



The rise of the chancer entrepreneur: Institutions and digital technology for entrepreneurship in uncertain times

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ABSTRACT

The COVID-19 pandemic brought economic activity to an abrupt standstill, prompting many existing businesses to temporary pause trading, whilst several others pivoted toward digital platforms. The UK labour market was particularly affected, with widespread unemployment leading individuals to seek alternative income sources—often through entrepreneurship. In response, the government implemented subsidies and cash transfers, whilst digital technologies—especially internet use—emerged as vital tools for launching and managing new businesses. Despite these developments, limited research explores how institutional support and digitalisation jointly shape entrepreneurial behaviour during crises. This study addresses that gap by asking: how do government support mechanisms and digital technologies influence entrepreneurship amid economic disruption? Drawing on institutional economics and technology affordance theories, we focus on *chancer entrepreneurs*—individuals who leverage government aid and digital tools to navigate uncertainty and seize business opportunities. We estimate longitudinal probit models using UK Household Longitudinal Study data from 2019 to 2022. Our findings highlight the key role of institutional and digital factors in fostering entrepreneurship during disruptions. Government support increases entrepreneurial aspirations by 0.12 points during the pandemic, as well as the probability of becoming self-employed by 0.05 and 0.09 points before and during the pandemic period, respectively. Similarly, digital technologies raise the likelihood of entrepreneurial intention by 0.27 points during COVID-19 and self-employment by 0.30 points pre-pandemic. These results underscore important policy implications: sustained institutional support and improved digital access can transform crisis-driven necessity into long-term entrepreneurial success, enhancing economic resilience in the face of future shocks.

1. Introduction

Over the past two decades, digital technologies have reshaped the business landscape, making tools once exclusive to large corporations accessible to small and medium-sized enterprises (SMEs) (McAfee and Brynjolfsson, 2017; Strange and Zucchella, 2017). The affordability of online trading platforms and digital financial services has enabled even microbusinesses to participate in national and international markets (Saridakis et al., 2022, 2024; Saridakis, 2023). Whilst individually small, these businesses collectively play a significant role in employment and economic resilience, particularly during periods of crisis (Allinson et al., 2013; Epure et al., 2024).

The rapid expansion of Web 2.0 (Dellot, 2014) and the emergence of e-commerce platforms (e.g., Amazon, eBay, Shopify) have transformed traditional business operations by facilitating global transactions and enabling entrepreneurs to engage in digital trade (Spulber, 2019). Financial innovations such as crowdfunding, fintech payment solutions, and automated business registration processes (UK.GOV, 2019) have further lowered barriers to entry for aspiring entrepreneurs. These technological advancements, however, became particularly crucial in response to an unprecedented external shock—the COVID-19 pandemic.

The pandemic disrupted labour markets, forcing many individuals into entrepreneurship as traditional employment opportunities declined (Abubakar et al., 2023). Whilst digital technologies provided essential

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tools for business survival, institutional support played an equally critical role. Government subsidies, furlough schemes, and cash transfers shaped the entrepreneurial landscape by mitigating financial risks and enabling individuals to start ventures despite economic uncertainty (Saridakis et al., 2022; UNCTAD, 2021). Yet, in this uncertain environment, entrepreneurship often resembled a gamble, as described by Storey (2011, p. 312): akin to purchasing a lottery ticket, where opportunities arise but outcomes remain unpredictable. This aligns with research on entrepreneurial risk-taking (Coad et al., 2013, 2014, 2016) and the role of external shocks in shaping entrepreneurial activity (Davidsson, 2015, 2017, 2022; Kimjeon and Davidsson, 2022).

Within the diverse composition of entrepreneurship, there are market conditions that motivate individuals to become entrepreneurs. According to Bosma (2013) and Reynolds et al. (2005), market frictions either pull (i.e., opportunity) or push (i.e., necessity) individuals to become entrepreneurs. Unlike these traditional and extensively analysed approaches to entrepreneurship, we follow Storey (2011) and Coad et al. (2013) to place emphasis on the idea that some entrepreneurs are chancer individuals—i.e., those who seize business opportunities amid uncertainty, leveraging resources that are utilised to make as many bets as possible (Storey, 2011). Evidence from the UK Inter-Departmental Business Register (IDBR) indicates that new businesses were registering during the pandemic following the pattern of consecutive COVID-19 waves and subsequent lockdown restrictions (ONS, 2023). Coad et al. (2013) complement this evidence by asserting that entrepreneurs are gamblers with random attempts, but once the growth pathway is found, they utilise resources in a planned way. To this end, Coad et al. (2016) find that commercial banks play a key role in providing growth-oriented new ventures with financial resources.

In times of crisis, these types of resources are scarce, which seems to indicate that entrepreneurs remain in randomness (Storey, 2011). Saridakis (2025) discussed the relationship between unemployment and entrepreneurship, highlighting that a sufficient body of existing literature points to a positive relationship between unemployment and entrepreneurship as a means of overcoming economic hardship. At the same time, existing entrepreneurs often seek alternatives to pivot their businesses and survive (Santos et al., 2022). Recent evidence suggests that digital tools gain relevance in potential and actual entrepreneurship, especially during a crisis, when people and businesses were affected by lockdowns (Kraus et al., 2022). Similarly, institutional support is identified as a key mechanism for aspiring entrepreneurs and the self-employed (Urbano et al., 2024). However, we observe that this literature remains disperse, especially when it comes to the idea of chancer entrepreneur.

The contemporary entrepreneurship theory seeks to put entrepreneurs into forms, such as the necessity and opportunity categories, or the differentiation between self-employed and entrepreneur, but the entrepreneur can be a blend of diverse parts simultaneously or at different times (Welter et al., 2017). Whilst Storey (2011) gives importance to public policies focused on financial resources for entrepreneurs, there remains a gap on how individuals preferences for entrepreneurship and entrepreneurial aspirations are shaped by access to digital resources and the availability income coming from governmental support funding. These two elements give people the possibility to “roll the dice” like chancer entrepreneurs, which so far remain underexplored (Parker et al., 2024). Hence, a question is still alive in the debate: how do institutions and digital technology shape entrepreneurial aspirations and actions, giving rise to chancer entrepreneurs during turbulent times?

Building on institutional economics (North, 1990), as well as on technology affordances and constraints (Autio et al., 2018; Gibson, 1977; Majchrzak and Markus, 2012), this study examines how government support and digital technologies enable (aspiring) entrepreneurship, particularly chancer entrepreneurs, during crises. We focus on chancer entrepreneurs—individuals seizing business opportunities while leveraging institutional aid and digital tools to navigate volatile markets. Using data from the UK Household Longitudinal Study

(UKHLS) spanning the COVID-19 period (2019–2022), we analyse the relationship between digital usage, government support, and (potential) entrepreneurial activity among 53,199 individuals.

Our findings reveal that while the frequent digital technology use itself did not directly drive self-employment as it does with entrepreneurial aspirations, government support significantly increases the likelihood of both potential entrepreneurship and self-employment during the COVID-19 period. This suggests that even in adverse conditions, some individuals remained entrepreneurial, often as digital entrepreneurs or those integrating digital tools into their operations.

Our findings make several important contributions to both theory and practice. First, we provide empirical support for Storey's (2011) concept of chancer entrepreneurs, who, much like gamblers (Coad et al., 2013), engage in trial-and-error decision-making. We extend this idea by demonstrating that these entrepreneurs emerge not just by chance, but because institutional support provides them with financial resources to take risks while cushioning potential losses—allowing them to seize digital market opportunities. So far, Storey (2011) and Coad et al. (2013) refer to new ventures and their growth path. We apply the concept of chancer entrepreneur to those who see entrepreneurship as a potential career choice and want to make entrepreneurial attempts without knowing the result.

Second, in the face of economic uncertainty, these resourceful individuals choose to pursue trading opportunities—not with full certainty, but with the intent to capitalize on available government support schemes and other resources. Third, we enrich the technology affordance and constraint framework (Autio et al., 2018; Gibson, 1977; Majchrzak and Markus, 2012) by showing how digital tools enable aspiring entrepreneurs to consider self-employment as a viable option during economic uncertainty. Rather than purely necessity-driven responses to crises, entrepreneurship can be seen as a dynamic interplay between institutional support and access to digital innovations. Fourth, we challenge the dominant necessity-driven entrepreneurship narrative of the COVID-19 era (Núñez and Morales-Alonso, 2024), arguing that the rise of chancer entrepreneurs is not solely a result of economic desperation but rather a function of supportive institutions and accessible technology enabling market exploration. Finally, our findings offer actionable insights for policymakers. Strengthening digital infrastructure and maintaining financial support mechanisms can foster entrepreneurship, ensuring that more individuals can transition from economic uncertainty to opportunity through digital-enabled ventures.

2. Theoretical background

2.1. Institutional economics perspective

The institutional economics framework (North, 1990) has gained a lot of attention in social sciences thanks to its capacity simplify a complex reality through the further comprehension of laws, regulations, and rules (as formal), as well as cultural norms, habits, and codes (as informal institutions). As multiple interactions amongst individuals emerge, potential costs arise due to discoordination and chaos. North (1990) suggests that institutions gain relevance to precisely reduce transaction costs and uncertainty coming from other external shocks. Williamson (2000) explains that formal institutions such as government support play a crucial role in human behaviour towards productive activities, as these contextual factors are more dynamic than culture or social habits.

These ideas are particularly important for entrepreneurial activity (Bruton et al., 2010; Thornton et al., 2011), in which entrepreneurs constantly face risk and uncertainty because of either market dynamics (Welter, 2011) or external shocks such as COVID-19 that affect the development of their projects (Epure et al., 2024). Institutions become either enabler or constraints of entrepreneurship (Urbano et al., 2019). For example, high regulations discourage individual intentions to become entrepreneurs and limit new ventures performance (Aparicio

et al., 2016; Colson et al., 2025). Institutions can also provide support and a friendly environment for those willing to take risk and undertake different projects (Bjørnskov and Foss, 2016). A stable institutional environment becomes fundamental when individuals are looking into the market to turn opportunities into new businesses. Storey (2011) aligns with this idea by suggesting that chancer entrepreneurs—individuals who “roll the dice” to venture into business out of opportunity rather than necessity—exist because there is an institutional support helping them to make different entrepreneurial attempts without the fear of losing.

2.2. Technology affordance and constraints framework

Whilst the idea of the chancer entrepreneur has not mentioned digital technologies as potential resources to randomly attempt entrepreneurial activities, digital platforms can also be advantageous not only to the self-employed, but also to those who wish to explore entrepreneurship as a potential career choice (Inceoglu et al., 2024; Nzembayie et al., 2019). A potential theory to comprehend chancer entrepreneurs using digital technologies consists of the technology affordances and constraints perspective (Autio et al., 2018; Gibson, 1977; Majchrzak and Markus, 2012), which provides a framework for understanding how the internet facilitates economic growth and job creation (Blank et al., 2018). It also accounts for how the recent technological innovations have enabled the emergence of various digital platforms (i.e., artificial intelligence and machine learning models are increasingly capable of understanding, generating, and acting on large and complex retail data) that offer opportunities for these entrepreneurs to realise their entrepreneurial intentions (e.g., Amazon.com, Shopify, Alibaba, etc.). These digital platforms can satisfy the need of individuals who ascribe to the notion of “being your own boss” (Benz and Frey, 2004; Boden, 1999) and believe strongly that their future should be in their own hands rather than relying on some senior executive (Kahneman, 2011).

Digital infrastructures and technologies have evolved rapidly and diffused widely, enabling a comprehensive transformation of value creation across the economy (Autio et al., 2018). They have also fostered regional development, female entrepreneurship, and the shift from unemployment to self-employment (Saridakis et al., 2022). The acceleration in the integration of digital technologies has been particularly prominent in the grocery industry (Erdmann and Ponzio, 2021). This new digital entrepreneurship ecosystem and digital technology re-combinations allow for new entrepreneurial activities. The use of internet allows entrepreneurs to leverage social media for marketing and customer engagement, which ultimately serves to build brand awareness and community around their products (Cutolo and Kenney, 2021). The internet also provides tools for data analytics, enabling entrepreneurs to gain insights into consumer behaviour and market trends, which can inform strategic decision-making (Luca et al., 2020).

However, the internet also imposes constraints that entrepreneurs must consider. For instance, the reliance on digital platforms can create power asymmetries, where platform owners exert significant control over the terms of engagement, potentially disadvantaging entrepreneurs (Cutolo and Kenney, 2021). Additionally, the fast-paced nature of digital markets can lead to inflated expectations and subsequent disappointment when the anticipated benefits do not materialise. Entrepreneurs must also navigate the complexities of digital marketing, where the effectiveness of strategies can be hindered by factors such as algorithm changes and market saturation (Petzsche et al., 2022).

Moreover, the interaction between affordances and constraints is dynamic; entrepreneurs often adapt their strategies based on their experiences with these digital tools. For example, the perceived affordances of social media for community building and customer interaction can be undermined by constraints such as user privacy concerns and the potential for negative feedback (Petzsche et al., 2022). This interplay suggests that successful entrepreneurs are those who can effectively recognise and leverage the affordances of digital technologies while

mitigating the associated constraints. That is why the digital technology-entrepreneurship nexus should consider the institutional theory (North, 1990), which complements the adoption of digital technologies in contexts under uncertainty such as the pandemic crisis (Amankwah-Amoah et al., 2021; Urbano et al., 2024).

3. Hypothesis development

3.1. Institutional economics and (aspiring) chancer entrepreneurs

Since crises may increase losses and, hence, uncertainty and risk-aversion (McMullen and Shepherd, 2006), public policies are key motivational drivers for (aspiring) chancer entrepreneurs (Epure et al., 2024; Storey, 2011). Whilst training programmes and regulatory relief are policy mechanisms for gambling (Coad et al., 2016), financial support, as a governmental policy, is essential in fostering an entrepreneurial environment during challenging times. Although there are not crisis periods in Storey's (2011) analysis, the existing uncertainty during the COVID-19 period invites people to utilise obtained subsidies and think of investing them into entrepreneurial activities. This matches the narrative about the chancer entrepreneur. In essence, governments worldwide implemented numerous financial aid programmes aimed at sustaining businesses and encouraging people to look at entrepreneurship as a career choice. Xu (2022) indicates that the share of new entrepreneurs who were previously unemployed surged to 30 % during the pandemic, highlighting how unemployment benefits can lower the opportunity cost of starting a business. This suggests that government interventions, such as unemployment insurance, can help individuals by providing them a safety net for considering entrepreneurship as a viable career path (Bilan and Apostoae, 2023; Saridakis, 2025).

Another significant form of support has been the provision of government-backed loans and grants. For instance, in the UK, approximately 92.1 % of all debt funding during the early stages of the COVID-19 crisis was backed by the government, a stark contrast to the less than 5 % typically seen in stable economic conditions (Calabrese et al., 2021). This influx of government support not only alleviated immediate financial pressures but also fostered an environment conducive to aspiring entrepreneurs by reducing the perceived risk associated with entrepreneurship during uncertain times (Cowling et al., 2021). Moreover, extant literature indicates that such financial interventions can enhance the resilience and growth potential of new businesses, which may encourage individuals to become entrepreneurs (Staples and Krumel, 2022).

Additionally, government support schemes have been shown to mitigate the existential threats faced by potential entrepreneurs during the pandemic. The availability of financial assistance has been crucial in preventing insolvencies among small firms, which could otherwise lead to a significant loss of entrepreneurial activity and innovation (Dörr et al., 2021). The targeted nature of these policies, focusing on financially weaker firms, has been instrumental in preserving jobs and maintaining economic stability (Belghitar et al., 2021). Furthermore, the psychological impact of financial support cannot be overlooked; it fosters a sense of security among aspiring entrepreneurs, encouraging them to pursue new ventures despite the prevailing uncertainties (Torres et al., 2021).

The effectiveness of these governmental measures is also linked to public trust in government actions. Research indicates that integrated government response measures, which combine health and economic relief strategies, significantly enhance public trust and compliance with governmental directives (Liu et al., 2021). This trust is essential for the successful implementation of support programmes, as it encourages potential entrepreneurs to engage with available resources and seek assistance when needed. Therefore, we suggest the following hypothesis:

H1a. Government support positively affects entrepreneurial

intentions, especially of potential chancer entrepreneurs, in the presence of economic uncertainty (i.e., COVID-19).

The pandemic has created an unprecedented economic landscape, leading to a significant decline in entrepreneurial activity, which governmental interventions aim to mitigate. For instance, self-employment is encouraged through the provision of financial aid and subsidies. During the COVID-19 crisis, the British government implemented stimulus packages designed to support businesses facing financial distress. Direct monetary aid has been shown to catalyse new business creation, particularly in environments where traditional funding sources are unavailable or unreliable (Moore et al., 2020). This financial support not only helps existing businesses to survive but also creates a conducive environment for new ventures to emerge, as the self-employed are more likely to take risks when they perceive a safety net provided by government interventions (Klein, 2020).

It is important to say that the quality of governmental institutions significantly influences the effectiveness of such financial support. Research indicates that higher economic freedom and better governance can enhance the recovery process following crises, thereby fostering a more robust entrepreneurial ecosystem (Boudreaux et al., 2021). In contexts where government institutions are perceived as legitimate and effective, entrepreneurs are more likely to engage in new business activities, as they trust that the support mechanisms will be reliable and beneficial (Li et al., 2021). Conversely, poor governance can lead to scepticism about the efficacy of government programmes, which may deter entrepreneurial initiatives (Audretsch et al., 2021).

In addition to direct financial support, governments can also influence entrepreneurship through policy frameworks that promote innovation and reduce bureaucratic hurdles. For example, targeted policies that lower taxes or provide incentives for startups can stimulate entrepreneurial activity, especially in times of crisis (Faria et al., 2023). Furthermore, the role of venture capital, often influenced by government policies, is critical in supporting innovative entrepreneurship. Government involvement in venture capital can provide legitimacy to startups, making it easier for them to attract additional funding and resources (Devarakonda and Liu, 2023; Zhang and Gu, 2024). This is particularly important during crises when private investors may be more risk averse.

The COVID-19 pandemic has also highlighted the importance of agility amongst entrepreneurs. Those who can pivot their business models in response to changing market conditions are more likely to succeed (Sanasi and Ghezzi, 2022). Government support can facilitate this agility by providing resources and training that help entrepreneurs adapt to new realities. For instance, training programs aimed at enhancing entrepreneurial skills can empower chancer entrepreneurs to innovate and respond effectively to crises whilst looking for market opportunities constantly (Åstebro and Hoos, 2021). In this regard, we posit that:

H1b. Government support positively affects the likelihood of self-employment, as a chancer entrepreneur, under the presence of economic uncertainty (i.e., COVID-19).

3.2. Technology affordance and constraints for (aspiring) chancer entrepreneurs

Entrepreneurial individuals have been found to pursue ambitious business projects during periods of economic volatility and/or economic crises (Giotopoulos et al., 2017). This is in accordance with the optimism theory (see Storey, 2011), which posits that the chancer entrepreneur participates in entrepreneurial ventures with either unrealistic optimism about the long-term results or the aim of obtaining short-term rewards. Whilst the digitalisation of the British marketplace had been growing before the COVID-19 pandemic (Dean et al., 2012), the consequent COVID-19 lockdown forced upon even the smallest of businesses some hard decisions regarding the implementation and use of digital

technologies, such as the utilisation of e-commerce platforms and online delivery companies, in order to survive by continuing reaching their customers and remain operational (e.g., He et al., 2023).

The transformation of the British marketplace can be seen in the growth of small businesses with online presence, and in the number of online retail stores (Dean et al., 2012), and the impact of online microbusinesses (Nzembayie et al., 2024; Saridakis et al., 2022). A report by Dean et al. (2012, p. 8) notes that about the scale of digital transformation of businesses in the UK that “*The U.K. has become a nation of digital shopkeepers*”. It is estimated that more than one out of two small businesses (i.e., over 2 million businesses) offer their products and/or services online (BEIS, 2021; Young, 2013). What is more, during the recent COVID-19 pandemic quarantine, the pace by which entrepreneurs digitally transformed their businesses accelerated, forcing even the most reluctant entrepreneurs to build an online presence in order to access customers and stay in business (FT, 2020; UNCTAD, 2021).

The examination of the determinants of self-employment and new business formation has been found to be associated with increased entrepreneurship and innovation activity (Litsardopoulos et al., 2023). Along with government entrepreneurship and/or self-employment programmes, and an education system that is geared towards fostering innovation and creative thinking, the myriads of formal and informal institutions have been identified to be a definitive factor in encouraging entrepreneurship (Urbano et al., 2019; Verheul et al., 2002), with variable success (Acs et al., 2016; Shaw and Blackburn, 2000). Educational programmes at the university level have created an important potential entrepreneurship, mainly observed in the young population (Ruiz-Rosa et al., 2020).

The influence of digital technologies on aspiring entrepreneurs during crises, such as the COVID-19 pandemic, can be understood through several mechanisms that highlight the transformative potential of digital entrepreneurship. These mechanisms include the acceleration of digital transformation, the creation of new business models, enhanced access to resources, and the facilitation of social networks. For example, the COVID-19 pandemic has significantly accelerated the digital transformation of businesses, leading to the emergence of new entrepreneurial opportunities. As Modgil et al. (2022) note, the pandemic has infused innovation capabilities into traditional production, marketing, and delivery methods, prompting a shift towards digital solutions such as telemedicine and virtual care. This shift has not only created new channels for communication with stakeholders but has also led to a surge in digital startups, as entrepreneurs adapt to changing consumer demands and hygiene requirements. Furthermore, Browder (2023) and Urbano et al. (2024) emphasise that digital transformation enhances organisational resilience, enabling businesses to better navigate crises by adopting new technologies and practices. This resilience is crucial for people who are pursuing entrepreneurial projects. They observe what strategies might be appropriate to rapidly enter into an entrepreneurial project that may face an evolving market condition brought about by the pandemic.

In addition to resilience, the pandemic has catalysed the development of innovative business models. The digital landscape allows for the creation of digital products and services, which Torres and Augusto (2020) argue are essential for achieving revenue growth and improving user satisfaction. The necessity for potential entrepreneurs to adapt quickly has led to the learning of lean startup methodologies, which facilitate rapid experimentation and iteration of business ideas (Ghezzi and Cavallo, 2020). This approach is particularly relevant in crisis situations where traditional business models may no longer be viable, and potential entrepreneurs must find new entrepreneurial projects that deliver value to customers.

Moreover, digital technologies have enhanced access to resources and knowledge, which are critical for individuals interested in becoming entrepreneurs. Jafari-Sadeghi et al. (2021) highlight the importance of technology readiness and the ability to exploit digital tools for the identification of market opportunities. The internet serves as a powerful

platform for potential entrepreneurs to access financial information, share knowledge, and connect with potential investors and customers (Oggero et al., 2019). This access is particularly vital during crises when traditional funding sources may be limited. Additionally, Zhao et al. (2021) discuss how digital technologies facilitate the formation of entrepreneurial social networks, which can provide support and resources during challenging times. These networks enable individuals to share experiences, collaborate on projects, and leverage collective intelligence to navigate the complexities of the crisis. Etemad (2023) notes that the rise of multi-sided online platforms has transformed the entrepreneurial landscape, allowing for greater connectivity and collaboration among potential entrepreneurs. These platforms not only provide access to markets but also foster innovation by enabling entrepreneurs to co-create solutions with consumers and other stakeholders. This collaborative approach is essential in times of crisis, as it allows for the rapid adaptation of products and services to meet emerging needs. Thus, we posit that.

H2a. Frequent internet use positively affects entrepreneurial intentions, especially of potential chancer entrepreneurs, in the presence of economic uncertainty (i.e., COVID-19 pandemic).

The digital transformation has been a critical driver to move from an aspirational to an actual entrepreneur, especially in the technology entrepreneurship landscape. It is suggested that digital technologies reshape market dynamics and enables new business models. Jafari-Sadeghi et al. (2021) emphasise that understanding digital transformation necessitates a multi-level analysis that incorporates diverse concepts from various fields, highlighting the complexity of this relationship. Nambisan (2017) further elaborates on this by suggesting that digital entrepreneurship is characterised by less bounded processes and more distributed agency, which fundamentally alters traditional entrepreneurial practices. This fluidity has enabled entrepreneurs during the COVID-19 to leverage digital tools to create and capture value in innovative ways.

Moreover, it has been suggested that the role of digital capabilities is crucial in entrepreneurial activity. Proksch et al. (2021) argue that a well-defined digital strategy enhances the digitalisation of new ventures, with digital capabilities acting as a mediator in this process. This assertion aligns with Belitski et al. (2023), who discuss how digital affordances can significantly influence entrepreneurial dynamics, particularly in European regions. The interplay between digital technologies and entrepreneurial capabilities fosters an environment conducive to innovation and growth, suggesting that entrepreneurs who effectively harness these technologies are better positioned to succeed.

Additionally, the emergence of open innovation and platformisation has transformed the entrepreneurial ecosystem and entrepreneurship. Nambisan et al. (2018) highlight that these phenomena promote more collaborative and distributed models of innovation, which are increasingly facilitated by digital platforms. This shift not only democratizes access to resources and knowledge but also encourages a more inclusive approach to entrepreneurship, allowing a broader range of actors to participate in the innovation process. The integration of artificial intelligence and big data further enhances this dynamic by providing entrepreneurs with advanced tools for market analysis and decision-making, thereby improving their competitive edge (Obschonka and Audretsch, 2019).

Therefore, it can be argued that frequency of digital use (such as internet) can assist individual entrepreneurs by supporting their organisational tasks and activities, support vital entrepreneurial functions that connect customers and suppliers, and also open up new opportunities for new entrepreneurial activities for individuals who are willing to chance it. In this paper, we test the following four hypotheses.

H2b. Frequent internet use positively affects the likelihood of self-employment, as a chancer entrepreneur, under the presence of economic uncertainty (i.e., COVID-19).

To elaborate further on the hypotheses developed above, Fig. 1 presents a simple conceptual model illustrating the proposed hypotheses to be tested.

4. Methods

4.1. Dataset and sample

The data used in this paper are from waves 10–12 of the UKHLS, which covers the 2019–2022 period, which includes the COVID-19 pandemic years. The UKHLS is a study funded by the Economic and Social Research Council (ESRC) and a variety of other UK government departments, under the guidance of the Institute for Social and Economic Research (ISER), University of Essex (University of Essex - Institute for Social and Economic Research, 2022). The survey is delivered by several collaborating fieldwork agencies: the National Centre for Social Research (NatCen), the Central Survey Unit of the Northern Ireland Statistics and Research Agency (NISRA), Kantar Public, and Millward Brown Ulster.

The UKHLS is clustered and stratified, probability sample of approximately 24,000 households accounting for over 40,000 at Wave 1. The data are collected in their majority via face-to-face interviews, which are supplemented by a small number of telephone and web interviews. The mainstage survey collects data from every household member who are at least 16 years old and above. Whilst the survey contains perceptual variables stemming from subjective questions, the UKHLS follows a rigorous methodology where households are interviewed over a span of 24 months (e.g., 6-12-6 pattern) to maintain the high quality of the data collection, with the same individual interviewed at approximately 12-month intervals. Previous research has relied on this dataset to understand psychological characteristics (Kang et al., 2023) and institutions such as democracy (Brieger et al., 2024), entrepreneurial activity as self-employment (Litsardopoulos et al., 2023), to ultimately explain outcomes such as well-being (van der Zwan et al., 2020). We consider working-age individuals (16–64 years old) and the survey waves that collected data between 2019 and 2022. The process yielded an unbalanced panel data of 53,199 observations over the three survey waves.

4.2. Dependent – independent and control variables

Our main *dependent variables* are those associated with entrepreneurial aspirations question (in waves 10 and 12), in which participants are asked if they would like to start their own business (i.e., “Would you like to start up your own business?” (see Table A1 in the Appendix); and a labour status question (i.e., “What is your current labour situation?”). We use self-employment equal to 1 if the individual is self-employed or 0 otherwise. These variables have largely been recognised in extant literature aimed to analyse individuals’ intentions and actions associated with entrepreneurship (cf. Litsardopoulos et al., 2020).

Regarding our main *independent variables*, we use a technology associated question, namely the frequency of internet use (i.e., “How often do you use the internet for your personal use?”). The question about the frequency of internet use has been adjusted over the years to reflect the increase in the use of the internet. We consider the topmost category out of seven optional answers to the question as the highest frequency (dummy = 1) and the six other answers as an indication of lower frequency (dummy = 0). Hence, high frequency of internet use may capture the strength of integration and adoption of new technologies and their importance to users’ lives. Whilst this variable might seem trivial, extant research has shown that the utilisation of internet entails individuals’ investment in digital infrastructure, which becomes a resource to further explore market opportunities (Urbano et al., 2024).

In addition, we approach institutions through a derived income support series of questions (“Are you currently receiving any of these payments, either just yourself or jointly?”), which covers a total of 46

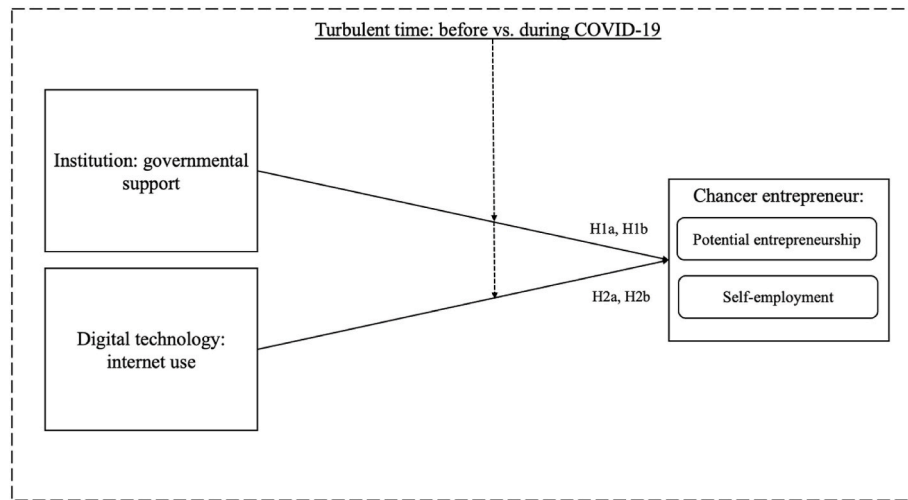


Fig. 1. Conceptual model.

government support benefits, including core benefits such as, Income Support, Job Seeker's Allowance, Child Benefit, Universal Credit, along with a range of several other government support benefits, such as Employment and Support Allowance, Educational Grant, and Incapacity Benefit. The derived aggregate of multiple combined benefits received by individuals ranges from 0 to 13 (i.e., individuals receive from 0 to 13 support benefits). Bjørnskov and Foss (2016) have shown that these public policies constitute an accurate approach to formal institutions, highly used in entrepreneurship literature.

To account for unobservable, we use *control* variables for age, gender, marital status, the presence of children in the household, educational achievement, urban-rural area of residence, born in the UK, UK region/nation, house ownership, and time (individual survey interview year). We consider the age of participants to create a youth dummy variable, where it takes the value of 1 if individual age is 16–24 and the value of 0 if age is over 24. With this information, we are able to capture the downsize of self-employment in the UK during the pandemic crisis, which is why we also control for unemployment. The unemployed variable included individuals who were temporary laid off during covid, but not those who were on the Coronavirus Job Retainment scheme.

By doing this, we can check whether unemployment motivates individuals' entrepreneurial intentions and actions or whether these response variables are, indeed, associated with chance. We also create a Covid dummy variable to capture the effects of the pandemic (i.e., zero value for the period prior to 2020). It must be noted that the date of the first reported COVID-19 case in the UK coincided with the date of the official exit of the UK from the European Union (Brexit) and therefore it is difficult to disentangle the two effects (see further discussion in the Limitations section).

4.3. Empirical strategy

In our investigation we employ a quantitative analysis approach using the random effects Probit estimator of variance for binary response (Aldrich and Nelson, 1984; Wooldridge, 2010). We implement the above XTPROBIT method with the Gauss–Hermite quadrature and bootstrapping with 1000 resamples using the STATA quantitative analysis software (StataCorp, 2023). According to Wooldridge (2010), this technique can bring more efficient results than traditional fixed-effects models as it does not discard much information. Overall, it perfectly models variables that use binary outcomes in longitudinal studies. It is worth mentioning that this technique requires normal distribution, which might impose an important restriction. Equation (1) represents our estimations.

$$P(CE_{it} = 1) = \Phi \left(\alpha + \beta_1 I_{it} + \beta_2 DT_{it} + \sum_{j=3}^J \beta_j X_{it,j} \right) \quad (1)$$

In our model, we examine the effects of technology indicators (DT_{it}) such as the frequent use of the web (one of our key explanatory variables) and institutions (I_{it}) like governmental income support (another key explanatory variable) on chancer entrepreneurs (CE_{it}) such as entrepreneurial aspirations (response variable) and on self-employment (response variable), respectively. Moreover, we use a set of j controls (X_{it}), covering individual, labour, and economic characteristics. The error term (ε_{it}) is implicitly captured through the standard normal distribution function $\Phi(\cdot)$. It reflects unobserved influences on the outcome for individual i in wave t , and is assumed to be normally distributed with mean 0 and variance 1.

To complement our analysis, we use information on the gross monthly income and annual savings/investments to estimate the individual annual earnings and calculate the mean annual earnings to create a dummy variable that distinguishes lower earnings (i.e., below the sample mean) and higher earnings (i.e., above/equal to the sample mean). We also split the sample considering gender and age groups.

5. Analysis and results

5.1. General results

Tables 1 and 2 show both the descriptive statistics and the correlation matrix. From Table 1, we can observe that the number of respondents manifesting an aspiration for entrepreneurship is lower than that by self-employment. However, potential entrepreneurs are, on average, higher than self-employed. Correlations in Table 2 also confirm our initial expectations. Therefore, we can proceed to go deeper into these relationships.

Table 3 presents the empirical results of the models of entrepreneurial aspiration, and self-employment before and during COVID-19, which show the association of government support and frequency of internet use with these variables. The results in Table 3 suggest that institutions such as government support exert a positive influence on aspiring entrepreneurs and self-employment, with stronger influence in the pandemic period than before COVID-19. We also observe that the frequent use of the internet is positively associated with entrepreneurial aspirations (Entrep. Aspirations) during COVID-19 and self-employment (Self-Employed) before the pandemic. Specifically, the results in Table 3 show that the income individuals perceive from government aid transfers augment the likelihood of both entrepreneurial intentions and

Table 1
Descriptive statistics.

Variables	Obs.	Mean	Std. Dev.	Min.	Max.
Entrepreneurial Aspirations	21,522	0.048	0.213	0	1
Frequent internet use	50,856	0.722	0.448	0	1
Self-employed	51,091	0.097	0.296	0	1
Unemployed	51,091	0.584	0.234	0	1
Youth	51,091	0.166	0.372	0	1
Gender	51,091	0.541	0.498	0	1
Married	50,905	0.504	0.500	0	1
Own Child	51,091	0.416	0.493	0	1
Urban Residence	50,680	0.791	0.407	0	1
UK Born	50,238	0.834	0.372	0	1
Earnings (log)	47,319	9.776	1.244	-1.4271	12.8992
University educ.	46,697	2.966	1.271	1	5
Home ownership	50,717	0.704	0.457	0	1
UK Gov. support	88,202	1.606	1.632	0	13

Note: Obs. Observations; Std. Dev. Standard deviation; Min. Minimum value; Max. Maximum value.

actions, which is line with Storey's (2011) idea about reducing the fear of failing entrepreneurial projects, whilst exploring different entrepreneurial projects. Hence, our findings offer support for hypotheses 1a and 1b.

These results are in line with Belghitar et al. (2021) and Torrès et al. (2021), who suggest that entrepreneurship policies related to financial aid create certainty for those individuals assessing whether entrepreneurship is viable and doable. Whilst Storey (2011) focuses on growth, we show that when people can count upon governmental support, aspiring entrepreneurs may consider turning to entrepreneurship as a reasonable way to get ahead during a lockdown. Our work complements the work of Liu et al. (2021) about trusting governments as mechanism to encourage potential entrepreneurs. This also seems to be important for entrepreneurship, particularly in environments with resource constraints (Moore et al., 2020). In line with Klein (2020), self-employed individuals decide to take the risk (or "roll the dice" *a la* Storey (2011)) mitigating risks and minimising the harmful effects of failing.

Table 3 also displays that a higher frequency of internet use increases the probability of individuals' aspiration to start their own business (during COVID-19), and the probability of being self-employed (before

COVID-19). These results offer support for both Hypothesis 2a and Hypothesis 2b. Moreover, what is particularly interesting is that economic factors during the COVID-19 pandemic years (i.e., earnings) had a statistically significant negative impact on people's entrepreneurial aspirations, and the same appears to have been the case for self-employment. In this regard, we agree with Dean et al. (2012), He et al. (2023), and Nzembayie et al. (2024) on the importance of using digital technologies as a platform to explore possible ideas that can become entrepreneurial projects in the near future.

Albeit internet connection is apparently everywhere, this tool gained relevance during the lockdown, when the pace of business digitalisation accelerated. Amankwah-Amoah et al. (2021) have shown that people were able to socialise thanks to this resource in the COVID-19 crisis. We show that the combination of online entertainment and socialisation might incentivise people to look for projects that potentially take form on e-commerce platforms. Unlike potential entrepreneurship, digital technologies might not affect self-employment during the COVID-19. Storey's (2011) idea of chancer entrepreneur remains invariant when it comes to resources such as digital tools. Our results suggest that chancer entrepreneurs would make random attempts as long as they can count upon institutional support. Yet, the pandemic crisis drove people to do

Table 3
Technology effects on Aspirations and Self-employment.

	Entrep. Aspirations	Entrep. Aspirations	Self-Employed	Self-Employed
	Pre-Covid-19	Covid-19 period	Pre-Covid-19	Covid-19 period
UK Gov. support	0.009	0.115***	0.052*	0.096***
Frequent internet use	0.132	0.278***	0.307**	0.045
Youth	-0.132	-0.162	-1.812***	-1.916***
Female	-0.048	-0.172*	-1.003***	-1.234***
Unemployed	0.523	0.018		
Earnings (log)	-0.027	-0.107*	-0.246***	-0.247***
Controls	YES	YES	YES	YES
Constant	-1.039*	-0.854+	0.549+	-0.334
Observations	6,545	12,840	17,335	24,433

Note: We also estimated all the models using lags for the respective internet technology variables, and the results remain robust. ***p < 0.001, **p < 0.01, *p < 0.05, +p < 0.1.

Table 2
Correlation matrix.

Variables	1	2	3	4	5	6	7
1 Entrepreneurial Aspirations	1						
2 Frequent internet use	0.049***	1					
3 Self-employed	0.076***	-0.007	1				
4 Unemployed	0.009	-0.013***	-0.082***	1			
5 Youth	-0.010	0.109***	-0.117***	0.074***	1		
6 Gender	-0.011	0.014***	-0.127***	-0.019***	0.011**	1	
7 Married	-0.004	-0.056***	0.099***	-0.093***	-0.429***	-0.043***	1
8 Own Child	0.028***	0.055***	0.006	-0.018***	-0.057***	0.046***	0.235***
9 Urban Residence	0.016**	0.053***	-0.047***	0.037***	0.024***	0.008*	-0.036***
10 UK Born	-0.077***	-0.010**	-0.038***	-0.042***	0.109***	-0.018***	-0.149***
11 Earnings (log)	0.000	-0.017***	-0.023***	-0.238***	-0.328***	-0.127***	0.161***
12 University educ.	0.045***	0.069***	0.013***	-0.083***	-0.101***	0.071***	0.064***
13 Home ownership	-0.048***	-0.022***	0.049***	-0.127***	-0.043***	-0.042***	0.211***
14 UK Gov. support	0.028***	-0.024***	-0.004	0.101***	-0.169***	0.140***	0.004
Variables	8	9	10	11	12	13	14
8 Own Child	1						
9 Urban Residence	0.028***	1					
10 UK Born	-0.106***	-0.153***	1				
11 log earnings	0.010**	-0.025***	0.024***	1			
12 University educ.	0.019***	0.007	-0.017***	0.186***	1		
13 Home ownership	-0.024***	-0.086***	0.111***	0.094***	0.127***	1	
14 UK Gov. support	0.255***	0.029***	-0.057***	-0.007	-0.106***	-0.261***	1

Note: **p < 0.05, ***p < 0.01.

everything online. For some enterprising individuals this involuntary digitalisation of life may have positively affected their entrepreneurial aspirations, and where others saw only hard trials ahead, some saw an environment conducive to testing business ideas. In this regard, we complement Urbano et al. (2024), who demonstrate that digital technologies like the internet help entrepreneurs grow.

Notably, we see that the Female control variable was negatively associated with the response variables in all models, as was the Youth and Earnings control variables. To further investigate these interesting results, we examine the effect of internet technology on self-employment and entrepreneurial aspirations during the COVID-19 pandemic, while considering the interactive effects of the aforementioned control variables. Toward this goal, we interact the internet use with the earnings dummy variable, that is below ($<$) or above ($\geq$) the sample mean, and examine the effects for the sub-samples for women and men, as well as, for younger and older individuals.

5.2. Sub-sample estimates

The results in Tables 4 and 5 suggest a more complex link between institutions, digital technologies and chancer entrepreneurs than previously suggested in the results of Table 3. Looking at Table 4, we see that institutions positively explain the overall sample of aspiring entrepreneurs. This result might be led by the women subsample, who are significantly affected when government support is obtained. A similar pattern occurs when we compare older versus younger population, in which government support seems more important for those above 24 years old than those in the younger group.

Table 4 also shows that the frequent use of the internet increases the possibility of entrepreneurial aspirations for the overall sample. The positive impact of the frequent internet use is also evident for the subsample of men and women alike, as well as for older individuals, but interestingly not for younger individuals (i.e., 16–24 years old). However, the interaction effect of frequent internet use and earnings was not statistically significant in any of the models, suggesting that as far as entrepreneurial aspirations are concerned, there was no statistically significant difference in the combined effect of internet use and those in the lower or higher earnings groups (it is important to consider the potential presence of nested earnings differences within the two earnings groups). Interestingly, the Covid dummy shows the effect of the pandemic period on entrepreneurial aspirations was not statistically significant, nor was the effect of being unemployed.

Moreover, the results of the estimated models for the subsamples in Table 4 allow for further insights in the role of age and gender on entrepreneurial aspirations. The results show that within women there

Table 4
Technology effects on Entrepreneurial Aspirations – Sub-samples.

	Overall	Men	Women	Older	Younger
UK Gov. support	0.061*	0.049	0.077*	0.056*	0.107
Frequent internet use	0.226**	0.235*	0.207+	0.243**	−0.169
Earnings dummy	0.330***	0.439**	0.227+	0.299**	0.273
Frequent internet use * Earnings dummy	0.022	−0.112	0.117	−0.004	0.415
Youth	−0.238*	−0.211	0.280*	–	–
Female	−0.172**	–	–	−0.183**	−0.107
Unemployed	0.333	0.073	0.466	0.446	0.261
Covid-19 dummy	0.065	0.046	0.087	0.045	0.166
Controls	YES	YES	YES	YES	YES
Constant	−2.166***	−2.846***	−1.274+	−1.716**	−4.030**
Observations	19,385	9,149	10,236	17,034	2,224

Note: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.1$.

are statistically significant differences between younger and older women, with younger women (16–24) being more likely to harbour entrepreneurial aspirations. Additionally, the results also suggest that within older people (25–64), being a woman reduces the probability of having entrepreneurial aspirations.

The results in Table 5 suggest that institutions are important for all the self-employed, as well as women (non-statistically significant effect for men), older and younger people. These results make explicit the importance of institutional support for those entrepreneurs with less experience, and for women who are typically an underrepresented group in entrepreneurial activity. We can also observe in Table 5 that whilst the frequent internet use does not itself have a statistically significant effect, the interaction between earnings and frequent internet use has a statistically significant effect in all but the subsample of younger people. The results suggest that the frequent use of the internet among people with lower earnings has a positive effect on the probability of being self-employed. However, the level of earnings did not have a significant impact on the probability of being self-employed for the subsample of younger people (nor did the interaction term of earnings and frequent use of the internet). This might be associated with how much more younger people are on average accustomed to digital technologies and particularly internet applications, such as social networking applications and digital payment systems.

Moreover, the results of the estimated models for the subsamples in Table 5 allow for further insights in the role of age and gender on self-employment. The results show that within women there are once again statistically significant differences between younger and older women, with those women in the youth group (16–24) having a lower probability of being self-employed. Additionally, the results suggest that being a woman reduces the probability of being self-employed within older people (25–64), as well as within younger people (16–24), alas with a larger coefficient for the older group. Interestingly, the Covid dummy shows the effect of the pandemic period had a statistically significant impact on self-employment only for the subsample of older people. We discuss further these interesting results in the next section together with the concluding remarks.

6. Discussion and implications

The lockdown during the COVID-19 pandemic forced governments to act and support (through subsidies) people and businesses. To those who were looking for different opportunities to survive during the health crisis, entrepreneurship may have become a feasible solution. As a result, some people started using digital tools to explore opportunities and operate e-businesses (Amankwah-Amoah et al., 2021; Saridakis et al., 2022). In our results, we observe that institutional support in the form of public subsidies, grants, and cash transfer, amongst others, augments entrepreneurial intentions and actions amongst individuals. According to Storey (2011) and Coad et al. (2013), people act as gamblers when it comes to entrepreneurship. If the governmental support goes up, aspiring and actual entrepreneurs may shake off the fear of failing their entrepreneurial projects, hence, there are increased chances to “roll the dice.”

Similarly, the frequent use of internet technologies, such as navigating the web, searching and discovering information online, the use of digital payment systems, and accessing sharing platforms, amongst a multitude of other uses, can encourage the entrepreneurial aspirations of people, and offer additional tools to support the self-employed of lower income segments, such as owners of micro and/or small businesses (Etemad, 2023). Our findings may suggest that access to web services and being accustomed to using digital technologies (i.e., highly frequent use of the internet) may offer additional employment options for financially disadvantaged households, in line with contemporary notions of digital entrepreneurship (Saridakis et al., 2022). It is likely that people who use the internet more frequently may be able to search for and discover business opportunities that encourage their

Table 5
Technology effects on Self-employment – Sub-samples.

	Overall	Men	Women	Older	Younger
UK Gov. support	0.041+	0.005	0.080**	0.050*	−0.428**
Frequent internet use	−0.044	−0.052	−0.034	−0.070	0.693
Earnings dummy	0.350***	0.450***	0.255+	0.303**	0.304
Frequent internet use * Earnings dummy	0.260**	0.288*	0.247+	0.290**	−0.307
Youth	−2.288***	−1.859***	−1.590***	—	—
Female	−1.284***	—	—	−1.277***	−0.631***
Covid-19 dummy	−0.061	−0.076	−0.043	−0.077+	0.200
Controls	YES	YES	YES	YES	YES
Constant	−2.354***	−4.083***	−2.907***	−1.957***	−5.118***
Observations	41,768	19,085	22,683	35,418	6,350

Note: ***p < 0.001, **p < 0.01, *p < 0.05, +p < 0.1.

entrepreneurial aspirations and draw them to self-employment. Increased time online may be conducive to higher alertness to opportunities offered by digital platforms, inspiring people to turn from customers to traders. Taken together, both government support and digital technologies become important and complementary resources for (potential) chancer entrepreneurs. Whilst Urbano et al. (2024) have focused on firm productivity, institutional factors and digitalisation have also been important elements in their analysis. We complement this view by adding the catalyst power of institutions and technology utilisation as resources which can increase the chances of any entrepreneurial endeavour during uncertain times, such as the COVID-19 pandemic.

Furthermore, our results also showed that the effects of digital technology were also influenced by gender and age. Women in the 16–24 age group tend, on average, not to aspire starting their own business and are less likely to be self-employed. What is more, while this suggests that older women are significantly more likely to have such entrepreneurial aspirations, the results of the older subsample (25–64 years of age) indicate that compared to men, women were also significantly less likely to aspire starting their own business (Table 4), as well as being self-employed (Table 5).

Summarising the results also offers a glimpse into the characteristics of the probable entrepreneur of the COVID-19 pandemic. The Covid-19 dummy did not have a significant impact on entrepreneurial aspirations or on being self-employed. This was likely affected by the furlough scheme of the UK government which provided financial support for hours not worked to wage-employees of the lower incomes and grants to micro/small businesses that were forced to close. However, the results show that the interaction of frequent use of digital technologies and lower earnings increased the probability of being self-employed in the years of the COVID-19 pandemic. It is also likely that enterprising individuals not foreseeing the multiple COVID-19 variants and consecutive lockdown waves may have rushed to start a business in the interval. From this, implications to theory and literature, as well as to public policy can be derived.

6.1. Implications for theory

Our findings offer significant theoretical contributions to the literature on entrepreneurship, institutional support, and digitalisation. First, we advance institutional theory (North, 1990) by demonstrating that government interventions—such as financial subsidies and social safety nets—do not merely provide short-term relief but actively shape entrepreneurial dynamics. Unlike traditional views that position institutions as either barriers or enablers of entrepreneurship, our study suggests that institutional support can reduce the downside risks of entrepreneurial action, particularly for chancer entrepreneurs who might not otherwise engage in business formation. This nuanced perspective expands the literature on institutional economics by showing that state interventions, when coupled with digital infrastructure, can create conditions for risk-taking entrepreneurship during economic shocks.

Second, our findings contribute to the technology affordance and

constraint framework (Autio et al., 2018; Gibson, 1977; Majchrzak and Markus, 2012) by illustrating how digital technologies serve as both enablers and filters for entrepreneurial activity. While digital tools lower entry barriers and facilitate market access, their effective utilisation is contingent upon both institutional backing and individual agency. This extends prior research by showing that the intersection of institutional support and digitalisation is a critical factor in shaping entrepreneurial responses to crises. Additionally, we challenge the conventional necessity vs. opportunity entrepreneurship dichotomy (Davidsson, 2015; Núñez and Morales-Alonso, 2024), proposing that in uncertain environments, entrepreneurship is often driven by a blend of institutionally enabled opportunism rather than pure necessity. This theoretical refinement opens new avenues for understanding the role of external shocks in shaping entrepreneurial behaviour beyond conventional classifications.

The notion of entrepreneurship is associated with people with an entrepreneurial mindset who have a keen eye for opportunity and who are able to identify opportunities even in the most adverse environments (Kirzner, 1973). The COVID-19 pandemic may have at one hand discouraged particularly those in the higher earnings group from aspiring to engage in entrepreneurial activity and maybe even postpone any entrepreneurial plans they had before the pandemic. On the other hand, the conditions may have offered those who faced a reduction in their income, but not unemployed (i.e., furloughed employees), the space to consider starting their own business more seriously. People with the IT skills and some exposure to the online market, or people with training in the use of digital technologies and e-commerce platforms, were likely better positioned to explore business opportunities in this volatile business environment. This is the type of a chancer entrepreneur might be closer to the ‘alert’ Kirznerian entrepreneur (Kirzner, 1973), or even the classic theorisation of the ‘petit entrepreneur’ by Richard Cantillon in the eighteenth century (Cantillon, 1755). Concepts that may have fallen out of fashion in the scholarly pursuit to capture the innovator entrepreneur.

6.2. Implications for public policy

Our findings have important implications for policymakers seeking to foster entrepreneurship, particularly in times of economic uncertainty. First, the evidence underscores the critical role of institutional support in enabling entrepreneurial action. Policies that provide financial assistance not only mitigate the negative impacts of economic shocks, but also encourage individuals to take calculated entrepreneurial risks. However, for such policies to be effective, they must be designed with a long-term vision, ensuring that financial assistance does not merely serve as a short-term crisis response, but also facilitates sustainable business creation. This suggests that governments should consider pairing financial support with entrepreneurship training, digital literacy programs, and access to business advisory services to enhance the long-term viability of these ventures (Coad et al., 2016).

Second, our findings emphasise the strategic importance of digital

infrastructure in promoting entrepreneurship. While financial support lowers immediate barriers to entry, the availability and accessibility of digital tools determine whether individuals can effectively engage in entrepreneurial activities. Policymakers should prioritise investments in high-speed internet, affordable digital tools, and digital skill development programs to ensure that aspiring entrepreneurs—particularly from lower-income backgrounds—can fully leverage these opportunities. Additionally, fostering public-private partnerships to expand access to e-commerce platforms, digital payment systems, and online marketplaces can further enhance entrepreneurial success. By integrating institutional support with a robust digital ecosystem, policymakers can create a resilient entrepreneurial environment that enables individuals to transition from crisis-driven necessity to long-term economic self-sufficiency.

It can be deduced that even during adverse conditions such as the pandemic lockdown, there were still people who were harbouring entrepreneurial aspirations and were willing to take their chances to start their own business. Moreover, considering the pandemic lockdown it can be inferred that to a large degree these must have been digital entrepreneurs, or at least entrepreneurs who employed digital tools in their daily operations. Our analysis suggests that the volatility in the business market caused by the pandemic may have created opportunities for those who were more equipped to take advantage of them. It may also be the case that people in the lower earnings group were somewhat less content with the support from the various COVID-19 period government transfers and arrangements with employers, such as the Coronavirus Job Retention Scheme (Ferguson and Priestley, 2021). Regardless, the COVID-19 pandemic entrepreneur might not be so readily ascribed to either the necessity- or the opportunity-based entrepreneurship (Amorós and Bosma, 2013).

It is possible that several people who aspire to start their own businesses never actually realise their business venturing aspirations. It is also possible that unemployed people who aspire to start their own business may eventually start a business out of necessity, which does not grow beyond the very small level. Nevertheless, the symbiotic characteristics of micro and small businesses must be taken under consideration (Saridakis et al., 2022). Frey (2019) argues that as technology made the symbolic analyst (i.e., knowledge worker, tech and information workers, etc.) more affluent, they tend to spend a greater share of their income on peripheral services, often serviced by micro and small businesses in their local area. This symbiotic existence of businesses needs to be carefully considered in economic policy decisions. Policy makers who seek to foster innovation and entrepreneurship within their constituencies can play a critical role in advancing such policies.

6.3. Limitations

As with any research, there are some limitations in this investigation. We use self-employment as a proxy for entrepreneurship, even if the two concepts are not fully substitutable. Nevertheless, the UKHLS following the identification used by the Office of National Statistics (ONS) and the HM Revenue & Customs (HMRC) asks participants whether they identify themselves as being wage-employees or self-employed. There is a notion of a cyclical effect with technology and entrepreneurial aspirations that is difficult to disentangle. That is, as more businesses become digital the number of people who access them using the internet will increase, and in effect more businesses will seek to offer their goods and/or services online. Hence people who navigate the internet more frequently will inevitably be exposed to more online businesses, information, and likely be influenced in expressing entrepreneurial aspirations themselves. There is also the association between lower incomes and self-employment, where people turn to self-employment to compensate for lack of salaried work or low salaries, but also the lower earnings of the average self-employed (e.g., micro/small businesses). To assess the effects, we re-estimated all the models using lags, and overall, the results confirm our original findings. Lastly, the modelling of younger people

(16–24), particularly with regards to their entrepreneurial aspirations, suggests that traditional models might be not suitable for gauging their career aspirations as accurately as the previous literature and econometric models might have had.

As noted earlier, the date of the first reported COVID-19 case in the UK coincided with the date of the official exit of the UK from the European Union (Brexit) and therefore it is difficult to disentangle the two effects. As the period of Brexit coincided with the advancing waves of the COVID-19 pandemic and consequent lockdowns, it is difficult to separate the effect of either phenomenon had. For example, Brexit may have influenced the internationalisation strategy of firms and affected their online activity and presence. It is also probable the market outcomes that unfolded were a combination of the two to some extent.

Our information is a country-case that raises questions about similar patterns among other countries. Amankwah-Amoah et al. (2021) have brought international evidence on the role of digital tools in entrepreneurship. We assess internet use as a digital technology, which might not be meaningful in countries where high connectivity exists even in remote rural settlements. In fact, the absorption of technology may be inherent in young population, in which informal institutions are important to comprehend the way people socialise (García-Rodríguez et al., 2022). Further research into the characteristics of Gen Z is necessary to gain a better understanding of their career aspirations and their views about entrepreneurship.

6.4. Future research

The ongoing Industry 4.0 technologies diffusion and implementation across the size-range of businesses will likely continue, even if there is some temporary economic turbulence at times. As Industry 4.0 technologies become increasingly more affordable, the digital gap between the very small businesses and medium, or even some relatively larger businesses, is likely to shrink. As the pace of digitalisation increases it would be of interest to examine the ever-changing nature of micro/small businesses across different institutional and economic environments beyond the forced digitalisation imposed on businesses during the COVID-19 pandemic.

Future research opportunities can also explore how different countries have seen the potential emergence of chancer entrepreneurs (Amankwah-Amoah et al., 2021). This natural experiment motivates further exploration of how people utilised technologies to explore business opportunities and operate e-commerce platforms. Similar to Audretsch and Belitski (2024) and Inceoglu et al. (2024), future research can complement the institutional theory as well as the technology affordance and constraint perspective with the digitalisation and resource mobilisation approach to unpack nuances of people's experience when using digital tools to explore market opportunities. Since online interactions operate with informal rules (Nzembayie et al., 2024), these institutional characteristics should be included in future works focused on understanding chancer entrepreneurs in the digital world.

7. Conclusion

In the recent decades the diffusion of technologies, particularly technologies that are associated with the internet, have been changing the ways of doing business. The easy way by which people can nowadays register as sole traders and start a business within a day, together with the emergence of web technologies (e.g., Web 2.0) and the development of sharing platforms, retail and wholesale e-commerce platforms, have increased the range and scope of business start-ups, and most likely encouraged the business aspirations of people. Moreover, digital technologies can offer businesses a way to negate institutional barriers that hinder their growth potential (Urbano et al., 2024). The experience of the recent COVID-19 pandemic and consequent government policies (e.g., lockdowns) increased the speed of the ongoing digitalisation of businesses. Nevertheless, the digital entrepreneurship ecosystem did not

emerge in a vacuum. That is why the institutional theory (North, 1990) complements the adoption of digital technologies in contexts under uncertainty. There exist formal institutions (e.g., governmental support) that encourage entrepreneurial activity (Urbano et al., 2019).

Drawing on institutional economics (North, 1990), as well as on technology affordances and constraints (Autio et al., 2018; Gibson, 1977; Majchrzak and Markus, 2012), we examined how government support and digital technologies enable (aspiring) entrepreneurship, particularly chancer entrepreneurs, during crises. Using rich socioeconomic household data from the UK we found that both institutions (proxied by government support) and digital technologies (proxied by frequency of internet use) encourage the entrepreneurial aspirations of individuals, and increase the likelihood of self-employment, particularly of lower income people.

CRediT authorship contribution statement

Sebastian Aparicio: Writing – review & editing, Writing – original

draft, Formal analysis, Conceptualization. Nicholas Litsardopoulos: Writing – review & editing, Writing – original draft, Methodology, Data curation, Conceptualization. George Saridakis: Writing – review & editing, Writing – original draft, Conceptualization.

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Appendix

Table A1
Number of aspiring entrepreneurs (“Would you like to start up your own business?”).

Entrepreneurial Aspirations	Overall	Percent
NO	25,690	82.88
YES	5,305	17.12
Total	30,995	

Data availability

The authors do not have permission to share data.

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