Digital Futures of Small Businesses and Entrepreneurial OpportunityDarja Reuschke, Colin Mason, Stephen Syrett

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The multiple and ambiguous implications of digital technologies

Digital technologies and digital platforms are transforming existing industries and are blurring their distinction. Implications of digital technologies for businesses and entrepreneurship include new business models, new products, new forms of innovation and the transformation of established businesses to adopt their business operation and strategy to the digital economy (Nambisan et al., 2019). Digital transformations also mean that the spatial and social boundaries of entrepreneurial activities and entrepreneurial agency have significantly been transformed (Nambisan, 2017). The rise of digital business and entrepreneurship has therefore challenged the resource-based view of the firm and the demarcating and defining of firms' resources themselves (Kraaijenbrink et al., 2010) and instead highlighted the role of social, cultural, and spatial aspects of entrepreneurial processes and outcomes.

Information and communication technologies (ICTs) have provided some small businesses with the opportunity to combine the independence and flexibility of being small with the scope and access of large companies. New technology and mobile technology in particular have enabled small businesses and one-person businesses to cooperate, collaborate, and coordinate with independent workers and companies separated by geography, to work on collaborative projects (Matlay and Westhead, 2005). Connected with digital transformation of business and entrepreneurship is therefore also the development of new local-global connections of firms with other firms or customers (Grimes, 2003). At the same time, online trading can in certain circumstances enhance the local orientation of small businesses and entrepreneurs (Galloway et al., 2011).

The digital age is therefore often claimed to be an enabler of more entrepreneurial and inclusive societies as fast ICTs become widely available, more and more tasks are outsourced by large firms and in many industry sectors start-up capital is very low (OECD and European Commission, 2019; Evangelista et al., 2014). The

overwhelming majority of new start-ups is still in non-ICT industries. Start-ups in the ICT sector including ICT-dominated segments in manufacturing, wholesale and retail, still only accounted for ca. 8% of all new firm start-ups in the EU in 2016/2017 (European Commission, 2017). The 'platform economy' and crowdsourcing in the IT sector have also increasingly revealed the 'dark sides' of digitisation due to the exploitation of labour (Bergvall-Kåreborn and Howcroft, 2013; Tremblay and Genin, 2010) alongside the rising power of new, major digital corporations. These issues are reflected in current debates on the growth of the 'gig economy'.

Ambiguities of digital transformations of business and entrepreneurship have been identified in a number of aspects. Evidence generally suggests that digital technologies improve productivity at firm-level and contribute to economic performance and competitiveness of firms, regions and nations (Tranos et al., 2020; Martinez-Caro et al., 2020; Bertschek et al., 2013). Digitisation has often been regarded as a means to decrease regional and national disparities in economic growth and wealth. For example, many countries and supranational organisations have supported digital strategies to empower people and firms (e.g. the Digital Strategy of the European Commissions). However, there are firm size effects with larger firms benefitting more from ICT adoption (Destefano et al., 2018), while small businesses often lack the capacity or human capital to exploit the opportunities of the digital economy (Bouwman et al., 2019; Grimes, 2003). At regional level, digital technologies and infrastructure seem to complement agglomeration benefits rather than compensate for these (Craig et al., 2017), and therefore they have the tendency to exacerbate spatial inequalities rather than closing the gap between economically leading and lagging regions (Jones and Henderson, 2019; Camagni and Capello, 2005).

Digital inequalities

Different literatures have identified inequalities in the access and use of digital technologies and infrastructures (e.g. the Internet and fast broadband) and the opportunities provided through these to workers, firms and the wider population. Geographically, the greatest digital divide has been associated with the urban-rural divide (Townsend et al., 2013). This refers mainly to the unequal physical access to ICTs termed the 'first-level digital divide'. A growing number of studies, however, found

that it is a 'second level divide' which is ever more relevant for contemporary understanding of the social aspects of digital inequalities of ICT use (Park, 2017; Evangelista et al., 2014; Malecki, 2003) and the differentiated effectiveness of its usage including digital skills (Blank et al., 2018). Or in other words, if digital technology is available, the use may remain low (Townsend et al., 2013). For example, Blank et al. (2018) show for Britain that the spatially unequal Internet use can be fully explained by the geographically unequal distribution of socio-demographic and socio-economic characteristics of residents, in particular age, employment rate and education. Similarly, Kolko (2012) found that improvement in the provision of broadband access is little connected with the geography of homeworking, both telecommuting of employees and home-based business, and that the improvement of internet access is not simultaneously attracting more people who work from home. It is also estimated that digital start-ups made up around 15% of all start-ups among women in 2018 with no increase to 2016 (OECD and European Commission, 2019) highlighting that the inclusionary power of digital technologies for business start-ups and entrepreneurship clearly has limits.

Together these findings underline that the social and spatial dimensions of digital inequalities cannot be considered in isolation from each other. Despite the ever-increasing importance of digitisation and automation – the Fourth Industrial Revolution – the implications of digital technologies are complex and not always as predictable as suggested by technology-deterministic views of the impact of ICTs on business and entrepreneurship.

Researching and understanding digital futures

Current debates in the literature about digital futures of small business and entrepreneurship are frequently portrayed in 'bipolar' terms along categories of 'necessity' versus 'opportunity' or 'good' versus 'bad' work. However, following related studies on the second-level digital divide, understanding of the digital futures of small businesses and of entrepreneurial opportunity need to be based on conceptualisations that "go beyond the binary distinction between use and non-use" (Büchi et al., 2016, 2706). This implies, as Slaughter (2018) argues, to understand technology not merely as 'stuff' or container but to consider the social reality 'beneath the surface' (p. 116). Specifically, for small business and entrepreneurship this means not only considering

the measurable economic resources of businesses but also what is often discussed as 'context' in the entrepreneurship literature (Welter, 2011), which includes environmental/locational aspects and the social/household dimensions of business start-up and operation.

Increasingly, entrepreneurial opportunities have been studied spatially as entrepreneurial ecosystems that have emerged as a new type of spatial cluster through the exploitation of digital affordances (Autio et al., 2018). This emerging literature has highlighted the interconnection between digital affordances and spatial affordances. The focus in this literature, however, has been on high-growth entrepreneurship (Spigel and Harrison, 2018) which led to an empirical focus on 'successful' cases of high-tech entrepreneurship, the Silicon Valley in particular – at the expense of more 'ordinary' cases.

Micro-businesses (with zero to up to nine employees) and the sole trading self-employed are the more 'ordinary' basis of the enterprise population. These have often been neglected in previous studies on digital businesses and entrepreneurship that have tended to focus on innovative start-up firms, larger businesses including within the small business sector or knowledge-intensive firms. However, over recent years, the increased contribution of the SME sector in value added of all enterprises is almost entirely due to micro-businesses (European Commission, 2019). Within the SME sector, micro-businesses outperformed small and medium-sized businesses with 10-249 employees in terms of employment and value added over recent years in the European Union (ibid.). Digital technologies have been related to the growth of self-employed individuals in many countries who run small/micro businesses as sole traders or are active in incorporated businesses or partnerships (European Commission, 2017). Their increase forces business and economic research to consider the individual-level in conjunction with the business-level as the sole trading business cannot be disconnected from the individual who runs a one-person business.

Objective of the Special Issue and contributions

The overall objective of this Special Issue is to consider alternative future possibilities beyond simple dichotomies and to provide new explorations of emerging forms of the digital economy. While previous studies and conceptualisations of digital

entrepreneurship have tended to focus on high-growth entrepreneurship or knowledge-intensive firms, this Special Issue instead has the objective to provide new conceptual and empirical insights into a large and growing segment of the small business sector whose futures have remained under-researched: self-employed workers and freelancers who run one-person or micro-businesses and home-based businesses that operate largely or exclusively online.

Within this overall objective, the first key aim is to address relevant current debates on social and spatial digital inequalities and inclusivity of digital entrepreneurship. The second aim is to integrate business, entrepreneur and context through exploration of the motivations and experiences of one-person and home-based businesses in the digital economy and how digital and spatial affordances play out for these underresearched entrepreneurs and small business types.

The risks of social exclusion associated with new digital technologies have been discussed in previous critical accounts of the digital economy and society (Slaughter, 2018). Martinez Dy's conceptual paper adds to this literature through scrutinising the inequalities of digital entrepreneurship in particular of marginalised and/or underrepresented people in entrepreneurship including women. She criticises the predominant techno-centric perspective (digital applications, platforms and infrastructure) on digital entrepreneurship in the existing literature and argues that social and economic context need to be considered alongside technological aspects for understanding who is exercising agency in digital entrepreneurial environments. She identifies technological knowledge and skills (human capital) and access to resources and investment (financial and social capital) and social structures (e.g. occupational gender segregation) as important dimensions of digital entrepreneurship that need to be considered together rather than in isolation from each other. This allows study of various types of entrepreneurial activities enabled by the digital environment including those of the self-employed and individuals running businesses from home.

Home-based businesses and the extent to which they are more likely to trade online than 'mainstream' small businesses not based in the owner's home, are the focus of the empirical analysis of *Reuschke* and *Mason*. Their findings for Scotland (United

Kingdom) confirm the greater engagement in the digital economy of home-based businesses and hence the enabling role of digital technologies for running businesses. However, their findings also challenge the transformative nature of digital technologies and online marketplaces for small businesses and entrepreneurial opportunities in rural areas as online business models in the small business sector remain a niche.

The empirical study by *Zenkteler*, *Darchen*, *Mateo-Babiano* and *Baffour* investigates home-based businesses and remote working in Australia in the context of residential neighbourhoods. With the focus on the residential preferences of homeworkers, they highlight the importance of having a designated workspace in homes and of diverse multi-use residential neighbourhoods in order to connect economic activities and entrepreneurs' need for collaboration and networking with residential amenities. Homeworkers in their study therefore support local coworking facilities and flexible house designs for the growth and value creation of home-based work. The need for local coworking spaces is due to the lack of both social/meeting spaces in residential neighbourhoods and access to certain technological facilities (e.g. printing).

Collaborative workspaces are also the focus of the empirical study by *Clifton*, *Füzi* and *Loudon*. They focus on self-employed individuals, freelancers, and remote workers whose workplace is 'place-independent' thanks to digital technologies and the benefits they can derive from coworking spaces. Analyzing data for Wales (United Kingdom), they show that social factors are as important as environmental ones (i.e. those based on hard/technological infrastructure) for the motivation of entrepreneurs and remote workers to work in coworking spaces and for their experiences working in these. They conclude that in the digital economy coworking spaces may become more important in the future as a capacity-builder for informal networks and social capital.

Afutu-Kotey and Gough show how important existing skills and networks are for accessing and mobilising resources in the mobile telephony sector. Their empirical study contrasts with the other empirical contributions in this Special Issue and with previous studies on digital entrepreneurship in that they do not focus on how the Internet or digital platforms are used by entrepreneurs, but how young entrepreneurs in Ghana are creatively using the sales of mobile phones and the provision of related services to build and sustain a business. They employ the concept of bricolage to

conceptualise the informality of the business, the constraints faced by the individual entrepreneurs in terms of local economic/environmental conditions and limited resources for value creation, to highlight the different solutions and precarity involved in overcoming these various constraints.

Conclusion

The collection of papers provides a critical and nuanced discussion of entrepreneurial opportunities, alongside the risks and potentially false visions of digital futures for small business. The papers contribute to literatures in multiple disciplines that have highlighted the importance of the second-level digital divide in the digital economy and society. While previous studies have drawn attention to the role of human capital for the use of digital appliances, platforms and infrastructures, conceptual frameworks and empirical findings provided in this Special Issue draw attention to networks and social capital and their spatial embeddedness in complementing this human capital. Rather than in isolation, social structures and national, regional and local economic/environmental contexts need to be considered in intersection with human capital and the access to and use of digital technologies. What has emerged across the papers with their focus on under-researched entrepreneurs and small businesses is that for one-person businesses, home-based businesses and remote workers, location and local/regional context afford networks and social capital, alongside opportunities for trade and value creation.

Contributions also suggest that human capital needs to be considered as a process and not merely as a precondition for digital entrepreneurship and small business. Entrepreneurs build on previous skills, develop these further and entrepreneurial activities may not be the mere outcomes of a certain (technological) skill-set but may be used to further their education. What emerges as the relevant precondition for inclusive entrepreneurship at the scale of localities and neighbourhoods, is the offer of digital technologies and the facilitation of micro-enterprise relationships. This requires, for example, to rethink urban economic planning in terms of the integration of economic activities and residential amenities.

Empirical contributions here have noted the young demographic profile of entrepreneurs and one-person businesses employing digital technologies or exclusively focussed on young entrepreneurs. The low incidence of online small businesses may therefore relate to a demographic digital divide. With the aging of the 'digital generation' – children and young people who grew up with the Internet and digital and computer technologies – it appears likely that the future will see far-reaching digital transformations in how entrepreneurs and small businesses use digital technologies and online marketplaces for value creation and growth. This said, who will benefit from these digital entrepreneurial opportunities and environments is much less clear. Research has shown that gender inequalities in Internet use (extent and types of use) are almost negligible among young people, whereas among middle-aged and older generations women use the Internet significantly less often than men (Helsper, 2010). This generational change may signal a possible future growth of female digital entrepreneurship.

The futures of digital entrepreneurship and small business are changing amidst the global Coronavirus pandemic and its aftermath. While we have not seen a radical transformation of small business and home-based working towards online or Web 2.0 businesses pre-COVID-19, the Coronavirus pandemic dramatically disrupted existing supply chains and challenged some traditional business models during national and regional lockdowns (stay-at-home-orders) in many parts of the world. With people being asked to stay at home, online transactions for retail shopping soared changing Individual shopping behaviours apparently for good and providing potential opportunities for new online entrepreneurial activities and start-ups.

Across all sectors, COVID-19 disruptions intensified existing trends and led to technological development in ICTs, which some global high-tech companies and online retailers quickly capitalised on. Disruptions resulted too in opportunities for some small businesses through the discovery of new products, new supply sources or the new combination of resources as anecdotal evidence has shown (Rose, 2020). However, in the short term, self-employment experienced great disruption, resulting in on aggregate dramatic reductions of hours worked and income while some experienced increases respectively (Reuschke et al., 2020). During the pandemic, with regional or local lockdowns and hence restrictions for some sectors still being in place, the ongoing economic difficulties of the self-employed became a major challenge. If this was to result in a sustained reduction in the level of self-employment,

this risks leading to a loss in entrepreneurial capacity in national and regional economies.

Online technologies were central in the COVID-19 crisis in how businesses adapted their business models quickly when faced with external discontinuities and disruptions. With respect to adaption processes and strategies, commentators refer to the concept of bricolage to capture the need of entrepreneurs and businesses to deal with new constraints and to change existing resources (Shepherd, 2020; Ketchen and Craighead, 2020). Whether, for example, the new 'supply chain bricolage' (Ketchen and Craighead, 2020) and other changes business have undergone will bring about enduring changes, is still unknown. As used by Afutu-Kotey and Gough in this Special Issue, we may see more young bricolage entrepreneurs in rich economies that have been particularly hard hit, such as the United Kingdom or the United States, with subsequent negative consequences particularly for young people. The International Labour Organisation (ILO) has warned about the emergence of a 'lockdown generation' of young people disproportionately affected by the crisis in multiple ways. Young people were more likely to work in hospitality and retail when the pandemic spread and businesses in these sectors had to close resulting in an increased risk of job loss. They were also affected by the disruption in vocational education and on-thejob-training (ILO, 2020).

The COVID-19 pandemic has generated also questions about the possible futures of cities and spatial proximity. Will big cities continue to dominate business growth and innovation, as was the pre-COVID-19 situation, or will the effect of spatial proximity lose its strengths? The use of digital technologies has remained lower in rural areas than expected. However, with more people working from home, businesses may locate closer to where their employees work. This could lead to the weakening of agglomeration economies and the concentration of entrepreneurial activities and growth in big cities - a game changer for business location and the interrelationship between digital affordances and spatial affordances and a driver for alternative futures for both business and towns and rural communities.

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