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Digital entrepreneurship and indigenous value systems: An Ubuntu perspective

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Abstract

This paper investigates the embeddedness of digital entrepreneurship in the entrepreneurs' indigenous value system by examining the influence of 'Ubuntu' on digital entrepreneurship activities in the South African context. We do so through an interpretive field study of two innovation clusters in South Africa. Our findings reveal Ubuntu as the basis of a community orientation to digital entrepreneurship that offers an alternative to the prevalent heroic view in which digital entrepreneurship narratives are centred around the individual entrepreneur(s). They also highlight the tensions faced by digital entrepreneurs as they attempt to uphold the Ubuntu values of humility, reciprocity, and benevolence while operating in a competitive and fast-paced environment. In addition, our study indicates that the way entrepreneurs draw on their indigenous value system is dynamic, giving rise to what we call *digital Ubuntu*, reflecting a reworking of Ubuntu values into their increasingly digital reality. The concept of digital Ubuntu brings to light how indigenous values can become entangled with the capabilities of digital technologies and highlights the need for indigenous perspectives to advance our understanding of the diversity of digital phenomena, such as digital entrepreneurship, across cultural contexts.

All the authors have contributed equally to the paper.

KEYWORDS
community, digital entrepreneurship, digital Ubuntu, South Africa, Ubuntu

1 | INTRODUCTION

The versatility of digital technologies has made them a significant source of opportunities for entrepreneurs to create new ventures (Autio et al., 2018; Yoo et al., 2012). Digital entrepreneurs build on the distinctive features of digital technologies to create new combinations of social and material resources to generate value for users. They typically build their business models on digital technologies' ability to connect multiple processes and form platforms that generate new possibilities for economic and social interactions (Nambisan et al., 2018; Van Alstyne et al., 2016).

While some aspects of digital entrepreneurship, such as the technical skills required to engage in digital entrepreneurship activities, are relatively universal, the values that motivate digital entrepreneurs and influence their strategic choices vary significantly across contexts. Various studies have investigated these values in contexts that produced global technology giants such as the United States, Europe, and China. However, the particularities of the values underlying digital entrepreneurship activities in other value systems remain understudied. Digital entrepreneurs in different cultures and regions of the world tap into their indigenous value systems to give meaning and purpose to their entrepreneurial activities (Westrup & Liu, 2008). Therefore, developing a better understanding of the constitutive role of indigenous value systems in digital entrepreneurship is vital for appreciating the distinctive aspects of digital entrepreneurship outside its global hubs and for providing insights on indigenous approaches to digital entrepreneurship.

In this study, we focus on the indigenous value system of Ubuntu, which is prevalent in South Africa and neighbouring countries. Ubuntu offers a suitable basis for understanding the role of indigenous value systems in influencing the nature and direction of digital entrepreneurship activities. As a value system, Ubuntu is best summarised in the expression 'I am what I am because of others'. It particularly emphasises the values of humility (Lutz, 2009; Nussbaum, 2003), reciprocity (Lutz, 2009; Nussbaum, 2003; West, 2014) and benevolence (Lutz, 2009). In so doing, Ubuntu offers a unique context for investigating how these values inspire and motivate digital entrepreneurship activities. Such values have generally been ignored in the academic literature on digital entrepreneurship (Fang et al., 2018). Digital entrepreneurs pursue their objectives in complex and variable environments (e.g., Du et al., 2018; Leong et al., 2016; Martinez Dy et al., 2017). Nonetheless, much of the existing digital entrepreneurship literature presents a view of digital entrepreneurship as primarily driven by market mechanisms and competitive forces that reward the fittest entrepreneurs (e.g., Li et al., 2018; Martinez Dy et al., 2017; Pinvidic, 2018). This view of digital entrepreneurship as a largely meritocratic domain of action reflects a view of digital entrepreneurs as having unique characteristics, abilities, and talents that enable them to face heightened competition in the markets for digital goods and services (Martinez Dy et al., 2017). This perspective draws on and reinforces narratives in which the biographies of heroic individuals, such as the founders of large technology companies, are presented as the main thrust behind their entrepreneurial ventures' rapid growth.

Despite the prevalence of this heroic view in public and academic discourses, recent studies have called for alternative perspectives of digital entrepreneurship. For example, Nambisan (2017) and Davidson and Vaast (2010) challenged this heroic view by highlighting the distributed nature of agency in digital entrepreneurship activities and the collective social construction of digital entrepreneurship realities. They highlighted the need for more research investigating the social construction of digital entrepreneurship. This paper responds to this call by developing an alternative view of digital entrepreneurship that emerges from an indigenous value system, namely Ubuntu. Our analysis of Ubuntu's role in digital entrepreneurship explores Ubuntu values as a basis for a distributed understanding of digital entrepreneurship activities. It examines the role of the local community as a source of motivation for

entrepreneurs to engage in digital entrepreneurship activities in ways that transcend the competitive demands of digital markets. More specifically, our analysis addresses the following research question: How does Ubuntu, as an indigenous value system, influence digital entrepreneurship activities in South Africa?

We build on a field study in the Gauteng region (Johannesburg and Pretoria) of South Africa to address this question. The Gauteng region has, for long, been an epicentre of business in the country. Furthermore, now that digital technologies are becoming prevalent as a basis of entrepreneurial ventures, the area is fast becoming home to several clusters for digital entrepreneurship, such as the Tshimologong Digital Innovation Precinct in Johannesburg and the Innovation Hub in Pretoria. This context enables us to study the complex set of values that shape the digital entrepreneurs' strategic and operational activities within the historical and cultural milieu of South Africa. By grouping a set of values within a unifying concept (Ubuntu) and embedding them into a cultural tradition, this context offers us greater visibility of how local values and indigenous perspectives affect the identity and trajectory of digital entrepreneurship ventures. Therefore, by attending to this context's cultural conditions, we bring to light the constitutive role of the commonly disregarded communal values, such as humility, reciprocity, and benevolence, in shaping digital entrepreneurship activities. We also reveal how Ubuntu values become intertwined with the entrepreneurs' new digital reality, giving rise to what we call 'Digital Ubuntu', which enables them to manage the competitive pressures in the markets for digital goods and services.

The paper is structured as follows. In the next section, we review the literature on digital entrepreneurship and highlight the prevalence of the heroic perspective in that literature and note the rise of alternative views foregrounding the community's role in digital entrepreneurship. Subsequently, we discuss the role of values in shaping entrepreneurial activities. We then present an overview of the literature on Ubuntu. In the subsequent sections, we describe our research methods, present our field study's findings, and discuss their implications for understanding the relationship between indigenous value systems and digital entrepreneurship.

2 | CONCEPTUAL BACKGROUND

2.1 | Digital entrepreneurship

The spread of digital technologies and the ubiquity of the internet infrastructure have created new possibilities and forms of entrepreneurship, broadly referred to as *digital entrepreneurship* (Davidson & Vaast, 2010; Martinez Dy et al., 2018; Nambisan, 2017). Digital entrepreneurship studies have recognised technology as a transformative (Li et al., 2018) and disruptive (Bharadwaj et al., 2013) force in various industries because of the ability of digital artefacts to enable the decoupling, disintermediation, and generativity of practices (Autio et al., 2018; Yoo et al., 2010), and their ability to lower entry barriers to established markets. Thus, compared to traditional entrepreneurship, digital entrepreneurship tends to emphasise resource orchestration over resource possession and value creation over value capture (Amit & Han, 2017; Foster & Graham, 2016).

Due to the constant changes in the scope and features of digital technologies, digital entrepreneurship processes tend to be highly fluid (Nambisan, 2017). The fluidity of digital entrepreneurship processes enables entrepreneurs to create new business models that can potentially disrupt long-established forms of value creation (Henfridsson & Yoo, 2014; Nambisan, 2017; Valacich & Schneider, 2018). However, this fluidity also means that digital entrepreneurs need to create and develop their business models in an unpredictable and uncertain environment where they need to continually reassess their model based on emerging opportunities and continuously shifting risks (Ojala, 2016).

Despite the fluidity and complexity of digital entrepreneurship processes, dominant accounts of digital entrepreneurship put the individual entrepreneur at the centre of its transformative potential. The technology press is replete with heroic accounts of digital entrepreneurs. This focus on the entrepreneurs' unique traits is reflected in many analyses of digital entrepreneurship within technology magazines, such as 'it takes creativity, risk, courage, intelligence,

and even a little luck to be an entrepreneur', and the assertion that entrepreneurs 'leave their comfort zones and rise above their expectations to […] accomplish their goals' (Fell, 2015). Others have explicitly called for the term 'hero' to be applied to entrepreneurs, arguing that '… entrepreneurs are the ultimate everyday heroes' because of 'the innumerable heroic achievements of entrepreneurs who take profound personal risks to start and run businesses' (Pinvidic, 2018). This view is also reflected in the dominant narratives that reduce the success stories of technology giants such as Facebook, Google, and Alibaba to the individual biographies of their founders, Mark Zuckerberg (Gershgorn, 2016), Larry Page and Sergey Brin (Entrepreneur, 2018), and Jack Ma (Sossnoff, 2016). These heroic narratives of entrepreneurship reflect an individualised understanding of entrepreneurship, which ignores its relational dimension (Greenhalgh, 2001).

Several studies in the academic literature reflect a similar focus in their interpretation of digital entrepreneurship practices. In such studies, the digital entrepreneur is presented as someone who has the propensity to take risks and to embody high levels of independence, self-efficacy, and control (Colombo & Delmastro, 2001; Ogbor, 2000; Sebora et al., 2009). For example, in a study of digital entrepreneurship on the Alibaba platform, Li et al. (2018) explained SMEs' success by focusing on the efforts of individuals who managed to exhibit qualities such as proactivity and strategic awareness. Similarly, Jones and Spicer (2005) and Low and MacMillan's (1988) described the creation of new ventures by focusing on digital entrepreneurs' unique capabilities. More recently, Abubakre et al. (2020) studied digital entrepreneurs across the Yabacon Valley in Nigeria and linked the success of digital enterprises to individuals' positive IT attitude, high personal innovativeness, and experience with IT. These studies contribute to a dominant account of digital entrepreneurship that puts the individual entrepreneur at the centre of entrepreneurial narratives. This heroic perspective has also been central to various theoretical approaches to the study of entrepreneurship, such as opportunity creation theory (Alvarez & Barney, 2007; Alvarez et al., 2013), which relates the ability to develop enterprises to the entrepreneurs' ability to actively search for new solutions that make them stand out in their industry.

However, some studies have challenged this perspective of entrepreneurship by arguing that entrepreneurship is not an individual but a relational process and should consequently be studied by focusing on entrepreneurial activities instead of individual entrepreneurs (Gartner, 1988). Other studies have advanced a community perspective of entrepreneurship by suggesting that the evolution of digital enterprises does not rely solely on the characteristics of the entrepreneurs but also on those of the communities to which they belong (Autio et al., 2018; Haugh, 2007; Johannisson, 1990). Davidson and Vaast (2010) presented a collective view of digital entrepreneurship by 'de-centreing' the entrepreneurs and emphasising their networks of relationships. They argued that the ability to develop digital enterprises rests not only on the individual entrepreneur's abilities but also on the availability of resources in their wider environment. Similarly, Spiegel et al. (2016) highlighted the dependence of digital entrepreneurs on the professional and social networks that provide them access to resources crucial to the successful development of their enterprise. This community view has also been adopted by studies that see digital entrepreneurship as embedded in ecosystems of participants with complementary resources (Du et al., 2018).

However, despite this increasing interest in the community perspective of entrepreneurship, there has been little attention to the conditions that influence digital entrepreneurs to adopt this perspective and how embracing this perspective affects entrepreneurial activities. In particular, there has been little research on how indigenous value systems, as defining elements of many local communities, influence how entrepreneurs frame and undertake their entrepreneurial activities.

2.2 | The role of indigenous values in shaping entrepreneurial activities

In the pursuit of their entrepreneurial objectives, digital entrepreneurs engage in a wide range of activities such as identifying opportunities, seeking funds, developing new products or services, bringing products or services to markets, forming partnerships, and growing a customer base (Alvarez & Barney, 2007; Amit & Han, 2017; Austin

et al., 2006). Digital technologies are not only the outcome but also an enabler of many of these entrepreneurial activities. For example, digital platforms allow enterprises to build partnerships and access resources. Generally, digital technologies bridge various physical and social distances that constrain entrepreneurial activities and provide them with a generative potential (Nambisan, 2017; Tilson et al., 2010).

However, despite the recognised encoding of entrepreneurial activities into technological practices, entrepreneurship research has acknowledged the role of social and cultural values in shaping the enactment and evolution of entrepreneurial activities (Gartner, 1995; Welter, 2011). In this regard, Downing (2005) argued that indigenous cultural beliefs specific to a context, such as those related to ethnicity or kinship, influence entrepreneurship by creating a basis for trust, solidarity, and social interaction. Other studies have explored variations in entrepreneurship across value systems. For example, Smallbone and Welter (2009) found that traditional norms and values enabled and constrained entrepreneurial activities in Uzbekistan. More specifically, they relate that 'Mahallas', representatives of local governing councils, assisted female entrepreneurs in the process of registering their businesses but were constrained in their support by local traditions that saw the role of women to be limited to their duties at home (Welter & Smallbone, 2008). In this case, the value system was both a source of possibilities and constraints for the female entrepreneurs. On the one hand, it allowed them to build social capital, but on the other hand, it limited the scope of their entrepreneurial ambitions.

Other studies pointed to specific mechanisms, such as identity, as a basis for explaining the influence of indigenous values on entrepreneurial activities. For example, in a study of entrepreneurship within the industrial district of Gnosjö in Sweden, Wigren (2003) suggested that local conditions, such as the norms of deliberation in business, supported the development of a local identity, 'spirit of Gnosjö', which shaped the entrepreneurial behaviour in the district. The role of indigenous values in shaping entrepreneurial activities emphasises community norms and attitudes (Stephan & Uhlaner, 2010) as defining conditions for the entrepreneurs' ability to undertake new ventures.

The societal values that entrepreneurs draw on for their entrepreneurial activities shape the mental models that define what is relevant and irrelevant in their entrepreneurial space and provide a basis for a shared understanding of entrepreneurial activities (Hill & Levenhagen, 1995). The adopted mental models influence the entrepreneurs' approach to undertaking entrepreneurial activities and to legitimising them within their environment (Barr et al., 1992). In particular, values emanating from the entrepreneurs' indigenous culture play an essential role in shaping their mental models of how their entrepreneurship fits in their local community and broader societal context. In this paper, we focus on Ubuntu as an exemplar for such indigenous value systems that influence the nature of entrepreneurship within their cultural space and beyond.

2.3 | The Ubuntu perspective

Ubuntu is an indigenous value system, a worldview (McDonald, 2010), a philosophy, and a lifestyle that permeates many African cultures, particularly in South Africa (Mbigi & Maree, 1995; West, 2014; Woermann & Engelbrecht, 2019). *Ubuntu* represents 'a pervasive spirit of caring and community, harmony and hospitality, respect and responsiveness, that individuals and groups display for one another' (Karsten & Illa, 2005, p. 607). The Nobel peace prize laureate Desmond Tutu describes the person embodying the spirit of Ubuntu as '*a person who is open to others, affirming of others, does not feel threatened that others are able and good, for he or she has a proper self-assurance that comes from knowing that he or she belongs in a greater whole and is diminished when others are humiliated or diminished when others are tortured or oppressed*' (Battle, 2009).

The literature on Ubuntu is diverse, reflecting varying emphases on different aspects of the concept (Battle, 2009; Mangaliso, 2001; Woermann & Engelbrecht, 2019). However, much of the Ubuntu literature lies at the intersection of two major concepts: identity and relationships. Regarding identity, Ubuntu represents a view of the self as formed interdependently through community, which is reflected in its two distinct morphemes: the prefix *ubu* and the root *ntu*. *Ubu* denotes the 'quality' or 'state' of *ntu*, which is translated as human being (Battle, 2009).

Ubuntu is about the quality of being human, which manifests through collective forms of being (community/society/etc.). Hence, Ubuntu has been known through the proverbial expression that a person depends on others to be a person (*'munhu i munhu hivanwana vanhu or ubuntu ungamntu ngabanye abantu'*), which translates to 'I am who I am because of others'. This understanding of Ubuntu has been influential in many domains of social life, including the political, economic, and social domains. For example, in politics, post-apartheid South Africa incorporated this understanding of Ubuntu in envisioning the society of the future through the processes of truth and reconciliation (Naude, 2017; Van der Colff, 2003). Socially, South Africans express Ubuntu through caring for extended families, where one achiever in the family becomes the veins through which siblings, cousins, and neighbours experience success.

Regarding relationships, Ubuntu represents a perspective in which individuals are as strong or weak as their community and vise-a-versa. That is, Ubuntu emphasises that one's success depends on the cooperation and contributions of the community. Economic value is seen as deriving from the capacity of the community instead of the abilities of individuals. Thus, Ubuntu emphasises the centrality of human relations in the conception of identity, suggesting that individuals become who they are through their relationships with others (Mangaliso, 1992). Ubuntu's central focus is human collectivity and the significance of interdependencies between people, emphasising how individuals are dependent on the community to realise their human potential (Chilisa, 2012; McDonald, 2010; Tutu, 1999). This is seen to require interconnectedness within communities (Mangaliso, 2001) and a sense of responsibility of each community member towards others (Nussbaum, 2003).

A significant element of this interdependence between individuals and their communities in Ubuntu is reflected in three core values: humility (Metz, 2020; Swanson, 2007), reciprocity (Mangaliso, 2001), and benevolence (Lutz, 2009). The principle of humility in Ubuntu represents a moral epistemology that breaks down the dichotomy between the self and the other (Metz, 2020; Swanson, 2007). Ubuntu instills a humility-based togetherness in resourcing and achieving mutual goals. In Ubuntu, humility is a central concept that recognises others in oneself's image of success and transformation (Metz, 2020; Swanson, 2007). Humility from an Ubuntu perspective is the moral basis for individuals to perceive other people's needs and interests as entangled with their own (Metz, 2014).

Reciprocity in the Ubuntu tradition heightens the perception of the community's role in helping individuals during conditions of need. It consequently increases the expectation for individuals to return the favour by helping other members of the community. Studies of African Humanism (see Metz, 2014) present this Ubuntu value as the moral quest to 'do the right thing' for unity (Praeg, 2017). Ubuntu offers a dynamic view of the influence that counteracts individualistic understandings of society and provides space for deliberation where influence is inclusive and builds on reciprocity between people (Tavernaro-Haidarian, 2018).

The Ubuntu value of benevolence encapsulates moral sentiments of compassion for the community and concerns that transcend individual needs. The essence of benevolence from this perspective is the act of sharing (Oreg & Nov, 2008). This dimension of Ubuntu was highlighted by members of the Linux community when they chose the name Ubuntu for the software they developed and shared for free (Mugumbate & Nyanguru, 2013). Ubuntu's value of benevolence is understood as a normative principle that stimulates the sharing of resources and consequently institutes social and economic interdependence amongst community members (Christians, 2019; Shan & Xiao, 2015). The implications of the Ubuntu understanding of benevolence on behaviour are the basis of how communities are formed and maintained and how community members depend on each other in achieving both their collective and individual goals.

Ubuntu has been studied in different fields and was applied in diverse ways for understanding the uniqueness of the South African cultural environment and its implications for human behaviour and cognition. For example, political science studies used Ubuntu to analyse the African Renaissance and the truth and reconciliation transition after apartheid (Naude, 2017; Van der Colff, 2003). In corporate governance, Ubuntu was discussed as a basis of ethical behaviour and attitude of fairness, collectiveness, and humility amongst corporate actors (Metz, 2014; Pérezts et al., 2019; West, 2014). Studies of restorative justice applied it to examine the processes of dialogue, mutual restitution, and healing (Anderson, 2003). Education studies used Ubuntu to explore questions of educational leadership

and management (Bush, 2007). Management studies turned to Ubuntu to investigate collective learning, knowledge sharing, teamwork, and sustainability (Karsten & Illa, 2005; Lutz, 2009). It was also used to discuss differences in management styles (Broodryk, 2005). In this study, we draw on Ubuntu to investigate the role of indigenous value systems in shaping digital entrepreneurship.

3 | RESEARCH METHODS

To investigate Ubuntu's role in shaping South African digital entrepreneurs' activities, we adopted a qualitative study approach in the interpretive tradition (Walsham, 1995). Interpretive methods stress the social construction of reality and focus on the intersubjectivity of the actors' engagement with the world (Klein & Myers, 1999; Walsham, 1995). By adopting an interpretive stance, we tried to make sense of the entrepreneurs' individual and collective experiences as they engage in digital entrepreneurship activities through the meanings that they gave to those activities.

3.1 | Research context

This research is based on analysing digital entrepreneurship processes in the Gauteng province in South Africa. The Gauteng province is located in the north of South Africa. It is the smallest province in the country and the richest and most densely populated because it contains two of the nation's largest cities, Johannesburg and Pretoria. Gauteng means 'Place of Gold' in the Sotho languages. Gold was discovered in the Gauteng region towards the end of the nineteenth century. The discovery and exploration of Gold have made modern-day Gauteng the focus of large infrastructural projects and home to a dense and diverse population of over 12 million people. A vibrant academic environment supports entrepreneurial activities in Gauteng. The province boasts three leading universities in the country: The University of Johannesburg, The University of Pretoria, and the University of the Witwatersrand. The Gauteng province is also a host to many digital innovation hubs such as the Innovation Hub (Pretoria), Tshimologong Digital Innovation Precinct (Johannesburg), Impact Hub (Johannesburg), and Softstart BTI (Midrand). Studies have indicated that digital entrepreneurship has been an enabler of economic growth in the Gauteng province through job creation, enhanced industrial capacity, and innovation (DoC, 2017; Lotriet et al., 2010).

3.2 | Data collection

Our research is informed by empirical material collected over 4 months of fieldwork, from February 2018 to January 2020. We gathered data primarily through semi-structured interviews with digital entrepreneurs. We started our fieldwork by identifying organisations and individuals associated with digital entrepreneurship operating in the Innovation Hub and Tshimologong Digital Innovation Precinct. We also reached out to digital entrepreneurs dispersed in the province recommended by the digital entrepreneurs working in the Innovation Hub. Also, we obtained access to digital entrepreneurs in the region by attending public events on digital innovation organised by companies such as Oracle and Festos. Our presence at these events helped us gain familiarity with the various networks linking digital entrepreneurs in the region and identify other individuals who could provide valuable insights for this study.

We conducted audio-recorded interviews (face to face and via Skype) with 41 entrepreneurs who engage in various digital entrepreneurship activities through a wide range of digital technologies, including social media, mobile applications, cloud computing, artificial intelligence, and 3D printing. As highlighted in Table 1, we interviewed 18 entrepreneurs from the Innovation Hub and eight entrepreneurs from Tshimologong Digital Innovation Precinct. We also interviewed 15 digital entrepreneurs from various other innovation clusters in the Gauteng province. The interviews ranged from 30 to 75 min, and all interviews were transcribed verbatim to be prepared for analysis.

TABLE 1 Summary of interviews

Informant location digital technology type	Innovation hub	Tshimologong digital innovation precinct	Other innovation clusters	Total
Social Media Platform	5		1	6
Crowdsourcing Platform	4	2	5	11
Mobile Application and Cloud	3	3	7	13
Artificial Intelligence	4	3	1	8
Internet of Things	2			2
3D Printing			1	1
Total	18	8	15	41

Our semi-structured interview protocol enquired about the participants' activities as digital entrepreneurs, their relations with other digital entrepreneurs and stakeholders, the particularities of digital entrepreneurship in the socio-cultural context of South Africa, and their views about digital entrepreneurship beyond their local context. We interviewed some of the informants more than once and, in some cases, interviewed more than one individual from the same organisation. The early interviews suggested that some entrepreneurs from marginalised and disadvantaged backgrounds needed to approach their digital entrepreneurship activities differently because of the constraints imposed by the economic divide in South Africa. This led us to go deeper into our interviews regarding the entrepreneurs' social and cultural background and how it affects their digital entrepreneurship activities.

3.3 | Data analysis

Our data analysis followed an interpretive approach (Klein & Myers, 1999). The analysis began with a data cleaning and reduction process to make the sizeable volume of transcripts and notes more manageable and ready for analysis. We used the qualitative analysis software Atlas.ti 7 to aid in this process. After reading the interview transcripts several times, we generated codes that best described the entrepreneurs' meanings associated with their digital entrepreneurship activities. We organised the codes to present a narrative that reflects the actors' interpretations of their value system, the digital technologies they utilised, and the corresponding influence on their entrepreneurial activities. The co-authors independently reviewed a sample of coded transcripts and discussed coding decisions to reach an agreement. We achieved higher levels of confidence in our adopted codes by reviewing each other's codes and themes to ensure that our interpretations of the data converge (Korstjens & Moser, 2018; Yin, 2015).

We first coded our transcripts for examples of digital entrepreneurship activities. Three major categories of digital entrepreneurship activities emerged from our data: 'recombining accessible resources', 'developing new digital products/services', and 'forming partnerships'. All these categories have an important body of literature associated with them, highlighting their significance in the entrepreneurial process (Alvarez & Barney, 2007; Amit & Han, 2017; Austin et al., 2006). Following this process, we identified emerging themes by combining multiple codes. Our coding for this paper was refined to focus on themes related explicitly to the role of Ubuntu in influencing entrepreneurship activities. We identified three distinct themes where there was sufficient evidence to support our analysis: The salience of Ubuntu values in digital entrepreneurship, a community approach to developing digital solutions, and challenges in upholding Ubuntu values in digital entrepreneurship.

Following an abductive approach, we coded our transcripts for manifestations of Ubuntu values. The focus of our analysis in this regard was on the three categories representing Ubuntu values derived from the literature: 'reciprocity', 'benevolence', and 'humility' (e.g., Mangaliso, 2001; Pérezts et al., 2019; West, 2014). We also built on the literature on digital entrepreneurship (Alvarez et al., 2013; Amit & Han, 2017; Yoo et al., 2012) to interpret

TABLE 2 Sample of the data coding process—building categories and themes

Sample codes	Categories	Themes
Modification of existing products	Recombining accessible resources	Digital entrepreneurship activities in South Africa
Combining existing products		
Idea generation	Developing new digital products/services	
Developing and testing products		
Collaborating with other entrepreneurs	Forming partnerships	
Sharing skills and capabilities		
Value in mutuality	Reciprocity	Upholding Ubuntu values
Dual benefits		
Sharing assets	Benevolence	
Altruism to competitors		
My success is dependent on others	Humility	
It's not about me		
Subscribing to Ubuntu is difficult in a business environment	Tensions between Ubuntu and competitive mindset	Tensions in upholding Ubuntu in Digital Entrepreneurship
Ubuntu hinders profitability		
Ubuntu is primarily a social system	Tensions between Ubuntu and market-oriented innovation mindset	
Ubuntu is not conducive to innovation		

the emerging concepts about the factors that influence entrepreneurial activities. We then coded our transcripts for challenges that the digital entrepreneurs faced in upholding the Ubuntu values during their entrepreneurship activities. Two major categories emerged from our data: 'economic objectives' and 'competitive pressures'.

For selective coding (Strauss & Corbin, 1990), we followed an iterative process going back and forth between the categories emerging from our data and our Ubuntu-focused conceptual orientation. The various categories related to digital entrepreneurship activities, Ubuntu values, and tensions in upholding Ubuntu were combined to develop our concept of 'digital Ubuntu'. Our theoretical developments sought to reflect the participants' understanding of their digital entrepreneurship activities to reveal the mechanisms through which their societal value system influences those activities. Table 2 provides a summary of our analysis.

4 | CASE FINDINGS

Our fieldwork was centred in Pretoria's Innovation Hub and Johannesburg's Tshimologong Digital Innovation Precinct. The Innovation Hub is a science park established by the Gauteng Provincial Government to foster Gauteng's economic development and competitiveness through digital innovation and digital entrepreneurship (DoC, 2017; The Innovation Hub, 2018). The Tshimologong Digital Innovation Precinct is located in Braamfontein, the high-tech zone within Johannesburg's vibrant inner-city district. The precinct supports the incubation of digital entrepreneurs, the commercialization of research, and the development of high-level digital skills for students, working professionals, and unemployed youth.

The participating digital entrepreneurs came from both disadvantaged and affluent communities. The majority of participants from disadvantaged backgrounds faced significant challenges in pursuing entrepreneurial goals because of limitations in technical skills, access to business information, and social safety net. Digital entrepreneurship

activities in this context were fuelled by the increasing availability of the internet and mobile devices across the African continent. These entrepreneurs tapped into the newly available digital infrastructure to develop digital products and services that address various problems in their communities.

4.1 | Digital entrepreneurship in South Africa

Our study highlighted several activities in which digital entrepreneurs were engaged and the meanings and values they gave to their entrepreneurial pursuits. For example, digital entrepreneurs were recombining accessible digital resources to develop new products and services and market them. For instance, a group of participating entrepreneurs used the increasingly accessible analytics tools to collect, aggregate, and analyse complex consumer data to derive insights that can enhance access to financial credit for medical aid. These digital entrepreneurs recombined new technologies with the availability of open and public data to develop services that can address some of the healthcare issues in their communities. They also created a front-end application that provided a platform for healthcare providers and patients to connect and interact:

> On our platform [website and mobile app], consumers interact with us, [as well as] with doctors, nurses, pharmacists that we partner with. They generate information, even if it is just Q&A [...] We ask questions about their interactions. We then import into my SQL relational database management system and try to analyze what is happening. Even Excel is useful. It is essential to build an information system to provide a medical expense credit card. [Informant #31]

Another set of digital entrepreneurship activities through which many of our study participants sought value and meaning were focused on *forming partnerships* that help them, and their communities overcome some of the contextual constraints they faced. For example, to provide a platform for transit internet access to bus commuters, a group of entrepreneurs partnered with mobile telecom companies to build on their digital infrastructure, including 4G networks and mobile Wi-Fi routers, when offering their service. They also formed partnerships with the bus drivers who agreed to instal the digital infrastructure in their vehicles. Also, to make internet access free, the entrepreneurs partnered with third parties, such as retailers, who pay for the service and advertise their products and services to the users. One of these entrepreneurs explained the significance of their partnering activities for tackling some of the resource constraints in their environment:

> We partner with some of these major mobile networks (Cell C and MTN) to provide in-transit Wi-Fi by putting Wi-Fi devices in minibusses and buses for the masses that cannot afford internet access. The technology we use is Open Source Wi-Fi. And we try to go with a basic installation that allows us to have deployment in a very cost-effective way. We currently have just under 2,000 clients in South Africa with internet connectivity in transit … We then push advertising to them through our network. [Informant #18]

The digital nature of these entrepreneurial activities (recombining accessible resources, developing new digital products/services, and forming partnerships) created new possibilities for engaging with local communities in novel ways that can transcend some of the constraints of earlier forms of entrepreneurship, such as scalability and reach. They also offered the entrepreneurs new ways for their local values to bear on their entrepreneurship activities.

4.2 | Ubuntu and digital entrepreneurship activities

The Ubuntu value system plays a significant role in most South Africans' daily lives, particularly those who belong to black ethnic groups. Our fieldwork highlighted the three main Ubuntu elements of reciprocity, benevolence, and

humility as influential in shaping how digital entrepreneurs conceive and enact their activities. This section presents how Ubuntu was reflected in the digital entrepreneurship activities and how the entrepreneurs faced the tensions between the Ubuntu values and the pressures of their digital entrepreneurship environment.

4.2.1 | Humility in digital entrepreneurship activities

Our data revealed various manifestations of humility as a core value in how digital entrepreneurs perceived their role in the growth of their enterprise. The Ubuntu adage of 'I am because we are' influenced how many entrepreneurs perceived their enterprises' trajectories and successes. Rather than seeing themselves as the sole agents in their entrepreneurial activities, they tended to understand their digital entrepreneurship activities as collective performances in which agency is distributed across their community. They reflected a perception that emphasised the role that others play in helping them engage in digital entrepreneurship activities. An entrepreneur who was part of an enterprise that provided hotspots with Wi-Fi to connect consumers and retailers highlighted this:

> **Our success is because of somebody else, others, other entrepreneurs**. There is no way you can be perfect, especially if you are involved in a dynamic activity such as digital entrepreneurship. In the entrepreneurship space, this leads us to show ways to other entrepreneurs (emphasis added). [Informant #9]

This emphasis on humility was integral to the entrepreneurs' mental models of their digital entrepreneurship activities and their understanding of the nature of innovation processes. The perception that they would be helped to navigate the complexity of their digital entrepreneurship environment gave them the confidence to form partnerships with other businesses, enabling them to share assets, technical skills, and organising capabilities.

Ubuntu's emphasis on humility also manifested in the way entrepreneurs capitalised on the advantages of their technical skills. For example, digital entrepreneurs who had developed some level of expertise in artificial intelligence and machine learning had an essential advantage over other businesses, given the scarcity of these skills in this context. However, upholding the Ubuntu value of humility has led highly skilled entrepreneurs to perceive their unique skills as a collective outcome instead of a personal achievement. This provided a rationale for them to be less focused on deploying those skills solely to enhance their enterprise's growth and to use them in support of their community's development. This translated into collaborations with less skilled entrepreneurs to develop local information processing capacity and create social impact solutions. The founder of an enterprise, which uses Artificial Intelligence technology to predict and prevent future road accidents and breakdowns for the motoring and insurance industries, stated:

> Many people say collaborate. You can collaborate from an individualistic perspective; so, I am collaborating and pushing my goal. It is just a means to an end. **It is not about [...] only pushing my individualistic agenda; it is about how I can push the collective agenda**. This has always inspired me in the tech space because I am not in the tech space to be glorified or to be the next Apple. So, **it is not about me, but all of us** (emphasis added). [Informant #37]

Thus, the Ubuntu value of humility led some entrepreneurs to adopt a definition of success that was less focused on achieving profit or prestige and more linked to the level of service to others. It enabled them to question the competitive mindset expected in the rapidly changing technology markets. This, in turn, helped them cope with their limitations since it made them more open to receiving support from others throughout their entrepreneurship activities. A participant who started a company that allows medical professionals to upload x-rays and scans onto a digital platform to get immediate diagnoses for medical conditions explained this disposition resulting from the sense of humility:

> **I cannot do it alone, no matter what people think of my capabilities. I am at what I am because of others**. Hence our goals are not mainly profit-driven, so we will not stop because there is no more money. That is why I share my algorithms with other entrepreneurs. I do not care if someone steals them and pursue my ideas because that means they have developed problem-solving procedures for our people (emphasis added). [Informant #33]

These digital entrepreneurs' attention to how others contributed to their success reflects a cultural disposition that the concept of Ubuntu captures and helps to reinforce. The digital entrepreneurs were explicitly and implicitly framing their digital entrepreneurship activities with Ubuntu values such as humility. This allowed them to remain consistent with their cultural environment and provided them with practical advantages, such as an attitude of openness to the support of others. This attitude allowed the entrepreneurs to be more adaptive and resilient in the fast-paced environment of digital markets.

4.2.2 | Reciprocity in digital entrepreneurship activities

Ubuntu's emphasis on the value of reciprocity made many South African digital entrepreneurs appreciative of the collective construction of their enterprises and thus of the need to give back. The entrepreneurs' understanding of their activities emphasised the value of mutuality, which helped them rationalise their decisions to allocate some of their limited resources to give back to others. For instance, a digital entrepreneur who developed a service to offer Wi-Fi connections on buses explained this emphasis on reciprocity by stating:

> Achieving our business objectives requires lateral thinking […]. **Because of the […] experiences that people have shared with me, I now have prioritized sharing with them**. I have 1,882 hotspots, somebody else has 400, another guy has got 700, and another guy has ten. We came together; I say as black entrepreneurs, we produced a bigger opportunity to produce the in-transit Wi-Fi in the buses. We see the benefit of certain skills that we do not have [… and fill the gaps in each other's skills and resources. **We created an environment where we can compete but collaborate based on our mutual exchange of resources** (emphasis added). [Informant #18]

The layered architecture of digital infrastructures enabled the ecosystems that provided the space for combining collaboration and competition. This space created conditions that enabled the digital entrepreneurs to enact their disposition towards reciprocity by allowing them to create services that can become platforms for others operating at higher layers of the digital infrastructure. That way, the Ubuntu value of reciprocity became integral to the fluid and complex infrastructure for digital entrepreneurship.

Our study's participants highlighted several elements of the role of reciprocity as a basis for a community perspective to their entrepreneurial activities. For example, many of the participating entrepreneurs argued that people's subscription to a shared value system, particularly the common expectation of reciprocity, was critical in their ability to get help in developing new products. These shared expectations enabled them to receive support from fellow entrepreneurs with no pre-existing relationship, with the understanding that the person helping could expect them to pay it forward when need be. One of these entrepreneurs explained:

> We help one another because Ubuntu tells us it is about the group, not the individual … [it's about] mutual exchange with all and benefit for all. Instead of struggling on your own, you can get someone next door with a solution to help regarding a problem. When we started our medical credit card business, we struggled to get the range of data required. We cried out on social media, and a fellow entrepreneur with whom we had no previous relationship gave us some leads on how to access databases.

> We do not have to return the favor to him directly but to another person who requires our help. That way, we serve humanity. [Informant #32]

Reciprocity was essential for these digital entrepreneurs since they had to deal with significant resource constraints, such as the lack of access to relevant databases. It helped them overcome some of these constraints by promoting a cooperative mindset and making them more attuned to their collective interests. When they draw on the reciprocity dimension of Ubuntu, the entrepreneurs see their individual goals as integral to their community's shared goals. One participant expressed this orientation amongst the entrepreneurs when reflecting on the rationale for assisting small businesses with free video and social media marketing:

> Your thought is already in a community fashion. You understand that to receive, you have to give. As an entrepreneur, the first thing that comes to mind is how I can help someone achieve their entrepreneurial goals and how they can help me achieve mine. Other entrepreneurs give me free content without expecting anything. This makes me want to go back to them again to work with them because of that human experience. We want to see the entrepreneurs' community upskilling themselves because we know they will give back. [Informant #8]

The digital entrepreneurs constituted a community that helped each of them address common problems by tapping into a diverse set of knowledge and expertise. The participants emphasised the need to enhance their ability '*to compete as a community*'. They perceived the locus of their competitive advantage in the community rather than their individual enterprise. An example of this community orientation was a small group of digital entrepreneurs who developed a platform called Lepsta that enabled software developers to synchronise codes across multiple servers automatically. The platform generated a community of software developers by enabling them to collectively test, innovate, and improve ideas, which created possibilities for them to compete at an international level. One of the entrepreneurs in this venture explained:

> Our communities are trying to change perspective about being innovative from **not just about building apps individually but reaching new heights as a community of software engineers**. So, on the Android platform [Lepsta], the community can do data analytics to answer questions: how we can test and improve our ideas and innovate to reach that point **to compete on an international level together in the spirit of Ubuntu** (emphasis added). [Informant #24]

In the presence of limited resources, the principle of reciprocity becomes essential for the entrepreneurs to expand their capabilities by motivating collaboration with each other, including competitors. In doing so, Ubuntu's emphasis on reciprocity helped the entrepreneurs overcome the limits that a competitive attitude to entrepreneurship places on collaboration possibilities. A technologist who writes codes for one of the participating enterprises explained this orientation by stating:

> Most times, **we share our plans with our competitors and say, you have this, and we have that**. If we do not have certain IT resources [or certain] know-how, we always [provide] each other. Again **it comes to the spirit of Ubuntu because if they benefit, we benefit** (emphasis added). [Informant #10]

4.2.3 | Benevolence in digital entrepreneurship activities

The digital entrepreneurs in our study highlighted the centrality of the Ubuntu value of benevolence in shaping the way they engage in their entrepreneurial activities. Underlying the presence of benevolence in their entrepreneurial

mindset was a belief in the need to be always in service to others, even when pursuing profit-based motives. Several study participants highlighted the significance of this value in defining the nature of their entrepreneurial activities. For example, a digital entrepreneur highlighted the importance of benevolence in his understanding of what Ubuntu means in the context of his digital entrepreneurship activities:

> Understanding that if you can give, give. And digitally, what I am doing [enables] me to help other digital entrepreneurs like myself. I am only 33, and I need to help others. I am trying to contribute daily in that regard. Now, that is what Ubuntu means for me. [Informant #18]

This emphasis on benevolence was also observed in the entrepreneurs' approach to developing new digital products and services. For example, the entrepreneurs who built the Lepsta platform decided to share the technology with a community of software developers for free. Although sharing of digital assets can have strategic advantages, benevolence was part of the logic through which these entrepreneurs engaged with the community of other entrepreneurs:

> We help software engineers to build software more efficiently and cost-effectively by sharing our technology (Lepsta) with them for free. Lepsta allows software developers to update and maintain the consistency of their servers automatically. People do it manually, or they use many tools that are very complex to learn. [Informant #25]

The value of benevolence amongst the entrepreneurs created an attitude that de-centres competition as the primary motivation of entrepreneurial endeavours. The entrepreneurs felt that they had to help other entrepreneurs because they share the same poverty and marginalisation background, making them less focused on competition. In some instances, Ubuntu provided digital entrepreneurs with the moral courage to engage in benevolent activities such as the free sharing of data without expectations of direct external reward. An entrepreneur who developed a mobile app that allows commuters to efficiently undertake their journeys through buses reflected this attitude when stating:

> I don't believe in pure competition. I also believe in selflessness; there is enough in the world for everyone. For example, I share resources like data with them. Focusing on the energy of competition takes away your focus on creating and adding to the space and adding value. We need as many entrepreneurs as possible to build things. I mean, the majority of us come from poverty [...] my parents always reinforced that I am meant to be on earth for self-sacrifice. [Informant #29]

Further, even when entrepreneurs saw themselves in competition with others, the emphasis on benevolence gave them a sense that they have an enduring stake in each other's success. This attitude to competition was helping the digital entrepreneurs form and maintain partnerships across their community. One entrepreneur who develops customised enterprise systems for small businesses expressed his shared sense of benevolence, including towards his competitors:

> The reason for being a techpreneur is to enable others, even competitors. I know my direct competitors feel that way, too, because we are like family members, trying to do well for everyone. Technology (Crowdsourcing Platform) allows us to help each other despite being far apart because we can easily connect and form partnerships on clients' projects. [Informant #12]

Benevolence, along with the values of humility and reciprocity, was integral to how these entrepreneurs were trying to uphold Ubuntu's emphasis on human relations as they engaged in various entrepreneurial activities. However, they also faced significant challenges in upholding these values in the highly competitive environment of digital markets. We discuss these challenges in the next section.

4.3 | Tensions in upholding Ubuntu values in digital entrepreneurship

While Ubuntu, as a value system, was providing most digital entrepreneurs in the Gauteng region with a moral basis for motivating their entrepreneurial activities, many entrepreneurs pointed to several tensions in their continued attempts to uphold the values of Ubuntu when engaging in digital entrepreneurship. Our fieldwork highlighted two sets of tensions raised by the entrepreneurs; the first relates to the competitive mindset they perceived as needed in their environment. The second relates to the innovation mindset that they saw as critical in attaining their economic objectives.

4.3.1 | Tensions between Ubuntu and a competitive mindset

The first tension in upholding Ubuntu revealed in our data was between its community orientation and the competitive mindset that several entrepreneurs perceived as essential and dominant in their field. The Ubuntu values were seen by some entrepreneurs as quickly abandoned in the face of competitive pressures. They noted that the competitive pressures of business environments shift the focus of entrepreneurs from the collective perspective of Ubuntu values to a more individually focused pursuit of resources and market share. One digital entrepreneur developing electric-powered drones to distribute health care products to rural and township areas conveyed doubts about the actual influence of Ubuntu in digital entrepreneurship. In his reference to one of the institutions (Meraka) founded on Ubuntu principles of sharing 'common grazing', he stated:

> Both Ubuntu and Meraka are value systems which essentially say common grazing land and allows you to say that there are common resources that the community is using that we can live by**, but unfortunately, I have seen many times once business walks in the front, [Ubuntu] walks out the back [door]**. Because when it comes to business, it is very self-serving (emphasis added). [Informant #11]

Other entrepreneurs highlighted the challenges of upholding Ubuntu's emphasis on the community and being forthcoming with support to others while still having a profitable business model that can sustain the enterprise in a competitive market. One participant, who built a digital employment platform that uses Unstructured Supplementary Service Data (USSD) to connect employers with rural and township job seekers who have no access to internet data, emphasised this challenge by saying:

> We are cut out because we still need to have money to maintain what we do and pay our employees. On the other hand, we have people that say, Look, I need those services, and I do not have money […], so we are in the market without really making an income. [Informant #17]

These tensions relating to Ubuntu's compatibility with a competitive mindset presented a challenge for these entrepreneurs as they made daily decisions on allocating their limited resources. While they understood their Ubunutu values to be enticing them to direct some of those resources towards the needs of their community, the competitive mindset that some of them saw as essential to their success as entrepreneurs was driving them to focus their resources on the financial performance of their enterprises.

4.3.2 | Tensions between Ubuntu and an innovation mindset

The second tension faced by digital entrepreneurs when upholding the Ubuntu values results from the challenge of reconciling them with an innovation mindset that many of them considered critical to the sustainability and growth

of their enterprises. Some participating digital entrepreneurs saw Ubuntu as constraining the individual expertise and capabilities required to succeed in digital entrepreneurship. They perceived Ubuntu values as engendering passivity regarding innovation and ideas generation. As a result, they considered strong adherence to Ubuntu as inhibiting digital entrepreneurs from going beyond the deployment of standard digital products and solutions. A digital entrepreneur who developed a platform that aggregates information about different township suppliers, including software engineers, electricians, and panel beaters, expressed this view by stating:

> It has no economic value; it is about just being good for one another. It is all about social involvement. **I don't believe it encourages people to be innovative or business people** […] **Ubuntu does not allow a pure opportunistic entrepreneurial instinct**. I have seen that people that have succeeded never cared about Ubuntu (emphasis added). [Informant #26]

These entrepreneurs perceived Ubuntu to be limited to pursuing social goals and, therefore, not conducive to supporting the intensity and rapid change of economic processes. However, other participants saw that Ubuntu is not inherently opposed to pursuing economic goals but that its principles need to be interpreted in ways that motivate innovation to pursue such goals. For example, an entrepreneur who deployed 3D printing technology to produce sculptures expressed this idea by saying:

> For me, the Ubuntu element means how can you come up with new ways of doing business […] I think **those attributes of Ubuntu would have to find a way in them being expressed from a business point of view** so you can deal with the pressure of remaining profitable without losing your Ubuntu values (emphasis added). [Informant #15]

These tensions were a source of challenge for digital entrepreneurs as they tried to figure out how best to uphold their values while pursuing their entrepreneurial objectives. Although the South African digital entrepreneurs shared an appreciation for Ubuntu's significance in defining what they do and how they do it, several entrepreneurs saw that the upholding of Ubuntu values in a business environment requires a rethinking of what those values could mean in this new and rapidly changing environment. These entrepreneurs felt the need to find ways to integrate the Ubuntu values with the values that they associated with digital entrepreneurship.

4.4 | Digital Ubuntu: Digital technologies as a basis for upholding Ubuntu

The technical prowess of the digital entrepreneurs involved in this study enabled them to draw on a wide range of technologies and adapt them to build products and services and uphold the Ubuntu values in their digital entrepreneurship activities. The connective and collaborative features of digital technologies enabled these entrepreneurs to espouse Ubuntu values in an environment where the market logic tends to be dominant. The entrepreneurs collectively leveraged the connective potential of digital technologies, such as cloud computing, social media, mobile applications, artificial intelligence, and big data, to make their digital entrepreneurship activities amenable to their Ubuntu mindset. They have used digital technologies to overcome physical barriers, share resources, and reduce operational costs. A digital entrepreneur who builds artificial intelligence and machine learning applications explained how the capabilities of digital technologies were helping them uphold Ubuntu's community orientation in the face of market pressures:

> As digital people, thankfully, Ubuntu would prevail over market values. **We can use the networkability of digital technologies to come together and combine our analytical skills**, no matter the volume or variety of the data. It doesn't cost us really, even storage-wise. We know where to

> store a vast amount of data in the cloud for almost free. So, the cost pressures are minimized (emphasis added). [Informant #38]

For entrepreneurs operating in a digital environment, extensive forms of collaboration with peers and clients were possible despite their limited resources. They can bypass costly activities required for collaboration in traditional entrepreneurship, such as frequent face-to-face meetings. Web-based collaboration tools helped the entrepreneurs in our study overcome spatial and temporal constraints by enabling them to have virtual interactions that transcend the limits of their physical location. An entrepreneur who utilised open-source and social media platforms to develop IT risk, security, and compliance solutions for a range of organisational clients highlighted this:

> Our technical abilities to leverage on and combine open-source, and social media platforms, allow us to bring our digital solutions to market very quickly at little or no cost [...] you know you don't need to perform your duties physically. They are all done online or virtually [...], so **less need for physical resources that can be costly**. I do not need to meet my clients or customers physically. **This allows us to keep up with Ubuntu in the face of market forces** (emphasis added). [Informant #19]

The versatility of digital technologies enabled the entrepreneurs to maintain a collective mindset while operating in a fast-moving and highly competitive market environment. The open nature of specific technologies, such as crowdsourcing platforms, helped the entrepreneurs maintain a collective outlook on their activities while engaging in market competition with each other. The adoption of such technologies allowed them to compete in the provision of digital services while empowering each other through the establishment of open communities. An entrepreneur who was developing a mobile application for the retail market reflected on this:

> We navigate the issue of upholding Ubuntu against profit [...] by understanding that the collaboration is in all our best interests if we are to survive the competition [...]. We have to help each other. **Technology (crowdsourcing platforms) puts the power in our hands**. Unlike anything else, it allows us to deliver solutions or access solutions without looking to a government [....] **technology allows us as a collective [to figure out] what we want** (emphasis added). [Informant #6]

The entrepreneurs leveraged the connectivity of digital technologies to share valuable resources, such as data, with each other. This created for them new possibilities to espouse the Ubuntu values of reciprocity and benevolence and helped some of them maintain a community focus while seeking to grow their enterprises. One of the participating entrepreneurs explained these possibilities with crowdsourcing platforms:

> **You get free data from a crowdsourcing platform because you can connect with others [...] that spirit of helping enables us to forge ahead in our business**. After putting the Ubuntu spirit, people will see that it adds value at so many different levels. The online world is like switching on the light during the dark ... [When] you switch it on, you see the possibilities (emphasis added). [Informant #11]

Similarly, the entrepreneurs sought to uphold their Ubuntu values as they created and joined social media platforms to contribute to and share content with other entrepreneurs. Many participants suggested that social media technologies, such as Slack, created a space for them to uphold their cultural commitment to a community perspective of their entrepreneurship. A participant from the community of software developers that developed the Lepsta platform highlighted how social media platforms were enabling them to maintain a collective mindset:

> Slack allows us to exchange information with other developers and vice versa in the group for the benefit of all. It is not just about [access to information]; **it is about creating a relationship and then moving on together** (emphasis added). [Informant #24]

By developing digital means to uphold their Ubuntu values, the entrepreneurs were making those values compatible with a competitive environment and using technology to help face the challenges of competition in their rapidly evolving market. An entrepreneur discussed this role of digital technologies by noting how they used open-source platforms in ways that allowed them to complement each other's skills and domain knowledge:

> Through the collective use of technology, entrepreneurs can reduce costs to their advantage and get business agility to deal with market pressures quickly. The open-source platform provides a basis for inclusion and knowledge sharing [….]. We are very conscious we have a common [social] background. We have to be kind to each other, so **it becomes a question to say how could we utilize the strengths of others, even our competitors, to help with our weaknesses and vice versa** (emphasis added). [Informant #39]

Importantly, digital platforms were enabling entrepreneurs, particularly those that hailed from impoverished townships and struggled under the apartheid regime, to overcome the challenges they face because of their lack of skills. As a result, the value of humility allowed them to tap into the various knowledge processes supported by digital technologies. One of the entrepreneurs in our study explained the knowledge enhancing benefits of their engagement with an open-source community and the significance of humility in that engagement by stating:

> The open-source platform creates a community of engagement that provides an opportunity to acquire knowledge from one another […] We black South Africans; our potentials are limited due to the ills of the past, **we have to be humble, so we collectively use technology to deal with the competitive pressures we face** (emphasis added). [Informant #40]

The value of humility enabled the entrepreneurs to overcome barriers to collaboration and use available digital tools to support each other's knowledge processes, such as ideas generation, knowledge sharing, and experimentation. The Ubuntu value of humility allowed the entrepreneurs who sought to enact it in their activities to bypass any forms of stratification in their community as they desired to collaborate with others. A digital entrepreneur explained how digital platforms helped them embody their understanding of humility as they engaged with their community:

> Our humbleness allows us to get along with one another as we do not think that we are better than others [….]. So we use digital platforms to run algorithms, [share] our ideas, and prototype our ideas to know what works. [Informant #25]

In sum, digital technologies created new possibilities for the entrepreneurs to maintain an understanding of their entrepreneurship as a collective achievement despite the market pressures to focus on and prioritise their enterprises. This created new manifestations of the Ubuntu value system, which are intertwined with the emerging capabilities of digital technologies. We call this emerging form of Ubuntu *digital Ubuntu*. It reflects the myriad of ways through which digital technologies are transforming how individuals and groups relate their activities to Ubuntu and how they seek to uphold its values when they engage in those activities. In digital entrepreneurship activities, Digital Ubuntu represents the new mental models and behavioural orientations amongst entrepreneurs to see in the connectivity and openness of digital technologies opportunities to uphold Ubuntu values despite the competitive pressures of their business environment.

5 | DISCUSSION

The case of the innovation hubs in the Gauteng region of South Africa highlights the role of Ubuntu in digital entrepreneurship, and in so doing, emphasises the constitutive role of indigenous value systems in digital entrepreneurship activities. In particular, it reveals how indigenous values that go beyond the perceived market imperatives for competition and pursuit of self-interest can be central to how digital entrepreneurs conceive of and enact their entrepreneurial activities. It presents an alternative perspective to the heroic view of digital entrepreneurship in which entrepreneurship is perceived as the purview of individuals with special capabilities who can deploy them to start and grow digital enterprises. It brings to light the role of the communities within which the entrepreneurs are embedded in defining the trajectories of their enterprises.

The South African digital entrepreneurs drew on the generative and collaborative capabilities of digital technologies (Yoo et al., 2010) in ways that allowed them to uphold their Ubuntu values as they engaged in digital entrepreneurship activities, such as recombining accessible resources, developing new products/services, and forming partnerships. The stacking of layers of technologies as tools, standards, and platforms (Tilson et al., 2010) creates a fluid and dynamic digital entrepreneurship ecosystem that opens up a broader set of opportunities for a variety of stakeholders to pursue their ventures collectively (Davidson & Vaast, 2010; Du et al., 2018; Nambisan, 2017; Spiegel et al., 2016). The layered architecture of digital technologies allowed the entrepreneurs to turn their products and services into platforms for others to build upon. In general, digital technologies created new possibilities for benevolence and reciprocity amongst digital entrepreneurs and thus enabled new ways for Ubuntu-inspired community-focused entrepreneurship. The adaptation of the Ubuntu values into the new digital realities of South African enterprises, what we call *digital Ubuntu*, created a shared space in which the entrepreneurs' cultural orientation towards the primacy of human relations found new ways of being expressed in their entrepreneurial activities (Table 3). Digital Ubuntu was also a cultural basis for these entrepreneurs to collectively overcome their resource limitations, which constitute a significant challenge to the sustainability and growth of enterprises in emerging ecosystems (Du et al., 2018).

Digital Ubuntu influenced the decisions of the various South African digital entrepreneurs in our study, particularly those that came from challenging socio-economic conditions, which were in part shaped by the legacy of apartheid (Naude, 2017; Pérezts et al., 2019). In this context, an essential motivation for pursuing digital entrepreneurship from an Ubuntu perspective was the desire to address some of the consequences of these conditions, such as information poverty and lack of technical skills in the community. Ubuntu's values helped the digital entrepreneurs relate their entrepreneurial ambitions to the needs of their local communities. Thus, digital Ubuntu reflects a mindset that

TABLE 3 Digital Ubuntu as an emerging basis for digital entrepreneurship

	Values influencing digital entrepreneurship	
	Ubuntu values	**Market values**
Entrepreneurial focus	Human relations	Market performance
Defining values	Humility Reciprocity Benevolence	Competition Innovation
Perception of entrepreneurial agency	Communities	Individual entrepreneurs
	Digital Ubuntu	
Definition	Expressions of Ubuntu values through the emerging capabilities of digital technologies	
Implications for entrepreneurship	New possibilities for digital entrepreneurs to overcome the paradoxical tensions between Ubuntu and market values	

places high value in human interconnectedness and responsibility towards others, which can now flow through digital conduits. This mindset enabled many digital entrepreneurs to undertake digital entrepreneurship that is not primarily focused on maximising economic gains but also takes into account the overall benefit to the community as a measure of success.

Our findings also highlight the tensions that digital entrepreneurs face when upholding their indigenous values within the highly competitive markets for digital goods and services. The entrepreneurs were subscribing to the Ubuntu values required to navigate the tensions between giving back to the community and remaining profitable and supporting other entrepreneurs and competing in the marketplace. The literature on social enterprises highlighted these similar tensions between a market and community logic, reflecting the competing demands between the goal of being profitable and the pursuit of social objectives (e.g., Gonin et al., 2013; Saebi et al., 2019). In an increasingly digital economy, these tensions are intensified since the same technologies that form the basis of heightened competition markets are also creating spaces for sharing and collaboration. That is why developing a digital expression of their Ubuntu values was essential for the entrepreneurs in our study to overcome the paradoxical tensions of digital entrepreneurship in their context.

Also, the emergence of digital Ubuntu allowed the digital entrepreneurs to overcome the tensions that they perceived between traditional Ubuntu values and the need for innovation in the pursuit of economic goals. Digital technologies allowed the entrepreneurs to be agile and transcend space and time constraints when collaborating and supporting each other's endeavours. In so doing, they create an environment that enables forms of innovation that thrive on humility, benevolence, and reciprocity. In particular, digital platforms allowed new forms of human connectedness and thus became a basis for interactions that had both social and economic value. Past studies have highlighted the tensions between Ubuntu and market values (McDonald, 2010). Our study points to the dynamic nature of Ubuntu values. It suggests the concept of digital Ubuntu to capture the innovative uses of digital technologies through which individuals and groups in the South African context reconcile their indigenous values with the demands of their increasingly digitalized economy and society.

6 | THEORETICAL AND PRACTICAL IMPLICATIONS

This paper makes several theoretical contributions to the literature. Extant literature has highlighted the role of values in shaping processes related to digital entrepreneurship, particularly those taking place within open source software and content communities (McLure-Wasko & Faraj, 2005; Oreg & Nov, 2008). In such communities, participants are motivated by values such as altruism (Zeityln, 2003), reciprocity (McLure-Wasko & Faraj, 2005), and a sense of obligation to contribute (Lakhani & Wolf, 2005; Oreg & Nov, 2008). However, the conceptualization of values in past studies (e.g., Blass, 1984; Oreg & Nov, 2008) has been centred on the individual participants in the community. Because of the globalised nature of such communities, the role of the local value system of their participants in shaping their processes has not been explored. In contrast, our study points to the role of indigenous values shared by members of a defined cultural tradition in influencing why and how digital entrepreneurs participate in open source and other digital entrepreneurship communities.

We contribute to the digital entrepreneurship literature by highlighting the community perspective emerging from an indigenous value system, in contrast to the dominant heroic view of digital entrepreneurship that tends to centre entrepreneurship narratives around the individual or group of individuals starting the enterprise (e.g., Li et al., 2018; Martinez Dy et al., 2017; Sebora et al., 2009). In so doing, our study answers the call of Information Systems research to engage in more entrepreneurship research that takes a community perspective (e.g., Autio et al., 2018; Du et al., 2018; Nambisan, 2017). However, we do not simply adopt a community perspective, as researchers, to interpret entrepreneurial action. Instead, Ubuntu's emphasis on the community as an epistemological lens into the world provided a unique context for exploring what a community perspective means for the entrepreneurs themselves and how it influenced their activities.

Second, our study contributes to the Ubuntu literature. The Ubuntu concept, a significant cultural force that stems from an indigenous belief system, has been adopted in the side of a wide range of topics, including knowledge sharing and teamwork (Karsten & Illa, 2005; Lutz, 2009), ethical behaviour amongst corporate actors (Metz, 2014; Pérezts et al., 2019; West, 2014), leadership and management (Bush, 2007), and truth and reconciliation post-apartheid (Naude, 2017; Van der Colff, 2003). Our study highlights the role of Ubunutu in entrepreneurship, particularly in digital entrepreneurship. We also reveal the tensions that the entrepreneurs face in upholding their indigenous values in a globalised and rapidly changing marketplace for digital goods and services. In South Africa's history, upholding Ubuntu was pursued in face-to-face interactions and social gatherings, and traditional Ubuntu was primarily perceived as a static system (Metz, 2014; Pérezts et al., 2019). We provide evidence that the approaches to upholding Ubuntu are dynamic and changing in response to the tensions imposed by shifts in the broader economic system, particularly its increasing digitalization. The enactment of Ubuntu values has become increasingly entangled with digital technologies, which enabled the locus of Ubuntu to go beyond face-to-face interactions to become more diffused and distributed across time and space.

We propose the concept of *digital Ubuntu* to highlight how Ubuntu is enacted in an increasingly digital reality. Digital Ubuntu reflects how entrepreneurs utilise the distributed nature and the generativity of digital technologies to create new ways for upholding their Ubuntu values. Digital Ubuntu offers an indigenous perspective of how entrepreneurs perceive and enact their entrepreneurial activities in the local context of South Africa and the tensions they face in bringing community-centred values to bear on their entrepreneurship. It thus highlights the need to account for how digital technologies become intertwined with local cultures and value systems. Drawing on such an indigenous perspective is particularly important in understanding how digital entrepreneurship can help address the social and economic needs of local communities.

Finally, the findings of this study have some important practical implications for digital entrepreneurs and policymakers. First, they highlight that indigenous values can be an essential source of motivation for entrepreneurial activities and that digital entrepreneurs need to find ways of interpreting and enacting those values that overcome their perceived tensions with the realities of a digital world. Second, our findings offer helpful insights into how policymakers and coordinators of entrepreneurship hubs can draw on society's indigenous values to advance the economic and national imperatives for innovation in ways that ensure broader social inclusion. The concept of digital Ubuntu highlights how seemingly static indigenous values can find new forms of expression in a digital environment. Furthermore, our study highlights the need for policymakers and community leaders who seek to promote digital entrepreneurship in their areas to account for the tensions faced by entrepreneurs as they try to reconcile their commitment to their communities with the competitive demands of digital markets. Accounting for these tensions is particularly important in disadvantaged socio-economic communities, where digital entrepreneurship needs to be approached more holistically as a set of complex activities embedded in the societal values of those communities.

7 | CONCLUSION

This paper highlights the need to consider indigenous perspectives when studying digital entrepreneurship processes in diverse contexts. It does so by investigating how Ubuntu, as an indigenous value system, influences digital entrepreneurship processes in South Africa. It specifically examines the role of Ubuntu values in influencing digital entrepreneurship activities. The emerging perspective offers an alternative understanding of digital entrepreneurship that de-centres the enterprising individual and emphasises digital entrepreneurship's collective nature as a community performance. Our proposed concept of *digital Ubuntu* highlights the dynamic nature of indigenous value systems and their adaptability to changes in their environment. Finally, our study highlights the need for indigenous perspectives and approaches to digital entrepreneurship to advance our understanding of the diversity of the phenomenon across cultural contexts.

The findings of this study suggest various opportunities for future research. First, our study highlights the role of non-market values in shaping digital entrepreneurship activities. It thus indicates that future empirical investigations of digital entrepreneurship from perspectives that go beyond market imperatives would enrich our understanding of the broad array of approaches to digital entrepreneurship across contexts. Therefore, this would enable a better appreciation of the potential diversity of digital futures (Faik et al., 2020). In addition, our study highlights the evolution of indigenous value systems in response to the digitalization of economies and societies. Future research can seek to identify the main mechanisms of this evolution by investigating and contrasting the effects of digitalization on different indigenous value systems. Such research will need to attend to indigenous values beyond their role in digital entrepreneurship to identify the mechanisms through which the use of digital technologies reshapes how individuals and groups draw on their values as they engage in economic and social activities.

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DATA AVAILABILITY STATEMENT

The authors confirm that the data supporting the findings of this study are available within the article

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