling average incomes in the informal economy were registered especially in Africa⁴⁹ and Latin America.⁵⁰ Moreover, as many leading anthropologists also pointed out,⁵¹ working and living conditions in the informal economy seriously deteriorated, thanks to increasingly unethical business tactics, social solidarity being further degraded, and growing levels of violence and 'turf wars' breaking out within and across poor communities. All told, the more competitive and extensively deregulated local labour markets that emerged under SAPs helped create 'living museum(s) of human exploitation'.⁵² Not surprisingly perhaps, the UN termed this period for many L&MICs to be 'the lost decade'.⁵³

Although the extent of this dystopian scenario was beginning to be recognised in the 1990s, cognitive dissonance ruled: the belief held that the informal economy is capable of absorbing almost unlimited labour, so promoting even *more* microenterprise development was still the way to address poverty. This core belief underpinned the rise of the global microcredit industry that began in the 1990s. Its pioneer and 2006 Nobel Peace co-laureate, Muhammad Yunus, was just the most distinguished among the many proponents of this view when he famously declared that:

[Microcredit] opens up the door for limitless self-employment, and it can effectively do it in a pocket of poverty amidst prosperity, or in a massive poverty situation.⁵⁴

The sheer unworkability of the microcredit model began to be exposed in the mid-2000s when a growing number of pioneering countries reached a 'critical mass': enough microcredit for everyone wanting it. A new term, 'job churn',⁵⁵ describes the unproductive process where the benefits of a high level of microenterprise entry are largely offset by the combined impact of high levels of 'exit'⁵⁶ (closure) and 'displacement' (where new microenterprises destroy jobs in existing microenterprises⁵⁷). This 'churn' effect helps to explain, among other things, why the net number of sustainable jobs created by new microenterprises is generally far below the number of new microenterprises registered. Worse, the increased local competition tended to push down local prices, which in turn reduced average earnings for those owning and working in microenterprises. At the same time, the better-off benefited from the cheaper cost of many basic goods (such as food) and services (gardeners, cooks, cleaners). The pain of poverty was thus not eradicated but simply *redistributed* among the poorest, as the following examples illustrate.

Box 1: Redistributing and intensifying poverty through microenterprise development

In post-apartheid South Africa, a steadily growing supply of microcredit after 1994 helped to launch a large number of new informal microenterprises in the poorest black townships and rural communities – although their impact was less positive than most microcredit advocates had hoped. One of the most damaging developments was the significantly increased competition in the poorest communities, already struggling to cope with a World Bank-led austerity programme. This depressed average incomes in the informal economy, including both new entrants and small businesses formed during the apartheid era. Over the period 1997–2003, this contributed to an 11.4% annual decline in incomes from self-employment, while real wages in the informal sector also fell yearly by 7.8%.⁵⁸ This dramatic fall in incomes helps explain why poverty actually increased in black communities in the first 20 years after apartheid had ended.⁵⁹ Coupled with the stratospheric profits enjoyed by the mainly male Afrikaner elite that manages and owns the largest microcredit institutions (see also Box 13), this contributed significantly to South Africa becoming the world's most unequal country.⁶⁰ This problem subsequently intensified as refugees arriving in South Africa from across the continent, many fleeing conflict and war, started microenterprises as a way to survive. Inevitably, these took customers away from already struggling local microenterprises. The resulting tensions eventually led to serious inter-ethnic violence.⁶¹

Similar competition-induced dynamics emerged in the city of Medellín in Colombia.⁶² In the 1980s a large number of migrants began arriving to avoid the narco-wars raging in many rural areas. With formal jobs in short supply, most of the new migrants had no other option than to try to support themselves by establishing a microenterprise, using a microloan offered by the many new microcredit institutions operating in the city. The number of new microloans and new informal microenterprises was portrayed as a major success story. However, a survey of the microenterprise sector and subsequent interviews in one of the major 'retail streets' in one of the poorest communities in Medellín revealed that existing microentrepreneurs reported their growing inability to adequately support their families only on their retail operations. Previously, they had been able to earn up to USD 10–15 on a good day, but this had fallen to an average of a few dollars. This was attributed to the increased competition created by many new arrivals, including migrants from the rural areas and their new microenterprises. Some of these long-standing micro business owners felt that they were effectively forced to assist the even poorer arrivals by accepting cuts in their own earnings. They described this as a form of 'tax' imposed on them by the local government, which could instead have provided some form of welfare support for the wave of migrants (for example, see Box 2). Microenterprise development thus helped new arrivals to avoid complete penury, but at the expense of existing small businesses.

The problem was clear: the global microcredit movement, and Muhammad Yunus in particular, had effectively fallen for one of the most famous economic fallacies, known as 'Say's Law', which holds that 'supply creates its own demand'. As shown by Alice Amsden, an astute development economist,⁶³ there is generally not (or no longer) a limited supply of the essential goods and services people living in poverty need in order to survive, because these are now largely available in most poverty-stricken areas. The problem is that the poor cannot access them because of their *lack of sufficient purchasing power*. After all, if there is little or no demand in the poorest communities by definition, there is little realistic chance that any more than a tiny handful of individuals will succeed in their microenterprise project and escape poverty. Amsden's basic argument is that poverty is largely a problem of limited local demand, not insufficient local supply.⁶⁴

In the main, influential international development organisations and mainstream economists chose to ignore this structural flaw in the operation of capitalism in the L&MICs, which complicated their coordinated efforts to promote the microcredit model.⁶⁵ Accordingly, cognitive dissonance ruled once more. Occasionally, however, the reality breaks through even to mainstream economists.

Box 2: The fallacy of Say's Law is inadvertently revealed in Kenya

An increasingly popular anti-poverty intervention is the concept of cash transfers (CTs) or cash grants to the poor.⁶⁶ One of the largest pilot programmes of this kind was carried out in Kenya from mid-2014 to 2017 by the US-based non-profit organisation *Give Directly*. Using the M-Pesa money transfer platform this programme paid out a one-time cash transfer of USD 1,000 to over 10,000 households across 653 villages in rural Kenya covering a population of 280,000. Amounting to 15% of local GDP at its peak, this was a very significant cash injection into these communities. The architects of the programme were obliged to undertake a formal evaluation when it ended, to assess its real impact on the local economy. Not surprisingly, the regular cash injections were found to have led to a much higher level of local purchasing power, which was mainly spent locally on essential goods and services (food, housing, clothing, medicines, etc). Poverty was reduced because the beneficiaries of the CTs had more cash to spend on essentials. However, the architects and evaluators of the scheme, as well as many outside observers,⁶⁷ were surprised to find that this significant additional spending created almost no new jobs in local microenterprises. The reasons were twofold. First, most existing microenterprises survived on very limited local demand and therefore operated at a very low level of capacity (the average non-agricultural enterprise typically had just 1.7 customers an hour). Accordingly, when the CT programme began to increase local demand for goods and services, most existing microenterprise owners were able to respond to this business opportunity by simply working a few extra hours: there was no need to take on any extra employees. Second, there was no evidence of individuals in the CT programme starting a new microenterprise. In fact, there appeared to be a small net shift *out* of self-employment and *into* wage employment. Putting cash directly into the hands of the poor appeared to be a better way to address poverty than programmes supporting microenterprise entry and expansion.⁶⁸

Despite this finding, many new fintech lending platforms are already extending a very large volume of digital microcredit *precisely* in order to spur accelerated microenterprise development. According to some analysts, this additional capital might amount to as much as USD 1 trillion.⁶⁹ The widespread expectation is that this will automatically reduce poverty by encouraging many more microenterprises to be established.

Cognitive dissonance *still* rules: fintech-based lending models remain premised on the same discredited belief that local communities possess the magical elastic quality of being able to support unlimited numbers of new microenterprises. The almost inevitable result is that the fintech model will *intensify* the problems of over-supply that already bedevil microenterprise development funded by 'brick-and-mortar' microcredit institutions. Evidence to this effect is already emerging in the first countries to adopt the fintech-lending model, notably Kenya.

Box 3: High rates of microenterprise entry and exit in Kenya

As employment opportunities in the formal sector contracted in recent years, Kenya has seen an explosion of informal microenterprises. Many of these new start-ups initially relied upon 'brick-and-mortar' microcredit institutions for financial support. Since 2010, however, finance has increasingly come from fintechs. These include Safaricom's M-Shwari and, more recently, start-ups, such as Tala and Branch International, established by US-based venture capitalists. However, much of this digital microcredit has gone into a variety of unproductive enterprise projects, such as small-scale retail, fast food, petty services (such as personal transport), and so on, which struggle to compete with existing small businesses in the same sector that are already barely surviving in the face of declining local demand (see Box 2). As a result, the benefits provided by new microenterprise entrants are outstripped by the downsides associated with the almost equally high level of microenterprise exit.⁷⁰ For individuals, such failures precipitate many problems, including deeper indebtedness (see Boxes 11 and 14), lost savings, forfeited assets (collateral such as vehicles, land, houses), and so on.⁷¹ At the community level, increased competition has tended to depress incomes. For example, informal taxi drivers have seen their incomes collapse as thousands more were attracted into the sector by Uber, extra competition that both reduced the price of a ride and the number of passengers a driver might hope to get in a day.⁷²

At the macro-economic level, fintech has clearly failed to enable Kenya to sustainably and equitably develop its economy through the production-based activities that are the key to growth.⁷³ The supply of fintech-based lending to the informal economy based on petty trade has exploded,⁷⁴ but the supply of credit to the productivity-raising formal SME sector has, not coincidentally, been declining.⁷⁵ Providing the least productive informal microenterprises and self-employment ventures with as much credit as they wish is more profitable in Kenya (see Box 17) than providing credit to the most productive formal SMEs. Moreover, using the 'advantages' of informality (paying no tax, offering ultra-low wages, non-compliance with environmental and health regulations, etc), programmatically expanding Kenya's informal sector has further aggravated the situation by taking market share from formal SMEs (even if just temporarily). This further undermines the formal SME sector's ability to grow through gradual reinvestment, reaping economies of scale, acquiring new technologies, and so on. This problem is notably reflected in the World Bank's regular Enterprise Survey of Kenya series in which managers and owners of Kenya's formal SMEs consistently report that one of their biggest obstacles to growth is the 'unfair' competition from the informal sector.⁷⁶

One of the first countries to follow Kenya in promoting the fintech model's support for microenterprise development was Uganda. Like Kenya, its longer-term economic development chances also appear to have been undermined as a result.

Box 4: The fintech sector helps to misallocate finance in Uganda

The rapid growth in the supply of microcredit in Uganda in recent years has contributed to greatly expanding the country's informal microenterprise sector. The entry of so many new informal microenterprises led the prestigious GEM (Global Entrepreneurship Monitor) project to label Uganda the 'world's most entrepreneurial country'. Although this explosion in the number of informal microenterprises appeared to some to portend a promising economic future for the country,⁷⁷ World Bank economists have since concluded the opposite.⁷⁸ Just as in Kenya, alongside exponential growth in the supply of microcredit, Uganda also experienced a predictable reduction in financial support for the crucial formal SME sector. Put simply, here too there is more profit and less risk involved in 'quick return' lending to informal microenterprises compared to lending to formal SMEs (especially production-based SMEs) that generally require 'patient' long-term, low-cost capital. This trend has helped to facilitate a marked shift in employment and output in Uganda, away from formal SMEs and large companies and towards the unproductive informal microenterprise sector. This move has held back productivity gains in Uganda, which in turn has reduced the chances of sustainable economic development and poverty reduction. In addition, crucially, as one of the African countries widely considered to be a 'front runner in digital financial inclusion',⁷⁹ this emerging structural weakness is now being greatly amplified: Uganda's already bloated informal microenterprise sector is being helped to expand further with the help of a growing supply of digital microcredit, while the country's SME sector remains as capital-starved as it has always been. As a result there has recently been a very rapid rise in the number of microenterprise exits which almost outpaces the high number of new start-ups.⁸⁰ Thus, Uganda's formal SME sector is not obtaining the capital investment it needs to grow, while the informal microenterprise sector appears to be trapped in a 'churn' that both wastes financial resources and risks major setbacks in people's lives.

As the fintech model continues to expand, therefore, and digital microcredit becomes ever easier to access, it seems inevitable that more financial and other scarce resources will effectively be expended on ultra-unproductive microenterprise projects that do little to contribute to sustainable local economic development, and may even undermine or block it entirely.

Crowdfunder financing of the SME sector is also an 'anti-development' financing model

Alongside local fintech lenders such as M-Pesa, a new and quite distinct non-deposit-taking fintech-based lending model has emerged that is more attuned to supporting formal SME development in the Global South. This is the 'crowdfunding' lending model, also known as 'Peer to-Peer (P-2-P)' lending,⁸¹ which involves raising finance from a group of individuals, investors and institutions that, for a fee, is channelled to clients wherever they are. The widely advertised aim is to provide formal SMEs with much more capital, more quickly and at lower interest rates.⁸² Right from the start, the crowdfunder-lending model began to generate considerable excitement among a number of international development organisations. An early World Bank study, for example, went so far as to claim that the rapid expansion of the crowdfunder-lending model was one of the keys to the development of the L&MICs,⁸³ describing it as '(A)n innovation in entrepreneurial finance that can fuel "the rise of the rest" globally'.⁸⁴ The World Bank's International Finance Corporation (IFC), its investment wing, describes crowdfunder-lending as 'the future of SME financing'.⁸⁵ With the entry of many crowdfunder-lending platforms from the early to mid-2010s onwards, especially in China, it was believed that a period of accelerated fintech-enabled development of the formal SME sector was very much on the cards.

However, economic history – backed up by the recent experience of crowdfunder-lending models in action – strongly suggests that an East Asian-style 'rise of the rest' is extremely unlikely. In fact, the crowdfunder-lending model is more likely to seriously *extend* the misallocation of financial resources that has already been one of the most destructive features of 'financialised' capitalism.⁸⁶ To explain this we need first to look at economic history and briefly highlight the two successful SME financing models that emerged in Europe and East Asia after 1945.

The 'relationship banking' model played a key role in developing European countries in the late 1800s, and then in the aftermath of the Second World War it significantly helped to reconstruct the region. A central factor in this success was the close local relationships established between the financial sector and its local clients, local and regional governments, and other local institutions.

Box 5: Relationship banking in post-war West Germany/Germany

The long-term success of the German economy and its world-leading industrial SME sector can be traced in part to its community-owned savings banks (*Sparkassen*) and member-owned mutual and cooperative banks (*Genossenschaften*). First, these community-based banks provided more than two thirds of the local-level lending required by Germany's technology-driven *Mittelstand* (medium-sized enterprises, MSEs) which constitute the core of Germany's industrial economy. They provided low-cost long-term capital, made possible by the lower risk created by their joint liability arrangements. This meant that no individual member bank was allowed to collapse in times of difficulty (such as when a major local industry shuts down) but could tap into mutual support from other banks in their network unaffected by such localised problems. Second, their senior managers saw it as part of their function to build robust local relationships, which often involved participating in local networking activities and serving on the boards of various institutions. In this way both the *Sparkassen* and *Genossenschaften* were able to develop trust and gain knowledge of the local enterprise sector, which helped them to identify the best candidates for a loan. It also enabled them to better and more proactively help the local business community to become more efficient as a whole by expanding its knowledge of issues such as new markets and products, regulatory issues, innovative training techniques and new technologies.⁸⁷ Moreover, despite adopting a long-term developmental focus, the *Sparkassen* are still financially more efficient than their counterpart private-sector banks; for example, earning a significantly higher return on capital which, among other things, allows them to pay much more tax revenue to local and federal governments.⁸⁸

Other notable European examples where the development of such close relationships greatly underpinned local economic development can be found in both the Basque region of northern Spain,⁸⁹ and in southern Spain.⁹⁰ Probably the most famous example where networking relationships were linked not just to economic success but also to a high level of equality and social justice, emerged after 1945 in the so-called 'red regions' of northern Italy.

Box 6: Northern Italy's post-war economic and social miracle

One of the major factors in the successful reconstruction of northern Italy after 1945 was the network of cooperative banks, financial cooperatives and local and regional government controlled Special Credit Institutes (SCIs). In the absence of Marshall Plan funding because of the left-wing orientation of the first elected governments in the region, the only option for these financial institutions was to mobilise the savings of local people, and then invest these resources as best they could. These local financial institutions decided the best way to do so was by building strong relationships of trust and reciprocity with business clients and in the local community, including with the newly-elected communist/socialist local and regional governments. The consensus was that the only way to ensure that Italy would never again subscribe to fascism was to build a far more equitable and 'people-centred' economy. Lending policy was therefore configured mainly to support 'inclusive' enterprise development, benefiting the entire population rather than a small elite. The region's new and revamped financial institutions were quick to mobilise local savings and learn how best to invest them in potentially sustainable local businesses. Cooperatively owned and controlled businesses were prioritised as clients, building on the long local tradition of such democratic enterprises (most cooperatives were closed down under Mussolini). Great emphasis was placed on working closely with all kinds of businesses in order to upgrade the adoption of technology in the production process because the resulting higher productivity was seen as the best way to guarantee decent wages and better working conditions. Microenterprises were also supported, provided they met certain conditions: for example, to join the CNA – the Italian Confederation of Craft Trades and Small-and Medium-Sized Enterprises; promptly remit any taxes owed to the appropriate local authorities; adopt new technology wherever possible; and ensure that employees enjoyed decent wages, social benefits and safe working conditions. By the 1970s northern Italy had become an economic powerhouse, one of Europe's richest regions, and – not coincidentally – the world's premier regional location for industrial and agricultural cooperative enterprises.⁹¹ Perhaps the most important outcome of this local financial model was that it regularly topped European 'Quality of Life' surveys owing to the very high levels of solidarity, equality, dignity, mutual support and sense of 'community liveability'.⁹²

Although the economic, political and cultural conditions are very different from Europe's, including in many cases a lack of formal electoral democracy, post-war Asia also pioneered a lending model built on relationships, local knowledge and contacts, and a real concern for longer-term community development.

Box 7: Local developmental finance helps create East Asia's 'economic miracle'

One of the lesser known aspects of East Asia's famous 'economic miracle' is the crucial role played by various sophisticated sub-national financial systems, institutions, regulations and lending models geared up to promote formal technology-based micro, small and medium enterprises (MSMEs).⁹³ Beginning with Japan after 1945, local financial systems were (re)constructed across East Asia that embedded significant elements of local state, cooperative and community ownership and control. Relationships between these various funding institutions and other institutions in the local economy (local governments, Chambers of Commerce, Technical Universities and educational institutions, Entrepreneurs Associations, etc) were especially important in helping create a development-driven entrepreneurial ecosystem. Local financial institutions were also designed to pursue key local economic development policy goals using comprehensive, coordinated and, very often, state-subsidised working capital and investment support. Achieving local development necessitated directing financial support towards the limited number of enterprises that (a) were operating at or above minimum efficient scale; (b) were technology-driven; (c) could innovate and 'learn by doing'; (d) could productively link into vertical sub-contracting chains and horizontal networks and clusters; and (e) had the potential to create innovative productivity-raising organisational routines and enterprise capabilities. Scarce financial resources were not squandered on supporting the expansion of ultra-unproductive informal microenterprises and self-employment ventures. This helped avoid the negative outcomes associated with the current expansion of exactly these kinds of microenterprises and self-employment in African, Asian and Latin American countries. Each of the East Asian 'developmental states' used the local financial intermediation process to create a 'bottom-up' dynamic that more than matched the 'top-down' impetus coming from the expansion of the large business sector.

While there are clear differences between these European relationship-based and East Asian development-driven lending models, their similarities are far more important. These include: (1) a physical proximity to clients, which is the best way to build trust, reciprocity and cooperation, and also ensures a deep understanding of local markets and the business culture as well as the capabilities of existing and *potential* clients; (2) an enduring, often politically mandated, commitment to securing long-term community development, rather than just maximising the short-term profits of the lending institution; (3) a willingness to identify and patiently support particular growth-oriented local enterprises and sectors with the most potential to become established, grow, diversify, and adopt new technologies, especially production-based formal SMEs;⁹⁴ (4) a general unwillingness to support no-growth informal microenterprises and self-employment ventures with little or no possibility of stimulating sustainable economic development;⁹⁵ (5) a preference for funding community-owned and controlled enterprises, which are better equipped to generate a more resilient and equitable local economic structure;⁹⁶ and (6) an interest in facilitating the building of formal clusters, networks, sub-contracting chains, and joint innovation and technology transfer among formal SMEs, which are productivity-raising relationships among local enterprises that ultimately promote local economic growth.⁹⁷

Turning to the comparison with the crowdfunder lending model, it is clear that it diverges substantially in almost every respect from these two lending models. The 'pure' market-driven crowdfunder lending model is essentially transactional. It requires little or no human intervention, avoids the need to build long-term knowledge-sharing relationships with clients, has little interest in clients acquiring technological capabilities (since in the short term this is likely to reduce the cash flow required to service a loan), and lacks any local embeddedness.⁹⁸

In practice this translates into a number of adverse trends. For example, the financing offer might last only until higher/quicker profit or lower-risk opportunities can be found elsewhere. Crowdfunder lenders have virtually no interest in considering longer-term local development issues, nor indeed any real capacity to do so even if they wanted to. Rather, the key to their commercial success is the use of impersonal algorithmic credit scoring, meta-data collection, machine learning, social media use, and other digital technologies that ensure the selection of well-established clients possessed with the ability to repay on time over the length of the typically short-term loan.⁹⁹ A crowdfunder lender can even track a client's cash flow to ensure that she or he maintains a successful repayment record. What happens after or on top of that (good or bad) is largely of no concern to the crowdfunder lender. It is also now recognised that crowdfunder lenders are prone to damaging 'herd instincts'.¹⁰⁰ Using the same or similar decision-making techniques, crowdfunder lenders tend to rush in to work with the same clients. An over-supply problem results. By the same token, crowdfunder lenders can quickly move *out* of financing certain enterprise sectors if other geographical areas or business sectors offer an easier and quicker route to expand the portfolio. Crowdfunder lenders are also more likely to reduce their lending operations to certain sectors during a crisis, which is generally the exact opposite of what is needed for the local economy to survive relatively intact.¹⁰¹ In particular, the lack of local connections and relationships render the lending function ineffective from a development perspective.

In sum, crowdfunder lending is a lending model that is designed to maximise the short-run financial returns to investors; not to provide the financial conditions that enable SMEs to get established and make a major contribution to sustainable local economic and social development.

China has pioneered crowdfunder lending and, at least for a time, it appeared to be making a major contribution to SME development. With the passage of time, however, it became clear that this was not the case and that crowdfunder lending was actually an ineffective way of supporting SMEs across the country.

Box 8: P2P business lending in China undermines local economic development

From almost nothing in the late 2000s, by 2017 China's P2P lending sector had become the world's largest with loans amounting to around USD 100 billion.¹⁰² Similar to other crowdfunder lenders, the vast majority of China's P2P lenders focused on registering quick profits by rapidly expanding their loan portfolios into the SME sector with very little concern for the quality and long-term survivability of its clients.¹⁰³ China's P2Ps used new algorithmic screening techniques and social media surveillance to collect information on repayment potential. This often included an assessment of collateral sources in the case of business failure. The physical distance between the P2P lender and its clients across China, however, meant it failed to engender the trust, knowledge, openness and cooperation that would have secured a more meaningful understanding of an enterprise's operations and its long-term growth prospects. Since its P2Ps simply pass on to clients the funds provided by third parties (individuals, investors and local banks) this meant the risk of default was not taken on by the P2P lender. As the US sub-prime debacle showed in 2008, this 'originate to distribute' lending model (where loans are generated by one institution but placed on another's books) is almost guaranteed to result in the financing of many ventures that are unviable long-term (see also Box 14). Consequently, business failures began to rise markedly in the mid-2010s and many P2P lenders began to close. Coupled with dramatically rising fraud (see Box 16), China's once-celebrated P2P sector was exposed as a very ineffective way of supporting SME development. Paradoxically, as China's own earlier development experience demonstrated,¹⁰⁴ the key to securing sustainable local economic development is the availability of long-term low-cost finance and a local support network of institutions. China's central government eventually recognised its error and announced major changes in 2019: all remaining P2Ps had to become conventional local lending bodies with a mandate to lend more responsibly and developmentally and use their own funds as much as possible. The P2P sector thus collapsed, going from nearly 6,000 active participants in 2017 to none by November 2020.¹⁰⁵

Other countries are all too likely to experience similar problems related to serious financial misallocation by crowdfunder lenders, in the worst case compounding earlier episodes, such as in Latin America.

Box 9: Fintech likely to extend financial misallocation in Latin America

In a book published by the Inter-American Development Bank (IDB),¹⁰⁶ its economists demonstrated that the nearly two decades (1980–2000) of rising poverty and worsening living standards in Latin America were largely caused by a seriously malfunctioning financial system. After the turn in the 1980s towards neoliberal financial policies (dubbed the ‘Washington Consensus’), the continent’s private financial institutions were given the freedom to adopt a hard-nosed market-driven approach: they could now begin to intermediate much more of its scarce financial resources into low-productivity informal microenterprises and self-employment ventures, which generated high returns at comparatively low risk. This inevitably meant, however, that much less financing was available for the more productive formal SMEs and large enterprises, which were associated with higher risk and lower financial returns. This change reversed much of the progress made in Latin America based on the import-substitution industrialisation (ISI) strategy that, from the 1950s onwards, helped to industrialise Latin America through structural upgrading and technology acquisition,¹⁰⁷ and which engineered the development of productivity-raising technology-based SMEs.¹⁰⁸

More recently, it was hoped that crowdfunder lending might repair some of this damage by improving financial inclusion and providing another source of funding for SMEs.¹⁰⁹ Albeit from a small base, the investment in crowdfunder lending and other fintech-based lending bodies in Latin America has been rapidly growing in recent years.¹¹⁰ So far, however, there are few signs that this will improve financial intermediation in the region. In most Latin American countries new low-cost psychometric techniques are being piloted in order to better assess the immediate repayment capacity of potential clients, using fully-automated underwriting practices, and so ensure full and timely loan repayment.¹¹¹ However, this non-human methodology eliminates the need for any seriously detailed evaluation of the long-term potential of any business plan, still less the potential impact of a business activity on the wider local community (for example, through positive ‘knock-on’ effects such as clustering, technology and knowledge transfer and other local-level impacts that are not reflected in market prices). In essence, it is a short-term quantity-driven lending approach designed to maximise the profitability of the crowdfunder even more than previous ‘bricks and mortar’ financial institutions. Crowdfunder lenders in Latin America, as everywhere else, will end up working mainly with established formal SMEs with reliable cash flows that enable them to more readily repay their loans. By the same token, they are likely to shy away from new SMEs that are taking risks by innovating, upgrading skills, investing in new capital equipment, and other long-term expenditure, all of which may eventually boost productivity but which initially absorb their revenue rather than being used to quickly repay any loan. The turn to fintech-based lending in Latin America may improve the basic efficiency and profitability of the financial sector, as is already being widely reported,¹¹² but this is likely to come at the cost of further weakening countries’ economic structures.

The immediacy, flexibility, neutrality and mobility that characterises the crowdfunder lending model – all characteristics of how ‘pure’ markets are supposed to work in theory – are widely advertised as its main advantage over more interventionist SME lending models.¹¹³ It is, however, *precisely* these attributes that offer little to local communities that are desperate for a stable and affordable source of capital, as well as other forms of institutional support, with which they might hope to achieve sustainable local enterprise development. The overwhelming profit-driven emphasis on increasing the ‘quantity’ of lending – the speed with which loans can be pushed out of the door and how quickly and efficiently they will be repaid – effectively ensures that it by-passes the crucial ‘quality’ issues that are key to sustainable and equitable local enterprise development and growth. Consequently, we should not expect local economies in the Global South to ‘catch up’ with those in wealthier countries on the basis of an expansion of crowdfunder-based lending bodies and loan volumes; rather they are more likely to increasingly ‘fall (further) behind’.

Fintech destroys social solidarity

While the global microcredit model is by far the best-known self-help-based intervention to find favour in the neoliberal school of thought,¹¹⁴ remittance flows have also been ‘re-packaged’ as an ideologically acceptable form of self-help. People are supposedly able to address their own poverty by the receipt of remittances from their own extended family and social networks, thus neatly doing away with the need for state intervention, social welfare programmes, wealth taxes, and other neoliberal bugbears.¹¹⁵ Inevitably, this heightened interest in remittances led to a search for easier and cheaper ways to facilitate remittance flows in order to maximise their poverty-reduction impact .

The original innovation of M-Pesa in Kenya was that money could be transferred between individuals in the country much faster and more cheaply than before.¹¹⁶ This was later extended to include the ability to receive remittances from abroad, which have in total long outstripped aid from OECD countries. Thanks to the ease, speed and reduced cost of sending remittances it was then found that individuals and families using M-Pesa were receiving an even larger volume of remittances than previously.¹¹⁷ The same thing happened in some other countries after introducing fintech applications.¹¹⁸ Some influential international development organisations projected that the volume of remittance income would begin to grow everywhere with the arrival of fintech. This would not only allow the recipients to better cope with emergencies, such as the current COVID-19 crisis, but potentially to also escape their poverty predicament by being able to quickly exploit new business opportunities.¹¹⁹ At no real cost to governments or the need to increase taxes on wealthier citizens, rising remittance flows again promised to help reduce poverty.¹²⁰

Crucially, the optimism of certain major international development organisations was based on their assumption that remittance flows could be exploited more intensively, with no diminishing returns. This is unlikely to be the case, however, given the wealth of experience that formalising, monetising and programmatically using social support networks in the service of poverty reduction eventually leads to their becoming more fragile and subject to degradation.¹²¹ We also know that links to family and friends among the diaspora often weaken over time, and results in remittances generally tapering off.¹²²

Evidence from Kenya suggests that this negative scenario is already a reality.¹²³ Researchers have found that those sending remittances back to family and friends in Kenya feel under greater pressure to both send more regularly and increase the amounts, with some claiming that they now have 'nowhere to hide' given how quick and easy the process is. As a result, some of those petitioned to send funds back home opt to 'become lost', refuse any further calls, or deliberately retain very little in their mobile money account in order to have no means to respond. It remains to be seen how significantly this will affect remittances at the global level, but it is a growing factor.

Another more concrete problem is that remittance flows are increasingly used as a form of collateral, especially to allow recipients to leverage microcredit if they wish to do so.¹²⁴ This relationship has already evolved into a more one-sided exploitative commercial transaction that involves aggressively peddling high-interest rate microloans to vulnerable clients.

Box 10: Using remittances to expand the profit made from the poor in Senegal

In the aftermath of the destructive neoliberal policies implemented in the 1980s and 1990s in Senegal, remittances began to play a major role in enabling families to survive.¹²⁵ In 2019 around 800,000 emigrants remitted USD 2.5 billion. Increasingly (half of all recipients to date) this income has been intermediated through a financial institution or a mobile money account. Fintech platforms handling remittances include Tigo Cash, Orange Money, Wari and Joni-Joni. These have recently been joined by a new microfinance institution, Baobab Senegal, one of eight participating in a seven-year USD 37.4 million programme developed jointly by the International Finance Corporation (IFC), the World Bank's investment arm, and the Mastercard Foundation, whose declared aim is to expand fintech platforms across sub-Saharan Africa. Support to Baobab Senegal helped build a network of 500 banking correspondents in the poorest communities. Apart from generating fees from processing remittances, Baobab Senegal is using these transactions as an entry point to aggressively sell other financial services to its clients. The banking correspondents play a key role in encouraging or 'nudging' clients, including a common pressure tactic used by digital finance providers elsewhere in Africa,¹²⁶ which is to bombard clients with SMS messages offering expensive 'Taka' microloans of between USD10 and USD 400. Many of its clients will not be able to use these microloans productively, nor repay them easily, but being unable to resist the temptation of a seemingly incredible 'one-off' opportunity is calculated to seduce them. Baobab Senegal also plans to extend its Taka loans to non-customers, through partnering with the leading Mobile network operators that are already transferring money across the country. Essentially, Baobab Senegal is creatively using its fintech platform in order to construct additional profit points around the remittance channel, principally by putting clients on a 'treadmill of debt'. In this way, a fintech platform has shown how major foreign fintech corporations such as Baobab Senegal, as well as foreign investors (the Paris-based AXA insurance and investment group and the London-based APIS investment company together own 57% of Baobab Senegal¹²⁷) can increasingly appropriate the remittance income of the poor.¹²⁸

Fintech represents a disruption that clearly makes it simpler and more efficient to send remittances and, at least initially, has probably facilitated an increased flow of funds to impoverished people. However, problems are likely to arise both from the over-dependence on remittances, and from the corporate exploitation of this now fintech-enabled income stream.

Fintech exacerbates problems of reckless lending and over-indebtedness

As we have seen from the early 2000s onwards, the boom in the volume of microcredit largely failed to create new jobs and incomes, but it did create a reckless lending-driven dynamic that, by the late 2000s, had plunged many communities, regions and entire countries into mass over-indebtedness.¹²⁹ The problems created by the programmed over-supply of microcredit were directly linked to rising poverty and vulnerability;¹³⁰ forced migration;¹³¹ loss of collateral, including land;¹³² the rise of modern debt slavery;¹³³ and frequent financial meltdowns and near-meltdowns,¹³⁴ the most famous being the microcredit meltdown in the state of Andhra Pradesh in India in 2010.¹³⁵

It was no surprise, therefore, that this growing problem of over-indebtedness was significantly extended with the arrival of fintech platforms, especially given their promise to make credit available 'at the touch of a few buttons'. Fintech lenders are incentivised to extend as much credit as possible, almost entirely irrespective of the ability of the community to absorb it productively, due to intense investor pressure on new fintechs to expand as rapidly as possible. This self-imposed urgency inevitably leads to reckless lending.¹³⁶ Apart from causing indebtedness and penury, it also typically evolves into illegality and fraud (see next section).

One of the first and most destructive outbreaks of fintech-driven indebtedness occurred, once again, in Kenya. According to Gordon and Lyon, it is not hard to see how this problem has arisen: 'If you have an M-PESA account, a phone and, in some cases, an active Facebook account, you're only a few taps away from securing an instant loan ranging from \$5—\$500'.¹³⁷ The commercial success of Safaricom's M-Shwari microcredit unit, which operates on the M-Pesa platform, began to attract a host of other fintechs hoping to cash in, such as Tala and Branch.¹³⁸ With more than USD 50 million invested in fintech start-ups in Kenya since 2015, however, this created a need for new fintech lenders to generate as much as USD 500 million in order to pay back the venture capitalists. This pressure forced fintech lenders to expand as fast as they could and to take ever-increasing risks,¹³⁹ plunging some of Kenya's poorest citizens into a huge level of personal debt.

Box 11: M-Pesa and its competitors have created destructive over-indebtedness

The speed at which Kenya's poorest citizens changed from being the beneficiaries of fintech lending to what might best be called its 'victims' surprised most of the analysts who had celebrated the country's 'fintech revolution'. By the mid-2010s, individual over-indebtedness in Kenya appeared to be out of control,¹⁴⁰ characterised by high multiple borrowing, high defaults, high non-performing loan (NPL) rates (defined as arrears of more than 90 days), growing numbers struggling to repay their loans and being forced to cut back on food, and the increasing numbers of clients forced to borrow more (including from local loan sharks) in order to repay their digital loan.¹⁴¹ One of the reasons for such problems includes the often extortionate interest rates charged by many fintechs, notably Tala (180% APR).¹⁴² However, most of Kenya's fintechs, including M-Shwari,¹⁴³ have deployed deceptive tactics (such as hidden fees and charges) in order to keep the real interest rate very high but to allow for them to advertise much lower rates. As the situation dramatically worsened in the late 2010s (see also Box 12), even formerly leading advocates of fintech, such as Graham Wright, appealed to the Governor of the Central Bank of Kenya, Patrick Njorge,¹⁴⁴ to take immediate and concerted action.¹⁴⁵ Alarmed at what he called 'the continued celebration of the *quantity* of loans issued without reference to their *quality*' (original emphasis), Wright argued that clients now needed much more robust regulation and also for the supposedly 'pro-poor' fintechs themselves to re-engineer their most damaging, yet most profitable, loan products to protect their clients.

It is no coincidence to find that rising poverty and deprivation in many L&MICs closely correlates to the rising popularity of various forms of gambling, lotteries and pyramid schemes. Anything that promises the chance of an instant exit from grinding everyday poverty will inevitably have its attractions, even if the longer-term consequences are all too likely to further embed such conditions into one's life. One of the most remarkable adverse developments in Kenya was the extent to which young people were programmatically assisted into often horrifying levels of debt.

Box 12: Fintech finances a hugely destructive gambling habit among Kenya's youth

In the mid-2010s the large fintech lending platforms discovered a new and highly profitable market, by providing unlimited microcredit to young people to gamble on internet-based sports betting companies operating in Kenya. By far the most important of these sports-betting companies was SportPesa which in 2018 was the second-largest company by revenue in Kenya after Safaricom.¹⁴⁶ The fintech lenders, in particular M-Pesa, were for a long time unconcerned that so many clients were using their fintech microloans in this way. As long as those with a gambling habit could find sufficient funds to repay on a fairly regular basis, such as through lending from family and friends and 'hustling',¹⁴⁷ they argued that this was the clients' private business. Assisted by the Central Bank of Kenya's mistaken belief in 'light touch' regulation, the result by 2019 was 'an epidemic' of gambling that involved a huge number of young people falling into irretrievable indebtedness, poverty and, eventually, violence.¹⁴⁸ Not wanting to counter the powerful and politically well-connected fintech corporations, the Kenyan government and the local business media (many of which relied on Safaricom for advertising revenue) initially agreed to downplay the problems. Things changed, however, when it was revealed that SportPesa was not just using its revenues to very generously sponsor some of the world's wealthiest English Premier League football clubs¹⁴⁹ and Formula 1 racing teams¹⁵⁰ but was also avoiding taxes and instead moving the bulk of its profits abroad.¹⁵¹ In 2019 the Kenyan government felt that it had to respond by instructing Safaricom to halt the processing of payments linked to SportPesa through its M-Pesa platform,¹⁵² a move that effectively closed down almost the entire internet-based sports betting industry based in Kenya. Although SportPesa had been hoping to return to the market, a recent court decision appears to have finally halted its commercial activity.¹⁵³ Nonetheless, gambling continued through other internet betting platforms in Kenya facilitated by M-Pesa. Fintech advocacy bodies long sympathetic to M-Pesa finally began to register their alarm, with one of its analysts describing the huge amount of Kenya's wealth diverted into unproductive spending (i.e., gambling) at a time of national crisis (due to the COVID-19 pandemic) as one of Kenya's most important problems given that "the value of bets placed through M-Pesa in 2020 was equivalent to 24% of the total value of exports of the country."¹⁵⁴

Other African countries are on the same path to serious fintech-created over-indebtedness problems. In Tanzania, over half of digital borrowers cannot repay a loan on time, while nearly a third have had to default.¹⁵⁵ Equally worrying levels of individual over-indebtedness have been registered elsewhere.¹⁵⁶ South Africa is one of the countries currently most likely to face a crisis.

Box 13: Tyme Bank in South Africa aims to provide even more microcredit than ever before

In 2020 South Africa's Capitec Bank received the accolade of being voted one of the world's best banks.¹⁵⁷ From another viewpoint, however, it represents one of the most problematic financial institutions to have emerged in the post-apartheid era. Owned by members of the Afrikaner financial elite, Capitec Bank also earned a reputation for unethical reckless lending practices that played a decisive role in its spectacular growth and the enrichment of its CEO and other senior managers and key shareholders,¹⁵⁸ but also played a pivotal role in creating the mass over-indebtedness of a huge swathe of the poorest black communities in the country that has further exacerbated the already high levels of poverty that existed in the apartheid era.¹⁵⁹ These twin factors have also contributed to South Africa's huge inequality crisis.¹⁶⁰ Faced with increased financial and political risks, Capitec Bank announced in the late 2010s that it would exit the unsecured lending field (lending without collateral) and become a conventional mainstream bank supporting formal SMEs and wealthier South Africans.

At around the same time, sensing an opportunity a new fintech-based bank was launched in South Africa – Tyme Bank – that promised to fill the market niche for unsecured lending vacated by Capitec Bank and to dramatically *expand* microcredit for poor black South Africans.¹⁶¹ With no branches and no paperwork required to sign up, by early 2021 Tyme Bank had 3 million customers, signing up 120,000 new customers a month. One of the reasons for its dramatic expansion was its lower transaction costs, enabling it to offer customers lower fees than all of its rival 'brick-and-mortar' banks operating in the unsecured lending market. Another crucial factor, however, was its partnership with South Africa's second largest supermarket chain Pick 'n Pay and the smaller Boxer chain (which since 2002 also owned by Pick 'n Pay), allowing it to put a kiosk in their retail outlets where Tyme Bank customers can deposit and withdraw cash from its nearly 14,000 cash tills.¹⁶² It is now easier than ever for the poor to obtain microcredit, encouraged by aggressive advertising, marketing tie-ups and other enticements for clients to access a microloan and immediately spend it in one of their retail outlets. In the process, it is also being made easier for Pick 'n Pay and Boxer to take valuable market share from the more than 100,000 small informal *spaza* shops traditionally owned and operated by the black community and which provide a major contribution to local food security, income generation and community solidarity and cohesion.¹⁶³ Inevitably, the expansion of Pick 'n Pay and Boxer thanks to its links to Tyme Bank can only lead to *further* over-indebtedness of the poorest black communities, hold back job creation and undermine the already minimal incomes of most *spaza* owners, pushing many of them to close. The winners are Pick 'n Pay's long-time owner, Raymond Ackermann – in 2017 the 12th richest person in South Africa –¹⁶⁴ and also the new (in 2021) CEO, Pieter Boone, thanks to the generous share options he was offered as an incentive to rapidly increase the turnover of both retail outlets.¹⁶⁵

Elsewhere around the world, the deployment of fintech applications by microcredit institutions is causing similar concern in view of its obvious potential to exacerbate existing problems of over-indebtedness.

Box 14: China's private sector fintech-driven microcredit lending went out of control

While a little late in forming conventional microcredit institutions than many other Asian countries, starting in the mid-2000s China soon became the world's pioneer in linking its burgeoning fintech sector to the supply of microcredit. Establishing various microlending units in order to monetise their huge user base, Alipay and WeChat swiftly became major suppliers of microcredit across the country. They were joined by a large number of private fintech start-ups, many of which did so by borrowing from foreign investment capital. The secret to selling so much microcredit was a '3-1-0' fintech-based microcredit model, which involves a microloan being made available in less than three minutes, after an approval process that takes one second, and which involves zero human interaction.¹⁶⁶ It became clear by the mid-2010s, however, that the supply of microcredit was going way beyond the ability of individuals and communities to use it productively and that a consumer credit bubble was emerging. By the end of 2020 the consumer debt overhang reached a record high of USD 7.6 trillion,¹⁶⁷ equal to a massive 130% of disposable income.¹⁶⁸ With a spurt in lending during the first year of the COVID-19 crisis, it was clear that another 'microcredit meltdown' was on the cards. As a result, in late 2020 the Chinese government introduced a major set of financial-sector reforms designed to make it much harder for fintech lenders to leverage capital to on-lend to individuals and informal microenterprises.¹⁶⁹ From 2022, for example, fintech lenders will have to keep 30% of any microloan on their own books.¹⁷⁰ Whether this will successfully rein in China's fintech lenders, or push them to find new forms of unproductive and exploitative lending to the poor, remains to be seen.

Cambodia is another Asian country where an existing debt overhang – the world’s largest in per capita terms – could potentially worsen with the recent arrival of many new fintechs, and the adoption of fintech applications by existing microcredit institutions.

Box 15: Fintech’s arrival further disrupts the lives of Cambodia’s poor

Cambodia currently has the world’s largest microcredit sector per capita, almost certainly its most profitable, but also the one most at risk of a serious correction, if not a full meltdown.¹⁷¹ In the early 2000s, the sector appeared to be of benefit to impoverished Cambodians, especially in terms of helping them to start new and expand existing microenterprises as well as supporting small-scale agricultural operations. Since 2010, however, the commercialisation of the microcredit sector, and especially its effective takeover by wealthy foreign investors looking for quick and high returns, has led to these initial gains being outstripped by a growing list of downsides.¹⁷²

One of the most damaging is the mass over-indebtedness of a large proportion of the poorest in Cambodia. This has, in turn, led to many of the indebted being forced to adopt extremely adverse strategies to cope with un-repayable micro-debt, such as becoming debt-bonded labour in the many brick kilns in the country,¹⁷³ and migrating to neighbouring countries (mainly Thailand) to work in the exploitative informal sector.¹⁷⁴ This over-indebtedness was created by the reckless lending of the largest ‘brick-and-mortar’ microcredit institutions, such as ACLEDA, PRASAC and AMK, which were driven to expand rapidly in order to satisfy the demands of their key investors to earn high financial rewards in very short periods. With the possibility of a meltdown on the horizon by 2017 the Cambodian government attempted to slow down the breakneck pace of growth, notably with a largely unsuccessful cap on interest rates.¹⁷⁵ Some social investment bodies aware of the serious over-indebtedness problem that they have helped create also attempted, equally unsuccessfully, to respond with self-regulation.¹⁷⁶

Despite these obvious warning signs, the fintech model attracted huge foreign investor interest. Fintech platform organisations such as Wing and ABA Bank have begun to build up a sizeable market share on the promise of extending financial inclusion even further into (over-indebted) rural communities.¹⁷⁷ Not wanting to be caught out, Cambodia’s existing microcredit institutions have also rapidly built their own fintech platforms to replace their existing network of high cost ‘brick-and-mortar’ branches in the rural communities. Their hope is not just to extend even more microcredit to the poor but also to provide other chargeable services, such as payments transfer. Even analysts generally sympathetic to fintech have quietly expressed the fear that an already very fragile situation is likely to be made worse if “(fintech) partnerships with microfinance institutions or other lenders (...) include promotions or other tactics to make taking out loans more enticing as the process becomes faster and easier.”¹⁷⁸

As amply demonstrated by a growing number of cases in the once 'best practice' fintech pioneering countries – Kenya and China – and now elsewhere, the investor-driven fintech lending model is inextricably linked to reckless lending. This inevitably leads to over-indebtedness which ends either in a destructive financial 'boom-to-bust' scenario, or to using government and international development funds in order to bail out the failing fintech lenders. There is little to suggest that any permanent solution to this problem has been found that remains within the confines of the prevailing investor-driven fintech model.

Fintech provides a perfect location for fraud, theft and other illegal activities to flourish

One of the most widely circulated 'common sense' claims made on behalf of the fintech model early on was that, compared to the use of cash, it would significantly reduce the extent of theft, fraud and other financial crimes. Fintech practitioners routinely used examples of cash being stolen in the street, from one's home, after leaving a bank, or on a bus, and compared it to the supposed safety of financial transactions undertaken via a mobile phone or smart device. Importantly, this far-reaching claim was backed up by many mainstream economists using their standard neoclassical textbook simplifying assumptions of responsible financial agents, 'efficient markets', and fraud being an exclusive act of governments.¹⁷⁹

It is now increasingly accepted that the fintech sector has become subject to a growing wave of fraud and financial crime that, as even the World Bank has admitted,¹⁸⁰ is a major problem.¹⁸¹ Indeed, in some scenarios, the investor-driven fintech model has created an almost perfect criminogenic environment. Thanks to its combination of empowered financial entrepreneurs, the profit motive, little or no regulation, and a client base of often misinformed individuals desperate to find a way out of poverty, this development was not unforeseen.¹⁸²

Fintech-based deception, theft and fraud emerged very quickly in Kenya, inevitably involving M-Pesa,¹⁸³ before spreading right across Africa¹⁸⁴ and Asia.¹⁸⁵ China's unregulated fintech sector in particular¹⁸⁶ gave rise to a giant wave of fraud that was only brought under control when the Chinese government intervened in 2020 to radically reshape and re-purpose its financial sector.

Box 16: China experiences a wave of fintech fraud

China's 'wait and see' regulatory regime was once seen as the key to the rapid growth of its fintech sector, which, by the mid-2010s, was the world's largest.¹⁸⁷ However, it became clear that much of this rapid growth was based on large-scale fraud, Ponzi schemes, outright theft and other forms of criminality.¹⁸⁸ Initial attempts to discipline the fintech sector through a minimalist regulatory framework achieved little and obscured the scale of fraud.¹⁸⁹ In 2016 matters came to a head with the collapse of the huge P2P lending platform, Ezubao. Previously praised by China's financial analysts and regulators as a great example of 'the market' responding to the supposed urgent need for credit in many of China's most marginalised communities, Ezubao was shown to be just an elaborate Ponzi scheme that had taken in and lost upwards of USD 7 billion obtained from 900,000 small investors. This represented a scale of fraud exceeded only by the Ponzi scheme operated by the late Bernie Madoff in the USA.¹⁹⁰ In 2020 China's financial regulators abandoned their 'light touch' regulatory regime and radically restructured and re-purposed the entire fintech sector in order to try to minimise fraud and ensure more socially beneficial outcomes.¹⁹¹

There are now increasingly urgent calls to exert some kind of control over the wave of fraud, theft and other illegal business practices that have hit the global fintech sector.¹⁹² So far, with the possible exception of China (see Boxes 14 and 16), most governments have made only minor changes to the operations and regulatory structures governing the fintech sector, and even these are all too often ignored or simply circumvented by savvy fintech operators. It remains to be seen, then, to what extent this problem can be reined in.

Fintech is a form of colonial-style extractivism

Potentially the most damaging downside to the current fintech model is actually an old problem associated with capitalism but with a modern twist. Essentially, fintech represents an updated form of the brutally exploitative practices associated with European colonialism and imperialism that relied on the mining of mineral wealth (gold, silver, coal, diamonds, platinum) or control of the production and distribution of agricultural commodities (cocoa, coffee, spices). Colonialism and imperialism combined to enable the most powerful countries at the time to plunder the wealth of local communities across Africa, Asia and Latin America, and grow wealthy at their expense. More recently, the process morphed into a corporate-led form of extractivism that exploited the natural resources of the L&MICs through market, political and financial power.¹⁹³

By 'mining' the digital financial transactions of the poor today in order to accumulate often vast financial returns, while increasingly impoverishing large numbers of their clients and undermining the chances that their communities will progress by reinvesting any surpluses, today's fintech model essentially updates the earlier extractivist processes to the same ends. Foreign-owned fintechs, in particular, have very little concern for the longer-term implications of their activities. Once more we can first look to Kenya and M-Pesa to illustrate our point.

Box 17: M-Pesa and its pioneering role in facilitating 'digital extraction'

Owing to its pioneering M-Pesa platform and somewhat problematic lobbying tactics (see Box 20), Kenya's Safaricom was able to build a near-monopoly position in facilitating the tiny financial transactions of the poor. Thanks to a variety of high charges, fees and other revenue-raising services, with the real prices often hidden from clients, these tiny financial transactions became the mother lode upon which an astounding financial bounty has been 'digitally mined'. The wealth 'extracted' from the poorest communities in Kenya enabled its parent company, Safaricom, to become one of the world's most profitable companies. In 2018–2019, for example, its net profit was recorded at USD 620 million. Even after the loss of significant revenues in 2019 from the demise of the sports betting craze (see Box 12), profits rose even further in the 2019–2020 period to a record-breaking USD 747 million.¹⁹⁴ Early on, Safaricom began to pay out most of its profits as dividends to its mainly foreign shareholders; first to the UK's Vodafone corporation with its majority 40% stake, and then to other wealthy shareholders who collectively own 25% of Safaricom. Since 2016, Safaricom has gone even further to reward its shareholders through a programme of 'special' dividend pay-outs. In the latest 'one-off' dividend in 2019, for example, Safaricom's shareholders received an extra USD 200 million.¹⁹⁵ Even during the COVID-19 pandemic when the Kenyan economy was plunged into a major economic crisis and poverty rose to new heights, the company still insisted on paying out the bulk of its profits as dividends – totalling just over USD 500 million in 2020–2021.¹⁹⁶ Naturally, Safaricom's senior management have always been generously rewarded and the CEOs quickly join Kenya's wealthiest elite.¹⁹⁷ Notwithstanding the dividends attributable to the Kenyan government as a result of its 35% shareholding in Safaricom (though the dividends it receives could also be viewed as a hidden tax on its poorest citizens), it is clear that Safaricom has essentially recreated the key elements of the old-style 'extractivist' business model that was responsible for slowly impoverishing the country (and the African continent) over the last 200 years.

Not least thanks to the example set by Vodafone and Safaricom, investors, fintech corporations, banks and other bodies have been clamouring to enter the most lucrative markets in the L&MICs. Leading the pack are the giant US-based digital payment corporations Visa, Mastercard and Paypal, which have manoeuvred to ensure that the largest share possible of the financial transactions go through their digital platforms.¹⁹⁸ This has involved buying up as many of the best emerging fintech ventures as they can, often backed up by their respective charitable foundations.¹⁹⁹ These ostensibly development-oriented charitable bodies aid the wider effort to facilitate the move to digital payments platforms which, not coincidentally, their corporate parents own and control. Barring further legal setback brought about by allegedly over-charging clients in the richer countries,²⁰⁰ these digital payments corporations expect to prosper in the coming years thanks to the expected profits generated from controlling the local financial systems in the L&MICs.

The major global banks and other financial institutions are close behind Mastercard and Visa in terms of securing their own fintech platforms in the L&MICs, such as JP Morgan Chase Bank, which has in recent years bought as many as 30 fintech platforms, most in the L&MICs.²⁰¹

Another way that the major fintechs are able to extract profits is by taking over government-run social grants and payment systems. Fintech platforms offer governments a way to slash their operating costs, which will theoretically free up money to address poverty. However, if investor-driven fintech platforms assume control over these digitised government payments systems they can be used, typically after a 'honeymoon' period during which they are on good behaviour, to pursue extremely lucrative 'extractivist' strategies.

Box 18: The social grants system used to exploit South Africa's poorest

With poverty and unemployment higher in post-apartheid South Africa than during apartheid, its government introduced a social grants programme. With the strong encouragement of some international development organisations, in 2012 the government started to disburse these social grants through a private fintech platform provided by Cash Paymaster Services (CPS), a subsidiary of the US-based fintech Net1 Technologies (Net1). The arguments in support of the contract were twofold: first, as a private company it was assumed that Net1 would provide significant cost savings; and, second, that it would improve the lives of social grant recipients as they would no longer be 'unbanked'. Net1's subsidiary CPS was granted the right to register all social grant beneficiaries, collect their biometric data, and open nearly 10.5 million new bank accounts on their behalf at Grindrod Bank, into which their grants would be transferred and could then be accessed. After a short period during which the system was implemented, CPS began to explore ways of using this valuable fintech platform and the data it contained to extract much more value from their largely impoverished clients. CPS began to bombard them with SMS messages offering 'unrepeatable bargains' for mobile phone airtime, electricity, insurance and, above all, microcredit. Crucially, this system was very cheap to operate and there were almost no risks involved in selling these products because payments were automatically deducted from the social grant payment processed through the platform. The 'hard sell' of microcredit proved to be the easiest and most profitable product, but many clients were soon heading into deep debt (see also Boxes 11 and 14). Even worse, the social grant was then turned into a form of collateral that all lenders in the country could use if the clients agreed to take out a new microloan, which inevitably resulted in even more hapless individuals falling into debt.

By 2015 these exploitative practices began to cause alarm among South Africa's civil society and human rights bodies. International development organisations, however, remained quiet about the steadily rising level of abuse, as this clearly reflected badly on their preferred investor-driven fintech model. This extreme reluctance to admit any flaws was evidenced in 2016 when the World Bank's IFC provided USD 107 million of equity investment in Net1, even though by then CPS's thoroughly exploitative practices were common knowledge.²⁰² Eventually, however, popular opposition to this form of 'digital exploitation' reached a crescendo. The government was finally forced to announce that it would not renew Net1's contract. Determined not to lose its hugely lucrative operations, however, Net1 responded before the end of its contract by immediately moving its clients to a new bank account that was entirely independent of the social grant contract and, crucially, its regulatory purview. Net1 hoped that this would allow its CPS subsidiary to continue to operate even after it lost the huge social grant contract. In 2018 the Net1 contract ended and the social grant payment system was taken over by the state-owned South African Post Office (SAPO). SAPO immediately ended the most exploitative commercial activities operated by CPS. The service continued to operate as efficiently as before, thus disproving the fintech advocacy lobby's argument that only a private-sector-led fintech platform would be efficient.²⁰³ Net1's hopes to continue operations were thwarted, however, when South Africa's Constitutional Court declared that a large part of the profits it generated under its contract with the government were invalid and so should be repaid. In September 2020, Net1 decided to put its CPS unit into liquidation.²⁰⁴

Further underscoring the validity of the colonial, imperialist argument is the fact that several key governments in the wealthy countries have also begun to take quiet, deliberate, steps to ensure that the vast profits generated by fintech operations in the L&MICs can underpin the functioning of their own economies.

For example, it is largely for this self-interested reason that the UK government has been so supportive of Vodafone expanding its activities in Africa, including maintaining its 40% stake in Kenya's Safaricom. For its part, Vodafone is also aware that its incoming dividends from such as Safaricom are useful to the UK economy. This was shown recently when Vodafone responded to the growing criticism of its low UK corporation tax payments²⁰⁵ with a publicity campaign that promoted Vodafone's infrastructure investments in the UK, which it has been able to finance using the dividends it has earned in the world's poorest countries, including in Kenya.²⁰⁶ Recognising this, the UK government has also pushed for other UK-based fintechs to operate in L&MICs,²⁰⁷ especially in Kenya.²⁰⁸ With tacit support from the Chinese government, Ant Financial, the world's largest fintech, has also been encouraged to make major strategic foreign purchases in line with the government's economic objectives.²⁰⁹ The US government has also been quite aggressive in supporting US corporate dominance of the global fintech industry.²¹⁰

Box 19: Pushing ‘demonetisation’ in India in order to facilitate extractivism

Since early 2010, through USAID, its bilateral aid agency, the US government has gone to considerable lengths to ensure that US-based financial and digital payments corporations are the principal beneficiaries of the fintech revolution. One of the most revealing examples of how this objective has been pursued involves the case of India’s 2016 ‘demonetisation’ experiment. In around 2012 USAID, the Gates Foundation and the ‘astro-turf’ corporate lobbying body, the Better than Cash Alliance, acting in cooperation with the Indian Finance Ministry, began to push the Indian government to consider a radical plan of ‘demonetisation’. The principal aim was to drive Indian citizens to rely on investor-driven fintech solutions, including a digital currency. Many spurious justifications were aired publicly to justify this move: that it would raise taxation, destroy much of the ‘black money’ in the economy, push the informal economy towards formalising, and begin to phase out physical cash in India.²¹¹ Behind the scenes, the US government hoped the new digitalised financial system would be largely owned and controlled by the US corporate sector.²¹² A report by the Boston Consulting Group and Google argued that as much as \$500 billion would be available in the Indian digital payments market that US fintech corporations should aim to capture, including by mining customer data in order to make people to buy more.²¹³ As one leading analyst concluded, quoting a US government report that essentially gave the game away, “This is what the Indian digitalization effort and the friendly help of USAID, the Gates Foundation, Visa, Mastercard and other seekers of the pot of gold is all about: *“a policy strategy that helps advance the sector and maintain a robust competitive advantage”* for the US payments industry.”²¹⁴ This US-led effort to control India’s financial sector, however, led to an eventual pushback by an increasingly unpopular Indian government under Prime Minister Narendra Modi seeking to redefine itself as ‘defending the homeland’.²¹⁵ Even so, the likes of Mastercard’s CEO, Ajay Banga,²¹⁶ continue to argue that over the longer run demonetisation was a ‘brilliant idea’ that would accelerate financial inclusion, even though this is not supported by the empirical evidence.²¹⁷ A new for-profit retail payments system is now being created to replace the public service payments system and leading fintechs are being invited to participate. This includes several major US fintechs (for example, Facebook, Google and Amazon), but as partners with Indian-owned private fintechs.²¹⁸

All these costs of the huge extractive potential of fintech raise the important question: Why are governments in the L&MICs embracing such a clear and present danger? One reason is all too familiar: it has been easy to co-opt local political and economic elites that, in return for a private share of the profits, are willing to ‘push from the inside’ for weak regulatory and supervisory regimes that govern the fintech sector.

Box 20: Kenya's political elite support M-Pesa in return for a share of the spoils

When Kenya's telecom sector was privatised in 1999, a small number of Kenya's political and economic elite were determined to benefit. To do this they formed a shell company, Mobitelea Ventures, which they secretly owned through a Guernsey-based company with its nominee Directors based in Anguilla and Antigua. In return for a 5% stake in Safaricom, the parent company of M-Pesa, Mobitelea Ventures, accepted the task of leading the effort to ensure as near a complete monopoly for M-Pesa's financial services as possible. Mobitelea's assistance in 'pushing from the inside' helped remove regulatory hurdles for Safaricom and held back competition from other similar innovations.²¹⁹ For example, the regulator, the Communications Authority of Kenya (CAK), on which several key Safaricom executives served, refrained from insisting upon operational universality (ensuring every individual household or community must in theory be able to connect to a particular fintech service rather than just select typically wealthier individuals or communities), while insisting on this for Safaricom's subsequent competitors. Effectively, Safaricom was allowed to share the market with just one much smaller competitor, Kencell, owned by a Kenyan businessperson with direct links to the then president. The two companies faced little pressure to lower their extremely high tariffs.²²⁰ With M-Pesa on course to be given the market to itself, Mobitelea's ownership stake in Safaricom was sold back to Vodafone in two tranches, generating significant profits for its owners (as much as USD 100 million).²²¹ Thanks to its complicated ownership structure, for a long time the final beneficiaries of Mobitelea Ventures were never formally identified. Vodafone refused to identify the real owners of Mobitelea Ventures, claiming 'commercial confidentiality'. The names of a few members of the political and business elite with ownership ties to Mobitelea Ventures were eventually released,²²² but by then the issue was 'old news'.

Increasingly driven by commercial interests and the national strategic development goals of the wealthiest countries, the fintech model has already begun to shed its superficially attractive poverty-alleviation roots. It has now morphed into a uniquely effective tool with which narrow corporate and state interests are increasingly cooperating in order to facilitate a 'digital extractivist' model of exploitation in L&MICs of potentially breath-taking scale and scope. The petty financial transactions of today's global poor today represent the new mother lode upon which fortunes are to be quietly extracted and appropriated by institutions based in the world's richest countries.²²³



4. Using fintech to help create an alternative future: The ‘Maricá model’ in Brazil

The danger to the global poor represented by the investor-driven fintech model might suggest that opposing it is the only option. We do not think this is the best response, however, because it is still possible for the fintech model to generate important benefits for the community as a whole, provided it is established and functions in a different way.

One such example we might look to is the interesting social experiment underway in the city of Maricá in Brazil that involves a radically different form of fintech.²²⁴ While idiosyncratic in many respects, we believe that the valuable experience gained in less than a decade illustrates how fintech has the potential to achieve a major sustainable and equitable economic and social development impact. In the aftermath of the COVID-19 crisis that has destroyed the lives and communities of so many people around the world, especially in Brazil, it is important to explore the contribution to ‘building back better’ that a fundamentally repurposed fintech model can play.

The small city of Maricá, some 50 kilometres to the east of Rio de Janeiro in southern Brazil, has gained an international reputation for the positive impact of its radical economic and social policies. Governed since around 2010 by the leftist Workers’ Party (*Partido dos Trabalhadores*) that has produced two recent national presidents – Luiz Inácio Lula da Silva (‘Lula’) and Dilma Vana Rousseff – the city has built upon one of the world’s most comprehensive and innovative basic income programmes. This was *Bolsa Família*, one of the flagship social achievements of the first term of the Lula administration. In 2013 the city of Maricá went much further than this, however, by establishing its own *Renda Básica de Cidadania* (Citizens’ Basic Income, or RBC) which was not just aimed at the very poorest, as are most basic income programmes, but meant to eventually include virtually everyone else in the city by right. This over-arching objective is directly informed by Brazil’s progressive movements, in particular the Solidarity Economy movement associated with the Brazilian economist and former Secretary of State for the Solidarity Economy, Paul Singer.²²⁵ Moreover, Brazil is so far the only country in the world that mandates a basic income as the right of every citizen, with the goal of making it a reality as financial resources permit, starting with the most impoverished citizens.²²⁶ Importantly, funding for the RBC is derived from taxes levied on Brazil’s state-owned Petrobras, which operates a major oil field just to the south of Maricá. This tax revenue not only provides the funds for the RBC, but also covers about 70% of the municipality’s budget. A sovereign wealth fund was created using part of this revenue to ensure that the RBC can be maintained in perpetuity.

The RBC was founded in 2012 on the basis of a community currency, a concept pioneered in Brazil by Banco Palmas in the northern city of Fortaleza. Initially using a form of magnetic card – the ‘Mumbuca card’ – given to RBC recipients and valid for all local purchases, in 2018 the Maricá municipality opted to switch to a community-based digital currency – the ‘E-dinheiro’ – which had already been adopted by 48 digital community banks in 17 states across Brazil. Crucially, this fintech platform opened up the road for the RBC to go from a limited social experiment to a major policy intervention aimed not just at establishing the basic income model across the city,²²⁷ but also at generating a wider range of social innovations of benefit to the city and all of its citizens. The basic RBC eligibility requirements are being a resident for at least three years and having a ‘moderately low’ income, which is well above Brazil’s minimum wage. Once approved, the person receives a monthly payment of ‘Mumbuca’, the digital community currency used in Maricá, either via a pre-paid credit card or, increasingly, via a dedicated mobile phone app.

Importantly, the Mumbuca is issued, operated and regulated by Maricá's community-owned development bank, the *Banco Comunitário de Maricá*, or 'Mumbuca Bank'. To encourage all citizens of Maricá gradually to adopt the digital currency, the salaries of municipal employees are paid in Mumbuca and many of the payments regularly made to the municipality (such as utility bills) can be paid in Mumbuca. The Mumbuca is tied to the national currency, the Real, which provides the growing number of private and commercial users with the confidence that it will retain its value. Mumbuca Bank charges businesses in Maricá 2% of the value of any transaction, which covers operational costs and allows for other services to be undertaken (see below). Exchange of Mumbuca into Brazilian Real by Mumbuca Bank is very straightforward and incurs only 1% of the value of the transaction.

From a small beginning, the proportion of citizens in Maricá eligible for inclusion in the RBC has quickly increased. By 2019 about 25% of the population was receiving a monthly payment in Mumbuca to the value of Real 130 (about USD 25). In the context of the COVID-19 pandemic, it was decided to considerably increase the amount of Mumbuca paid out per person, and also increase the number of eligible individuals. This was aimed at assisting the poorest communities that mainly derive their incomes from informal activities, such as retail and fast food, which dropped significantly with the onset of the COVID-19 pandemic.

The 'Maricá model' and the RBC have been fêted in Brazil and beyond.²²⁸ However, most of the journalistic and academic accounts of this important experiment focus on the RBC aspect, which is indeed important, but tend to overlook the social justice-driven uses of fintech that lie at the heart of the Maricá model. Several of its most important features demonstrate that fintech does not have to be used to enrich a narrow elite – domestic or foreign – but can be deployed to benefit the entire local population through a genuinely inclusive 'bottom-up' economic and social development trajectory.

The operational efficiency of the RBC was dramatically enhanced in 2018 when it moved to the fintech platform and the Mumbuca became a genuine digital currency. It now provides a service at a much lower cost compared to the commercial credit and debit companies, such as Visa and Mastercard.²²⁹ In addition, unlike with other fintech cash transfer programs, notably a major experimental basic income program in Kenya that uses M-Pesa and charges fees,²³⁰ RBC beneficiaries are not charged to access their funds. Moreover, Mumbuca Bank is not involved in quietly selling the purchasing data it collects to third-party clients, which is a major aspect of the operations of many investor-driven fintechs and their private partners.²³¹ This means that Mumbuca card-holders do not receive a welter of unwanted phone calls, SMS messages and other invitations to purchase goods, services or take out expensive loans; and there is also much less chance of receiving fraudulent calls and SMS messages. The RBC's efficiency was further evidenced, as already noted, when it quickly responded to the COVID-19 pandemic.²³²

The Maricá model also demonstrates that fintech need not be built on an 'extractivist' logic. Rather, the purpose of the fintech applications deployed by Mumbuca Bank is to serve the local population more efficiently but also, in the longer term, play a part in the city's overall economic and social improvement. The first and most obvious reflection of this is that any surplus generated by Maricá is owned by Mumbuca Bank and is then returned to the municipality. With no outside owners or for-profit investors, there is no pressure on the Mumbuca Bank to disburse or 'pressure sell' its services, such as pushing more digital microcredit on to the poorest.

Going further, Mumbuca Bank uses the Mumbuca to implement and fund a local economic development programme. For example, it has introduced the 'Mumbucred', a zero-interest loan programme aimed at supporting cooperatives and social enterprises in the municipality that adhere to the principles of the Solidarity Economy movement. To date this has mainly involved small loans to support the survival and diversification of local microenterprises such as carpentry, retail, handicrafts, printing, and food production and retailing. These small loans are both credited and repaid in the Mumbuca digital currency. Mumbuca Bank also closely cooperates with the local government's department for economic development to offer its customers business advice and support. Mumbuca Bank reinvests any surplus it earns in expanding and diversifying its operations.

It is recognised that Mumbuca Bank's support for the microenterprise sector is not in itself going to create the necessary local economic structure to bring about sustainable and equitable development and growth. The Maricá municipality has therefore explored financing more substantive growth-oriented enterprise development projects that are based on more sophisticated product and process technologies, higher skills and expert knowledge. Naturally, this has started by trying to link local enterprises to the oil and gas sector. The goal is to take full advantage of the opportunities for new and existing businesses based in Maricá to sub-contract to the oil industry, which will inevitably require more robust financial support.²³³ Among other things, this would ensure that the benefits of the oil windfall are not restricted to simply underpinning the RBC, but will also create a growing sector of sustainable and well-paid local employment. Two of the obvious, albeit contrasting, options that are being examined are the highly successful experience of central and regional Norwegian government administrations in managing the country's oil and gas reserves since the 1960s, and the calamitous experience of successive UK governments in managing its even larger reserves over the same period.²³⁴

Not least as a result of central government inaction, the COVID-19 pandemic has devastated Brazil, and Maricá has not escaped these consequences. In this tragic situation, Mumbuca Bank has taken a central role in attempting to address the economic and social damage through a number of emergency programmes.²³⁵ For example, customers who are facing difficulties are allowed to restructure their loans in line with their ability to repay. Apart from debt moratoria and interest write-offs, which some investor-driven fintechs are also offering to their clients, Mumbuca Bank also allows struggling customers to repay part of the loan by undertaking certain vital community services. Another innovation involves a number of new credit operations funding community gardens that, properly managed under the extreme circumstances, provide additional food and also maintain solidarity in the face of the common threat to fresh food suppliers. A transport cooperative has been financed to ensure safe transport within the municipality and a seamstress cooperative has also been formed. While these new areas of operation are meant to deal with the immediate problems created by the COVID-19 pandemic, the hope is also that the solidarity and mutual support structures created will serve as a firm foundation for long-term equitable development.

While we are offering only a small glimpse of the 'Maricá model', it is clear that the creative use of a number of fintech applications – principally through the use of a local digital currency issued by a community-owned fintech-based development bank – represents an important practical illustration of the significant potential for those who might wish to proactively deploy fintech for more socially progressive ends. The economic reversal in recent years, accelerated by the COVID-19 pandemic, a potentially negative reaction from Brazil's financial elite (including the

almost inevitable demand to privatise Mumbuca Bank at some stage to ensure it would generate a profit for investors), and also the current Brazilian government’s neoliberal policy approach, are all likely to put severe pressure on Maricá municipality to abandon its social goals, and so also its creative use of fintech. But the impressive progress so far, and especially the continued political commitment of key local institutions, suggests that although there will be many difficulties ahead for the Maricá model, more progress is possible. Indeed, we suggest that there is much for the world to learn in the years ahead from this experiment in a development-oriented ‘people’s fintech’.

Investor-driven versus a development-oriented ‘people’s fintech’ model

We end this section with a brief summary of the core differences between the investor-driven fintech model and the development-oriented ‘people’s fintech’ model being pioneered in Maricá. This helps to illustrate the stark differences between the two approaches to the use of fintech.

Table 1: Stylised key differences between two opposing fintech models

Key issues	Investor-driven fintech	Development-oriented ‘people’s fintech’
Growth	As rapid as possible, often driven by reckless lending	In line with evolving needs of the community
Inclusivity	Highly inclusive, in order to lower costs and have as many ‘profit-points’ (clients) as possible	Highly inclusive, in order to help as many clients as possible and lower unit costs
Ownership and control	Ownership and control by external bodies and investors, including foreign investors	Ownership and control by the local community through its elected government and self-government mechanisms
Profits	Used to upgrade services, purchase and ‘kill’ competitors, and reward investors and senior management	Used to upgrade services, develop the local economy through various financial measures, with any surplus recycled into the local community through additional benefits to clients
Development	Little or no real interest	Main focus of the initiative

Growth: International corporate fintechs, venture capitalists and most other investors expect the management to attain rapid growth above all other corporate goals. This ensures the required high financial returns in a short time period, often just five years. The higher the volume of financial transactions passing through any fintech, the more it is possible not just to benefit from them but also to shape and expand them in order to further maximise the benefits. Like the sub-prime mortgage institutions in the US that led to the Global Financial Crisis, however, the overwhelming need for very rapid growth and securing a high market share has already led many fintechs to engage in a wide range of destructive and wholly unethical activities, driven above all by reckless lending, that have undermined the economic and social fabric of the local community that they

purport to serve. The development-oriented fintech, on the other hand, seeks to achieve growth in line with the current and emerging sustainable demands, and real preferences of the local community for certain products and services, as well as the wider opportunities that will best address the aim to stimulate sustainable local economic development. Moreover, one fintech unit owned and managed democratically by local people and their elected representatives, as opposed to many private fintech units competing destructively against each other or forming self-interested cartels and monopolies, is a better way to reduce both destructive competition and collusion and provide better targeted services for the local population.

Inclusivity: Investor-driven fintechs seek full financial inclusion in order to quickly build up as large a number of 'profit-points' (clients) as possible, which then reduces unit costs and maximises profit per transaction, while also extending the ability to cross-sell a wider range of commercial products to clients. In general, the use of the term 'inclusivity' or similar terms (such as 'serving the under-served') is simply to efface the reality that the goal is to maximise short-term profits. Full inclusion is also sought by development-oriented fintechs, but in order to ensure a more efficient scale of operations that will allow the community as a whole to benefit through the provision of a range of lower cost services and products. Achieving 'inclusivity' is an ethically driven goal related to the achievement of a genuinely inclusive community in which *all* citizens, not just a select few, can be allowed to enjoy economic security, social rights, equality and dignity.

Ownership and control: Investor-driven fintechs seek as much effective control over the local financial system as possible in order to benefit their external owners and investors, which increasingly include major multinational financial, fintech and telecom corporations based outside the country. The ability to control the financial transactions of a local community opens up the possibility to extract large and almost risk-free returns into the longer term. A development-oriented fintech, by contrast, is driven to establish effective control of the local financial system through democratic institutions in order to maximise the benefits of scale (principally lower unit costs) which can then help to fund the financial services and development activities conducted to benefit the local community. A development-oriented fintech is also far more likely to be accountable to the community in which it operates, this being a core element of democracy.

Profits: Most investor-driven fintechs distribute profit among a narrow group of stakeholders, beginning with the investors and shareholders, with CEOs and other senior management also enjoying a share in return for securing rapid growth. Profit is also used to purchase competitors in order to further build market share and move towards a monopoly. Most of the largest fintechs send a large and growing percentage of any profit abroad in the form of dividends, which end up with the wealthiest individual and corporate investors, often in well-known tax-avoidance (or evasion) jurisdictions. A development-oriented fintech, however, exists to recycle any profit or surplus *within* the local community in which it operates; first, by reinvesting in its own operations to improve its products and services to the community; second, by passing profit back to the community in the form of lower costs of products, occasional dividend pay-outs, and services and special programmes, such as subsidised services for the poorest; and, third, by underwriting a range of longer-term local economic development programmes assisted by its own services and platforms.

Development: Other than for PR purposes, investor-driven fintechs generally have no direct interest in identifying or promoting the best local development opportunities or maximising any positive economic externalities (or knock-on effects) that might arise from fintech operations. Algorithmic screening devices, for example, help investor-driven fintech lenders to supply loans only to those established enterprises most capable of repaying them in the generally short time allowed. Development-oriented fintechs, on the other hand, see economic and social development as their fundamental rationale, and so can design their service offers and other activities around this primary goal. For example, loans are supplied to enterprises that are not just eventually able to repay (for example, after break-even point is reached) but which are likely to go on to make the most meaningful contribution towards sustainable and equitable local economic and social development.

5. Conclusion: The urgency of moving from destructive investor-driven fintech towards developmental-oriented fintech

Disruptive innovations are often initially lauded and 'sold' internationally on the basis of the great *potential* to benefit humanity. In the long run, however, many if not most such innovations, especially financial innovations, have been hijacked, manipulated, misrepresented and misused in order to enrich and empower a narrow elite at the expense of the vast majority.²³⁶ Opportunities for economic and social development, and wider human progress, are lost by using technology 'in the service of the few not the many'. We would argue that the almost universally fêted investor-driven fintech model appears to be the latest addition to this category of problematic innovations. While recognising that the investor-driven fintech model has generated many important initial and on-going benefits in many countries, including in the L&MICs, these benefits are now in danger of being swamped by the emerging practical downsides we have described. As in the case of the microcredit and the US sub-prime mortgage models, an innovation that is making stratospheric profits for some of its first-movers will be very aggressively defended to the bitter end, irrespective of the mounting damage inflicted upon its broader client base and society into the longer term. This perverse phenomenon accounts for why so many influential international development organisations have largely ignored the downsides to the fintech model, while the benefits have been promoted to the point where they are now almost part of popular culture.

The crux of the problem here is that too much money is being made too quickly by too many individuals and financial institutions which has made it impossible to build the momentum to stop the party that is underway. The global fintech industry is currently driven by the possibility of realising high financial returns, with the most ambitious investors consumed by their desire to 'find the next unicorn'.²³⁷ As a result, we find the use of strategies, tactics and sometimes transparently false justifications. There are few indications that the current investor-driven fintech industry will independently, or even under external pressure, adjust its current damaging trajectory.²³⁸ It hardly helps either that the few recent critical reports on fintech published by some of the most influential international development organisations and leading economists propose nothing more than 'careful regulation and supervision' in the belief that such modest measures will somehow resolve matters.²³⁹ Especially in the post-COVID-19 context, and the mantra to 'build back better', we need a completely new 'people-centred' approach that maximises the obvious promise that fintech holds while minimising the inevitable perils that have emerged for the global poor following the almost universal adoption of the investor-driven fintech model. Emerging alternative fintech models and institutional trajectories clearly exist, as shown by the case of the Maricá model, and these need to be more thoroughly examined, tested and made ready for wider adoption in the coming years.

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Endnotes

- 1 <https://en.oxforddictionaries.com/definition/fintech>
- 2 For critical analyses of the wider impacts of digital technologies, and especially the problematic role of the 'big data' corporations, see UNCTAD (2018) and Zuboff (2019).
- 3 See King and Petty (2021, p. 39).
- 4 See, for example, Susantono (2021).
- 5 A useful summary of the hypothetical potential of fintech to address global poverty is presented by the World Bank's team of financial economists. See Demirgüç-Kunt, Klapper, Singer, Ansar, and Hess (2018).
- 6 Some international organisations have recently undertaken studies that entertain the possibility that there are indeed serious downsides to the fintech model that must be urgently addressed if it is to remain attractive, notably the World Bank (2021)).
- 7 DFID (2004).
- 8 Turrin (2021).
- 9 Ibid., p. 6.
- 10 Although the evidence was by then overwhelming that establishing a 'developmental state' was how virtually all countries have successfully developed (see Amsden (2001); Chang (2002, 2007); Evans (2010)), in the 2000s some international organisations (notably the World Bank and IMF) were still heavily promoting the idea that markets and the private sector are all a country needs to develop.
- 11 Toye (2003).
- 12 See Studwell (2013) and Bateman (2020b).
- 13 <https://www.worldbank.org/en/topic/financialinclusion>
- 14 The Head of the ILO's Social Finance Programme, Bernd Balkenhol, famously announced in the mid-2000s that the 'international development community' had reached almost complete consensus that the microcredit model was "the strategy for poverty reduction par excellence" (Balkenhol, 2006, p. 2; original emphasis).
- 15 The ineffectiveness of microcredit as a development model had become quite clear to heterodox economists, political scientists, anthropologists, and others (for example, see Bateman (2003, 2010, 2011), Bateman and Chang (2012), Harvey (2014, pp. 182-198), Mader (2015), Bateman and Maclean (2017), and Bateman, Blankenburg and Kozul-Wright (2019). Eventually mainstream economists and microcredit advocates also came around to accepting that the microcredit model had essentially had zero impact on poverty (e.g. Roodman (2012), Altman (2014), Banerjee, Karlan and Zinman (2015) and Morduch (2017)).
- 16 Collins, Morduch, Rutherford and Ruthven (2009) is widely seen as the key text in justifying some of the most influential international organisations' support for this wider financial inclusion agenda and its watered-down aim to manage poverty rather than eradicate it.
- 17 Mader and Sabrow (2015).
- 18 see Mader (2017).
- 19 World Bank (2015, p. xi).
- 20 For example, Demirgüç-Kunt et al. (2018).
- 21 Blair (2022).
- 22 For example, Chang and Grabel (2014).
- 23 Gabor and Brooks (2017).
- 24 The G20 countries are Argentina, Australia, Brazil, Canada, France, Germany, Great Britain, India, Indonesia, Italy, Japan, Mexico, People's Republic China, Russia, Saudi Arabia, South Africa, South Korea and the United States, as well as the European Union.
- 25 A key aspect of UNSGSA's work is to promote fintech as a way of achieving the goals of financial inclusion that support the Sustainable Development Goals (SDGs).
- 26 McGoey (2012).
- 27 Many of the outputs produced by the global consulting companies can best be described as promotional puffs masquerading as serious economic analysis – two recent examples of this genre involving McKinsey are McKinsey Global Institute (2016) and Tyson and Lund (2016).
- 28 Wikipedia defines 'Astroturfing' as 'the practice of masking the sponsors of a message or organization (e.g. political, advertising, religious or public relations) to make it appear as though it originates from and is supported by grassroots participants. It is a practice intended to give the statements or organizations credibility by withholding information about the source's financial connection'.
- 29 For example, in order to buttress its claims to 'impartiality' and to a dedication to universally agreed poverty-reduction goals such as the SDGs, the Better than Cash Alliance advertises itself as 'Based at the United Nations'. As Häring (2018, p. 12) points out, however, this is a ludicrous claim to make simply on the basis of having office space!

- 30 For example, many of the fintech policy documents adopted by the G20 countries were entirely drafted by one of these two powerful lobby groups (Håring, 2018, p. 8).
- 31 This event took place in October 2018 in Bali in Indonesia where the World Bank and International Monetary Fund (IMF) were holding their annual meetings. It was designed to highlight the central role of fintech in economic policy and to instruct governments in the Global South on how they were expected to exploit this innovation (IMF and World Bank, 2018).
- 32 For example, Demirgüç-Kunt, and Klapper (2012), Demirgüç-Kunt et al. (2018) and IMF and World Bank (2018).
- 33 Mas (2009), Mas and Kumar (2008), Mas and Morawczynski (2009), Mas and Ng'weno (2010) and Mas and Radcliffe (2010).
- 34 For example, Jack and Suri (2011, 2014).
- 35 Suri and Jack (2016, p. 1288).
- 36 Notable examples include Demirgüç-Kunt et al. (2018, p. 3), Mastercard Foundation and IFC (2018, p. 32), Ndung'u (2018, p. 13), United Nations (2018, p. 81), UNSGSA, Better than Cash Alliance, UNCDF and World Bank (2018, p. 7), Cantú and Ulloa (2020, p. 7) and Pazarbasioglu et al. (2020, p. 1).
- 37 An entirely typical comment from senior international officials was made by Christine Lagarde, the then Managing Director of the IMF, who told an international audience in 2017 that '[a] good example [of fintech] is the rapid growth of mobile banking, which has boosted the economic wellbeing of hundreds of millions of citizens - from Bangladesh, to Kenya, to Peru' (see Tuckwell, 2017).
- 38 CCAF, World Bank and World Economic Forum (2020).
- 39 From the early 2010s, a wave of new independent analyses carefully reviewing the evidence on microcredit began to cast a very negative light on what had been lauded as a revolutionary intervention. One of the most devastating was a systematic review funded by the UK government undertaken by Maren Duvendack and an international team of impact evaluators and microcredit specialists (see Duvendack et al., 2011). They examined 2,643 impact evaluations of microcredit in order to assess their robustness, making it at the time the largest in-depth study of its kind. Owing to problematic methodologies, flawed assumptions and outright bias, the team found that only 58 of these evaluations could be considered robust, but even of this 58 supposedly quality impact evaluations there was no real empirical evidence presented to the effect that the microcredit model had worked to address poverty. Concluding that the global microcredit movement had therefore effectively been 'constructed upon foundations of sand' (p. 76), their findings sent shock waves through the microcredit industry. Such was the importance of the microcredit model to the its international proponents, and also to the UK government (which, via DFID, was funding many microcredit programmes in Africa and Asia), that their important conclusions were simply ignored.
- 40 For example, Mader (2016), Gabor and Brooks (2017), Wright (2017), Bateman (2018), CSFI (2018), Maurer, Musraj and Small (2018) and Mann and Iazzolino (2019).
- 41 For example, Donovan (2015), Wyche, Simiyu and Othieno (2016) and Natile (2020).
- 42 Other than intentionally, it is difficult to explain how Suri and Jack ignored almost all of the clearly visible downsides to the M-Pesa operation in their analysis of its then and likely future impact on Kenya's poorest citizens. These problematic issues included: (1) the mass individual over-indebtedness in Kenya since the rise of M-Pesa (See Box 11), particularly among youth engaging in internet gambling (see Box 12); (2) the high rate of microenterprise exit in Kenya that might largely offset the assumed positive impact of any microenterprises established by means of the easier access to microcredit provided by M-Pesa (see Box 3); (3) the possibility that demanding more remittances from family and friends with the help of M-Pesa will gradually destroy this valuable social linkage as a consequence of its programmed over-use; and (4) the Wall Street-style profits now extracted from the poorest Kenyan communities with the help of M-Pesa and largely sent to foreign corporations and wealthy investors and which represents a significant loss of local demand and reinvestment possibilities for Kenya (see Box 17). See also Bateman, Duvendack and Loubere (2019a).
- 43 For example, Dosi (1982) and Freeman (1982).
- 44 The most notable proponents of this neoliberal viewpoint were Hayek (1944) and Friedman (1962).
- 45 As Chang (2003, p. 6) points out, per capita income growth rates plummeted in the extreme neoliberal period (1980-1999) in Latin America and the Caribbean (LAC), the Middle East and North Africa (MENA) and sub-Saharan Africa (SSA) compared with the immediate post-independence reconstruction period (1960-1980).
- 46 Levitsky (1989).
- 47 ILO (1972) and Hart (1973).
- 48 For example, a global survey by Gomez (2008) showed that 75% of new microenterprises seldom survive beyond two years.
- 49 Ghai (1987).
- 50 Agénor (1996, p. 285).
- 51 For example, Breman (2003), Davis (2006), Elyachar (2005) and Standing (2010).
- 52 Davis (2006, p. 186).
- 53 See UN (2017).

- 54 Yunus (1989, p. 156).
- 55 For an excellent analysis of the ‘churn’ effect and its negative impact on development in general, see Nightingale and Coad (2014).
- 56 High exit rates are a particularly acute problem across Africa. See Gubert and Roubaud (2011); Page and Söderbom (2012); Patton (2016); Nagler and Naudé (2017). World Bank economists McKenzie and Paffhausen (2017) show that in general younger enterprises very often exit in their first year of operation.
- 57 Bateman (2010, pp. 63–77; 2019b).
- 58 Kingdon and Knight (2005, p. 3).
- 59 Liebrandt, Levinsohn and McCrary (2005, p. 34); see also Bateman (2019a) for a fuller discussion of the problem as it relates to the microcredit sector.
- 60 Mlaba (2020).
- 61 Crush and Ramachandran (2014).
- 62 Bateman, Duran-Ortiz and Sinković (2011).
- 63 See Amsden (2010).
- 64 This fundamental logical error was also famously recognised by Amartya Sen (1981) who argued that famines were not caused by ‘a lack of food’ and that ‘more food availability’ would not quickly remedy the problem. Sen pointed out that the core problem was in fact the limited purchasing power of the poor in particular communities (sometimes because floods and other natural events led to unemployment) that prevented them from buying food that was often quite widely available, hoarding by traders who were speculating that prices would soar and they would make healthy profits, as well as the inability of the poor to organise through local government, trade unions and other collective bodies to address the problem.
- 65 One of the best examples where this tactic was deployed in order to reach a largely false conclusion that microcredit conferred important labour market benefits on the local community is Buera et al. (2012).
- 66 For example, Hanlon, Barrientos and Hulme (2010).
- 67 For example, Matthews (2019a).
- 68 Egger, Haushofer, Miguel, Niehaus, and Walker (2019).
- 69 McKinsey Global Institute (2016, p. 43).
- 70 Omondi (2016). The level of exit has soared as a result of the COVID-19 crisis (Mburu, 2021).
- 71 Viswanath (2018).
- 72 Sperber (2020).
- 73 Chang and Andreoni (2021) show that the ability to produce, rather than simply trade, is a key prerequisite for successful local economic development that emerging economies ignore at their peril.
- See also Bateman (2019c) for a general analysis of why the evolving structure of local enterprises matters so much to the chances of achieving sustainable and equitable local economic development.
- 74 Gubbins and Totolo (2018).
- 75 World Bank (2019a, p. 13). This is also why SME managers and owners in Kenya report that their second biggest problem is accessing finance – see World Bank (2019b).
<https://www.enterprisesurveys.org/en/data/exploreeconomies/2018/kenya#2>
- 76 World Bank (2019b).
- 77 This assessment was based on what was termed ‘Total early-stage Entrepreneurial Activity (TEA), which includes individuals in the process of starting a new business and those running one for less than 3.5 years (see Kelley, Singer and Herrington, 2015, p.12). The authors of the GEM report failed to appreciate, or chose to ignore, the pivotal importance of factoring into their analysis the dramatic rise in business exit rates in recent years (see Patton, 2016) that would have put their claims regarding the impact of new entry into a proper context.
- 78 Ahmed, Mengistae, Yoshino and Zeufack (2015).
- 79 Sahay, von Allmen, Lahreche, Khera, Ogawa, Bazarbash and Beaton (2020:12).
- 80 Patton (2016).
- 81 Shneor, Zhao and Flåten (2020).
- 82 Shneor (2020).
- 83 We do not consider here the equity ‘crowdfunder’ model that invests in the equity of SMEs, which accounts for less than 10% of the total global market covered by ‘crowdfunder’ finance (see Cambridge Centre for Alternative Finance and FSD Africa (2017, p. 21).
- 84 See, for example, World Bank (2013, p. 4). The deliberate use of the term ‘rise of the rest’ was surely a reference to the title of a book by the development economist, Alice Amsden (2001), which detailed how East Asia’s ‘miracle economies’ financed their very rapid growth from the 1950s onwards.

- 85 IFC SME finance Forum (2020).
- 86 Mader, Mertens and van der Zwan (2020).
- 87 Audretsch and Lehmann (2016, pp. 106–7).
- 88 Brown (2019, p. 152).
- 89 Bateman (2019, pp 67–69).
- 90 Giagnocavo, Fernández-Revuelta Pérez and Uclés Aguilera (2012).
- 91 Zamagni and Zamagni (2010).
- 92 See Bateman (2007).
- 93 Bateman (2020b).
- 94 On the crucial importance of production-based enterprises to development, see Chang and Andreoni (2021).
- 95 Bateman (2010); Bateman and Chang (2012).
- 96 For example, Harrison (2013) and Novkovic and Webb (2014).
- 97 For example, Hirschman (1958), Piore and Sabel (1984), Best (1990) and Pyke and Sengenberger (1992).
- 98 UNESCAP (2021) Rethinking MSME finance in Asia and the Pacific: A post-crisis policy agenda. Bangkok: United Nations Economic and Social Commission for Asia and the Pacific.
- 99 Eça, Ferreira, Porras Prado and Rizzo (2021).
- 100 Caglayan, Talavera and Zhang, (2019).
- 101 In the first year of the COVID-19 pandemic, many microcredit institutions took steps to ensure their survival by cutting back substantially on new lending in order to ensure sufficient liquidity at a time when their usual funders were not offering more loans for on-lending due to the heightened risk of default. As Zetterli (2020) points out, '[t]hree in four [microcredit institutions] have reduced disbursements due to COVID-19, and to a very significant degree: two-thirds of them have slashed lending by more than half compared to normal levels'. This policy has clearly extended the damage done by COVID-19 to the low-income communities that they claim to be dedicated to serving in every way possible. Taylor (2021) reports that Kenya's BCB M-Pesa and M-Schwari cut back on their digital microloans (by 60% per cent and 14% respectively), probably because of the increased risk. However, the overall decline in digital loans across the entire local market was more than made up by Safaricom's digital overdraft facility, Fuliza, which registered a 33% increase between April and September 2020. Moreover, thanks to the initial overdraft fee (1.083%) plus a daily fee depending on how much was taken out, the revenue generated increased by over 60%, making Fuliza an extremely profitable product.
- 102 Ziegler and Shneor (2020, pp. 73–74).
- 103 One of the best explanations of the chaos that emerged is Turrin (2021, pp. 75–100).
- 104 Bateman (2020b).
- 105 Turrin (2021, p. 195).
- 106 Pagés (2010).
- 107 Amsden (2001, pp. 125–132).
- 108 Bateman (2013).
- 109 Cantú and Ulloa (2020).
- 110 Wardrop et al. (2016, p.19).
- 111 Hoder et al. (2016, pp. 17–18).
- 112 For example, see Houweling (2021).
- 113 Chen and Mazer (2016).
- 114 Bateman (2010).
- 115 Kapur (2005, p. 339).
- 116 When introduced in 2007 M-Pesa immediately slashed the cost of sending remittances by up to 90% (World Bank, 2016, p. xiii).
- 117 Jack and Suri (2014).
- 118 An experiment in Bangladesh found that providing a mobile phone to rural individuals living in poverty led to a 30% increase in remittances compared to a control group (Lee et al. (2018)).
- 119 Jack and Suri (2014); Suri and Jack (2016).
- 120 Asian Development Bank (2021).
- 121 For example, Bee (2011) and Guérin, Kumar and Agier (2013).
- 122 Ghosh (2006, p. 22).

- 123 See Kusimba, Kunyu and Gross (2018, p. 185).
- 124 For the example of Cambodia see Samnang (2019).
- 125 Guermond (2020).
- 126 For example, it is a major problem in Kenya (Kaffenberger and Chege (2016)).
- 127 See Baobab Senegal (2019, p. 9).
- 128 See Guermond (2020, p. 239).
- 129 Bateman (2010), Schicks and Rosenberg (2011) and Bohoslavsky (2021).
- 130 Guérin, Morvant-Roux and Villarreal (2013).
- 131 Bylander (2015).
- 132 Bateman (2020a).
- 133 Brickell, Parsons, Natarajan and Chann (2018).
- 134 Guérin, Labie and Servet (2015); Bateman, Blankenburg and Kozul-Wright (2019).
- 135 The origin of the microcredit sector's spectacular 'boom to bust' in Andhra Pradesh lies in the early 2000s and the rise of the 'big six' microcredit institutions, all driven by their respective CEOs setting out to earn their fortunes from the supply of microcredit. Propelled by astonishing greed, unwarranted risk-taking, unethical behaviour and – crucially – the power to block state regulators from doing anything to control their activities, the microcredit sector grew extraordinarily rapidly. Inevitably, the entire edifice was heading towards a collapse of some kind. This took place in late 2010 when the state authorities were finally pushed from all sides to 'do something' and, perhaps unwisely, given that other countries (Colombia, Mexico, Peru) have successfully used regulations to gradually deflate a microcredit bubble, passed an Ordinance that abruptly ended almost all further lending. See Arunachalam (2011) and Bateman (2012).
- 136 Black (2005).
- 137 Gordon and Lyon (2017).
- 138 Tala, for example, was launched in 2011 by a so-called 'social entrepreneur' with the aim of assisting Kenya's poor to access microcredit. Albeit not without misleading advertising and opaque pricing (Faux, 2020), by 2016 it was issuing more than one million microloans to 300,000 individuals, thus greatly contributing to what was to become a major over-indebtedness problem in Kenya.
- 139 Gordon and Lyon (2017).
- 140 See Donovan and Park (2019), Malingha (2019) and Kessler (2020).
- 141 Responsible Finance Forum and Incofin Investment Management (2020).
- 142 Ibid., p. 3.
- 143 For example, M-Shwari charges a 7.5% monthly fee (around 90% if annualised) on loans, which it describes as a 'facilitation fee' and not the interest rate, which is what it actually is, thereby enabling it to circumvent Kenya's interest rate cap policy that is designed to protect the poorest from usurious practices (see Park, 2020, p. 928).
- 144 After many years promoting fintech, and M-Pesa in particular, Njoroge was eventually forced to accept that many such digital micro-lenders had become 'loan sharks on steroids' and that 'there has to be proper regulation' (cited in Malingha (2019)).
- 145 Wright (2018).
- 146 Juma, V. (2021a)
- 147 Zollmann (2021).
- 148 Odundo Owuor (2018).
- 149 BBC Sport (2020).
- 150 Kamau (2021).
- 151 Faull and Jeory (2021).
- 152 Bateman, Duvendack and Loubere (2019b).
- 153 Juma (2021b).
- 154 See Taylor (2021).
- 155 Kaffenberger (2018).
- 156 Izaguirre, Kaffenberger and Mazer (2018).
- 157 Gernetsky (2020).
- 158 Bateman (2019a).
- 159 Bloomberg (2019) and Rees (2020)..
- 160 Bateman (2019a) and Bond (2013).

- 161 Mahlaka (2019).
- 162 BusinessTech (2021).
- 163 du Toit (2020).
- 164 Business Tech (2017).
- 165 Moneyweb (2021).
- 166 Turrin (2021, p. 269).
- 167 Bloomberg News (2021).
- 168 He (2021).
- 169 Zeyi (2021).
- 170 Xie (2021).
- 171 Bateman (2020a).
- 172 Bateman (2017a, 2019a, 2020a), Hanley (2019), Licadho and STT (2019) and HRW (202).
- 173 Brickell, Parsons, Natarajan, and Chann (2018),
- 174 Bylander (2015).
- 175 Almost all microfinance institutions quietly increased their fees and charges to clients in order to compensate for the lower advertised interest rate. See Bateman (2017b).
- 176 See Incofin (2018).
- 177 Kimsong (2018) and Southeast Asia Globe (2021).
- 178 Duncan (2021).
- 179 For example, Beck, Pamuk, Ramrattan and Uras (2015) and Rogoff (2017).
- 180 World Bank (2021, pp. 1–2).
- 181 Financial crime under financialised capitalism in the Global South has especially proliferated – see Whyte and Wiegatz (2016).
- 182 As the leading economist and financial regulator, William Black (2005), famously pointed out, ‘pure’ market-driven textbook financial systems, complete with little or no serious regulation or supervision measures, have almost everywhere become key drivers of fraud, theft and other financial crimes.
- 183 Natarajan, Brickell, Guermond, Lawreniuk and Parsons (2021).
- 184 BBC News (2018).
- 185 In the Indian state of Tamil Nadu, for example, fintech made it much easier for fraud and manipulation by private computer centre owners, cooperative society leaders and agriculture department officials to embezzle subsidies that were intended for poor farmers (of over 80,000 beneficiaries supported by the programme as few as 4% were genuinely eligible for the payments). See Guérin, Joseph and Venkarasubramanian (2021).
- 186 Zhu (2021).
- 187 World Bank and the People’s Bank of China (2018, p. 44).
- 188 Cho and Lo (2016).
- 189 Zhu (2021: 18).
- 190 Gough (2016).
- 191 Zhong (2021).
- 192 For example, Harrington (2017), Maddock (2019), IBM Blogs (2020) and Howat (2020).
- 193 Veltmeyer and Petras (2014).
- 194 Ngugi (2020).
- 195 Muhatia (2019).
- 196 The Kenyan Wall Street (2021). When COVID-19 hit Kenya in 2020 and Saficom’s profit fell for the first in more than eight years due to government-enforced reduced fees, it negotiated a loan of around USD\$ 200 million at least partly in order to maintain its healthy dividend payments, including to such as Vodafone – see Mabonga (2020).
- 197 Whownskya (2018).
- 198 For the example of Africa, see Adeshokan (2019).
- 199 These are the Mastercard Foundation and the Visa Foundation.

- 200 In 2018 Visa and Mastercard, as well as New York banks JPMorgan Chase & Co, Citigroup and Bank of America, were fined a total of USD 6.2 billion following a class-action settlement for pressuring merchants to pay swipe fees and blocking them from advising consumers to consider other methods of payment (i.e. cash). <https://www.reuters.com/article/us-usa-court-creditcards-idUSKCN1LY1PQ>
- 201 Franklin and McKenzie (2021).
- 202 See 'IFC invests in Net1 to promote proven technology that expands financial services to poor in Africa and beyond'. Press release, 11 April 2016.
- 203 James, Neves and Torkelson (2020) and Torkelson (2020).
- 204 See 'Cash Paymaster Services agrees to go into liquidation'. TimesLIVE, 30 September. <https://www.timeslive.co.za/news/south-africa/2020-09-30-cash-paymaster-services-agrees-to-go-into-liquidation/>
- 205 See Garside (2013).
- 206 See Vodafone (nd).'
- 207 ICAEW (2020).
- 208 Schipani (2021).
- 209 Iwamoto (2020).
- 210 See Council on Foreign Relations (2021).
- 211 For example, Pasricha (2016), Shepard (2016) and Lahiri (2020).
- 212 Häring (2017a, 2017b, 2017c, 2017d, 2018).
- 213 Boston Consulting Group and Google (2016).
- 214 See Häring (2017d).
- 215 Adams (2021).
- 216 Financial Express (2018).
- 217 Daya and Mader (2018) found no evidence that demonetisation facilitated financial inclusion.
- 218 Hanada (2021).
- 219 Tyce (2020).
- 220 Ajao (2020); Tyce (2020, p. 7).
- 221 Rice (2007).
- 222 Tyce (2020).
- 223 The classic text on this issue of 'under-developing Africa' is Rodney (1973).
- 224 Following preliminary data collection and discussions with local officials in 2019 and early 2020, this paper was meant to report on a more extensive fieldwork phase in and around Maricá that was due to begin in September 2020. These plans had to be put on hold because of the COVID-19 pandemic. Given the dramatically heightened importance of fintech as a result of the pandemic, we decided to go ahead with publication of this paper without the benefit of this fieldwork. This section is therefore based on secondary data and on several meetings with Maricá city officials held by one or both of the authors in Rio de Janeiro and Maricá from late January to early February 2020. A follow-up paper is planned at some stage to report on the results of the fieldwork phase due to begin in mid-2022.
- 225 Singer and de Souza (2000).
- 226 See 'Fact Sheet: Maricá Basic Income' (2020, July), Jain Family Institute and Universidade Federal Fluminense (UFF). <https://static1.squarespace.com/static/5f03b142d0412e25521412d8/t/5f2c188256203f7f04feb6dc/1596725379404/Marica+Basic+Income+Fact+Sheet.pdf>
- 227 Faria, Severo, Cukierman and Diniz (2020).
- 228 For example, Matthews (2019b).
- 229 The high fees charged to both cardholders and retailers for using the cards offered by the main digital payments companies and large commercial banks have long been an issue in Brazil. For example, although unit costs fell as usage increased, interchange fees paid by clients for card use increased from around 2010 from 0.79% to 0.82%, while the retailer fees ranged from 1% to as much as 3% of the value of the transaction (Ayes and Mandl, 2018). As a result, in 2010 the Central Bank of Brazil began a campaign to try to reduce these fees (see Mandl and Bautzer, 2018) and in early 2018 imposed an upper limit on fees charged by the commercial banks (Ayes and Mandl, 2018).
- 230 This is a program run by the US-based Give Directly foundation that provided a series of three cash transfers to the value of \$US1,000 to around 10,500 poor households across 653 villages in rural Kenya - see Egger, Haushofer, Miguel, Niehaus and Walker (2019). Cash transfers provided to recipients via M-Pesa are charged a not inconsiderable fee (up to 20 per cent) when they come to withdraw small amounts of this cash from an M-Pesa agent - see Safaricom. (nd).

- 231 See Zuboff (2019) and Helm (2020).
- 232 Katz and Ferreira (2020).
- 233 For example, Companhia de Desenvolvimento de Maricá – Maricá municipality’s development organisation – has signed an agreement with the Italian high-tech company Leonardo to develop the municipality’s industrial base and upgrade its level of technology with a view to localising many of the oil sector’s sub-contracting requirements. See <https://www.leonardocompany.com/en/press-release-detail/-/detail/03-04-19-leonardo-signs-wide-ranging?f=%2Fnews-events%2Fpress-releases>
- 234 For analysis of the markedly contrasting development outcomes generated by the ‘hands on’ Norwegian model and the neoliberal ‘hands-off’ UK model, see Hatakenaka et al. (2006), Smith (2011) and Bateman (2015).
- 235 Telephone interview conducted by Teixeira with senior officials at Mumbuca Bank, 9 April 2021.
- 236 In the USA in particular - see Foroohar (2016).
- 237 A ‘unicorn’ is what the fintech industry defines as a privately owned fintech having reached a market valuation above USD 1 billion.
- 238 The pro-business magazine, The Economist (2021), has expressed concern that the current fintech boom in Africa might be heading for a bust, but nevertheless remains relatively sanguine about the possibility.
- 239 Sahay et al. (2020, p. 42).

Fintech is being sold to the world as a solution to poverty and development, but it is largely structured as an ‘investor-driven’ model that overwhelmingly serves the private enrichment and ideological agendas of a narrow global elite including venture capitalists, financial, telecom and digital payments corporations, and major international development agencies (especially the World Bank). Alternatives to the ‘investor-driven’ model are clearly required if the vast potential benefits of fintech applications are not to by-pass the global poor, especially as we move out of the COVID-19 pandemic. The emerging experience of the Mumbuca Bank, pioneered since the mid-2010s in the city of Maricá in south-eastern Brazil, shows how it is possible for basic fintech applications to be directly used to promote the common good when they are driven by public institutions and popular control.



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