

2022

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Recommended Citation

Rene Guy, OMENGUELE and Cedric, MBOUOLANG Yimpi (2022) "When the Social Networks and Internet Come to the Rescue of Entrepreneurs: The Problematic of Crowdfunding in Africa," *The Journal of Entrepreneurial Finance*: Vol. 24: Iss. 1.

DOI: <https://doi.org/10.57229/2373-1761.1420>

Available at: <https://digitalcommons.pepperdine.edu/jef/vol24/iss1/3>

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When the Social Networks and Internet Come to the Rescue of Entrepreneurs: The Problematic of Crowdfunding in Africa

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Abstract

Since 2007, crowdfunding platforms have abounded on the web. It is estimated at 2.5 billion dollars the potential of the crowdfunding market in sub-Saharan Africa by 2025. The objective of this paper is to make an inventory of Crowdfunding activities in Africa, region with a most restrictive access to bank loan by SMEs, start-ups and young entrepreneurs. It appears from the economic and socio-cultural realities that Africa is a region with more potential catalyst for crowdfunding industry takeoff. However, there are many factors which are presented in this study as potential inhibitors of African CF market competitiveness. This study has identified digital divide as one of the main potential inhibitors of crowdfunding development in Africa. By waiting an empirical test of this proposition, local authorities may act to reduce any further the digital gap in their country in order to enhance crowdfunding industry takeoff in Africa.

Keywords: crowdfunding, digital divide, entrepreneurship, financing, Africa

JEL: G15, G23, L26, O16, O35

1. Introduction

In most of the world's economies, start-ups and SMEs are seen as the real catalysts for innovation and growth (Beck and Demirgüç-Kunt, 2008; Agénor and Canuto, 2014; Brancati, 2015). The most generally barrier for these companies is raising sufficient funds to finance their business plans and exploiting attractive investment and growth opportunities (Kortum and Lerner, 2000; Gompers and Lerner, 2004). Faced with this state of affairs, a consensus has emerged among practitioners and theorists that crowdfunding (CF) appears more and more as an alternative source of financing, a crucial new source of entrepreneurial finance (James, 2014; Mollick, 2014). Since a “crowd” of investors are solicited, the term CF has been used to describe this new source of financing which, like microcredit, is presented as an alternative financing system (Bruton & al., 2015).

CF refers to the efforts by entrepreneurial individuals and groups to fund their ventures by drawing on relatively small contributions from a relatively large number of individuals using the internet, without standard financial intermediaries (Mollick, 2014). It is a method of financing, whereby an entrepreneur sells a specified amount of equity or bond like shares in a company to a group of (small) investors through an open call for funding on Internet based platforms (Alhers et al., 2015). Rather than turning to their bankers, or in addition to banking assistance, more and more Internet users are turning to the CF to give themselves the means to carry out their projects.

According to Short et al. (2017), the World Bank estimates the volume of crowdfunding to become \$300 billion by 2025. As a forecast, Infodev (2013) estimates that the CF market potential in sub-Saharan Africa is \$ 2.5 billion by 2025. With the global digital revolution drawing new challenges, it is essential that companies take the digital turn so as not to lose performance and productivity on the international scene.

CF, a disruptive innovation that is part of the digital economy, is revolutionizing access to corporate finance today. It offers new opportunities but also generates new challenges, new questions (Moussavou, 2017). After a few years of craze on the CF market, whether in the form of debt or capital, it is interesting to take stock of these two young activities. From 100 Crowdfunding platform in 2007 to 1660 platforms of alternative finance in 2020 (Adhikary & al, 2018) ; Huffspot , 2017 ; Demiray & Burnaz, 2019; ziegler & al., 2021), crowdfunding industry is knowing an exponential growth. This general growth is not with de regional disparities. Given the literature and actual statistics, Africa appear as the region with more potential for crowdfunding development, but it remains at the bottom in term of regional performance in crowdfunding.

The purpose of this paper is to show the main developments of CF phenomenon in the world, in Africa, a continent with a lot potential for growth and innovation, to present the essential levers for the emergence of crowdfunding in Africa. But also, we aim to show some factors which act as potential inhibitors for the crowdfunding industry takeoff in Africa. Following innovation diffusion theory (Rogers, 1983, 1995), we try to discuss some dimensions of digital divide as the main potential inhibitors of CF development in Africa.

2. Crowdfunding: back to basics

Crowdfunding, the practice of financing projects and ventures in small increments from a large pool of individuals, has been touted as a novel and impactful tool for contemporary entrepreneurs (Schwienbacher and Hervé, 2018; Agrawal, Catalini, and Goldfarb 2014; Belleflamme, Lambert, and Schwienbacher 2014). In the headlines of entrepreneurial finance domain, crowdfunding is not an innovation in itself (Bessière and Stéphany, 2017).

2.1. The emergence of crowdfunding concept and filiation with crowdsourcing

Contrary to the dominant discourse in academic literature, crowdfunding is not a new phenomenon, does not require technology platforms, and has long been an “offline” fundraising source (Gras and al, 2017). The idea of CF, which is sometimes presented as an innovation that has emerged during the past eighteen years (Bessière and Stéphany, 2014), is part of a tradition of public subscription which has enabled, for example, Mozart and Beethoven to organize their concert or the funding of the Eiffel Tower in Paris and the Liberty Statue in New York (Maalaoui and Conreaux, 2014). The first attempts of the modern CF (online CF) are based on the use of websites specialized in fundraising and promotion of cultural, artistic and creative projects and charitable projects. As an illustration, the English rock group Marillion in 1997 had managed to pre-finance its filming on the American continent through a website. The term CF is fairly recent; it was invented and used for the first time in 2006 by Michael Sullivan during the launch of his incubator dedicated to video blogs (Gobble, 2012). The objective of the CF is to raise funds from the crowd for investment using the Internet and social networks (WhatsApp, Twitter, Facebook, LinkedIn and other specialized blogs). The main difference between the CF and what was happening before, mainly lies in the use of internet platforms to organize the fundraising. That is why Gras and al. (2017) distinguish “Online CF” to “Offline CF. In this work, CF refers to online crowdfunding. The development of the CF as a research field is concomitant with the emergence of websites dedicated to connecting entrepreneurs and the general public (Mollick, 2014). Therefore, the CF is part of the movement of new modes of cooperation such as crowdsourcing (Howe, 2006).

The term crowdsourcing (CS), which first appeared in 2006, was first used by Howe and Robinson when the American Magazine *Wired* was launched (Schwienbacher and Larralde, 2012). CS refer to the use of Internet users to solve a problem rather than by individuals solicited in a traditional way, such as employees of companies or entrepreneurs (Howe, 2006). It is traditionally presented as a form of outsourcing, by an organization, of an activity with "a large number of individuals whose identity is most often anonymous (Belleflamme, Lambert and Schwienbacher, 2013; Chua, Roth and Lemoine, 2015). Onnée and Renault (2014) consider that the CF constitutes a branch of the CS while Brabham (2013) sees in the CF only a financing process, distinct from the CS. According to Lebraty and Lobre-Lebraty (2013), crowdfunding is a form of CS. "Be that as it may, CS and CF both illustrate the increasingly important place taken by networks as factors of production" (Guesmi & al., 2016).

2.2. Crowdfunding: definitions and models

Research on crowdfunding is burgeoning, but scattered, denoting the nascent stage of the literature (Gras and al., 2017). Numerous and varied definitions of crowdfunding have been offered (Valanciene and Jegeleviciute 2013). Freedman and Nutting (2015) define crowdfunding as a method of collecting many small contributions, by means of an online funding platform, to finance or capitalize a popular enterprise. According to Cholakova and Clarysse (2015), CF is an emerging form of entrepreneurial finance which allows for the raising of funds from a large number of individuals via online platforms. CF can be seen as a process (Ramsey, 2012), an approach (Bechter, Jentzsch and Frey, 2011), a financial mechanism (Powers, 2012).

Following the definitions of the CF presented by Valanciene and Jegeleviciute (2013), given that the authors agree on its objectives, a differences are highlighted in the means to achieve them. These definitions, however, agree to highlight, funding, crowds and the use of the Internet (Bouaïss and Maque, 2016). Table 1 presents some definitions.

Table 1: Some definitions of crowdfunding

Authors	Definitions
Lambert and Schwienbacher (2010)	Open call, mainly through the Internet, for the provision of financial resources, either in the form of a donation in exchange for some form of reward and / or voting rights in order to support initiatives for specific purposes.
Ramsey (2012)	Process of raising money to help turn promising ideas into business realities by connecting investees with potential supporters.
Schwienbacher and Larralde (2012)	An open call mainly via the internet, requesting financial resources either in the form of a donation, or in exchange for consideration and / or shares with the right to vote in order to support an initiative with a particular purpose.
Powers (2012)	A financial mechanism that allows companies to start by soliciting funds from the general public through a website
Belleflamme et al. (2013)	An open call mostly through the Internet, for the provision of financial resources either in form of donation or in exchange for the future product or some form of reward to support initiatives for specific purposes.
Onnée and Renault (2014)	Funding method that allows project leaders to get in touch with internet users through dedicated platforms.
Mollick (2014)	CF refers to the efforts by entrepreneurial individuals and groups - cultural, social, and for-profit - to fund their ventures by drawing on relatively small contributions from a relatively large number of individuals using the internet, without standard financial intermediaries.
Alhers et al. (2015)	A method of financing, whereby an entrepreneur sells a specified amount of equity or bondlike shares in a company to a group of (small) investors through an open call for funding on Internet based platforms.

Source: Authors, following Germon and Maalaoui (2014).

The CF covers a differentiated reality and practices. The most used criterion for these classifications is the compensation granted to the contributor. In a study exploring the principal features of crowdfunding, Belleflamme, Lambert, and Schwienbacher (2010) identified three types of models: donation, active investment, and passive investment. According to the classification made by Hemer (2011), there are 7 types of CF in particular: crowddonation, sponsorship, Pre-ordering, membership fees, crediting, lending, and profit-sharing, independent, embedded, and start-up crowdfunding initiatives. Massolution (2012) compensation criteria, has developed the most widespread CF classification according to which we distinguish: reward-based crowdfunding, Pre-ordering, crowdlending, crowdinvesting and crowddonation. According to Bessière and Stéphany (2017), crowdfunding comes in four models: donation, donation with rewards, loan and purchase of equity in start-ups. Castrataro (2012) proposes the disaggregation of reward (or donation) models into “all or nothing” and “keep it all” types, and equity models into “club” and “cooperative” types. Further, he includes microfinance in the crowdfunding domain, and identifies two microfinance crowdfunding models: microlending and peer-to-peer (P2P). Table 2 below show the particularity of different types of crowdfunding.

Table 2: The particularities of the different types of crowdfunding

Authors	Classification	Explanation
Kappel (2008)	ex post Facto	Financial support in exchange for a completed project
	ex ante	Financial support to achieve a desired result
Belleflamme et al. (2010)	Donation	investors give altruistically
	active Investment	investors receive voting rights
	passive investment	rewards are given to investors at armlength
Hemer (2011)	Crowd donation	investors give altruistically
	Crowd sponsoring	investors receive marketing benefits
	Crowd pre-selling	investors pay for the product before its completion
	Crowd lending	investment with expectations of interest or revenue
	Crowd equity	investors receive equity in the organization
	independent	Created by individuals as opposed to organizations
	embedded	Originate within an incumbent private or public organization
Castrataro (2012)	Reward, all or nothing	transaction does not occur in less target is hit
	Reward, keep it all	investments are kept regardless of hitting target or not
	equity, club,	investors are approached as part of an exclusive club
	equity, cooperative	individual contributions are pooled for investment
	Microfinance, microlending	provide financial services to low-income clients
	Microfinance, p2p	Direct lending between individuals and organizations
Bessière and Stéphany (2017)	Crowddonation	No remuneration
	Reward-based	In exchange for project-related consideration (gifts)
	Pre-ordering	Fixed or variable reimbursement through product delivery
	Crowdinvesting	Equity investment
	Crowdlending without interest	No Interest-free reimbursement
	Crowdlending with interest	Repayment with interest

Source: Authors, following Gras and al., 2017

3. Crowdfunding: An opportunity for Entrepreneurship and innovation process

According many scholarship (Hervé and Schwienbacher, 2018) Crowdfunding is helpful for financing entrepreneurship and for innovation process.

As financial opportunity for entrepreneurship, CF is very important for entrepreneur which is an innovation actor (Schumpeter, 1934; Bruyat, 1993). Crowdfunding has developed as a new form of entrepreneurial finance, which aligns with the financing needs of some innovative firms often unable to tap other forms of financing (Hervé and Schwienbacher, 2018). Three innovations drive the dynamic of crowdfunding: economic, social and managerial (Assadi, 2018). According to Assadi (2018), financing the entrepreneurship is an economic innovation dimension of CF. Innovation is strongly related to risk (Cantillon, 1755), which in itself makes financing very risky (Hervé and Schwienbacher, 2018). This can disadvantage small firms, because larger ones can diversify their risk across other activities that either already generate revenues or across other research projects (Hervé and Schwienbacher, 2018). Empirical evidence (Cosh et al., 2009) therefore shows that start-ups do not receive enough external funding and that received funding is often not in the form they would prefer. Small innovative firms face more severe information asymmetry problems, which makes financing through traditional sources such as bank finance more difficult than for larger, more established firms (Carpenter and Petersen, 2002). These lack of financing is knowing as “funding gap” (Cressy, 2002) and results from important information asymmetry and the lack by entrepreneur of sufficient collateral (Hervé and Schwienbacher, 2018). CF is presented as a solution for these difficulties. For the crowdfunding participation, the collaterals are not required to entrepreneur. Crowdfunding has the potential to foster innovation by offering new sources of capital to innovation-driven firms and thereby reduce the funding gap for innovative start-ups. Crowdfunding has the potential to provide funding to early-stage projects and thereby fill some of the funding gap that plague small, innovative firms (Hervé and Schwienbacher, 2018). As a result, any type of crowdfunding enables small- and SME to overcome problems of accessing financing, including for innovation projects (Hervé and Schwienbacher, 2018).

Crowdfunding offers a way for the crowd to participate in the innovation process by providing feedback to the entrepreneur. This feedback can take various forms, including providing ideas on the development of the product during and after the campaign, and providing valuable information on the future demand for the new product (Hervé and Schwienbacher, 2018).

As a innovation faster, crowdfunding is helpful because it involves an open call affects the relationship between investors and entrepreneurs. Crowdfunding platforms typically offer ways for entrepreneurs and crowdfunders to interact during the campaign so that this exchange of ideas is possible. However, this may continue beyond the campaign if the entrepreneurs set up own ways to maintain such interactions (Hervé and Schwienbacher, 2018). In the Reward based CF for example, a high demand during the campaign may indicate the entrepreneur’s project is promising beyond the crowdfunding campaign. This feedback can be useful to the entrepreneur to decide whether to pursue the project or to adapt his or her strategy, including innovation strategy (Hervé and Schwienbacher, 2018). Another type of feedback provided by crowdfunders to entrepreneurs takes the form of ideas. Stanko and Henard (2017) and Di Pietro et al. (2018) pointed out that the interaction with investors can contribute to the generation and development of new ideas and thus the innovation process. A larger number of backers brings more information, resources, and ideas to mobilize for the development of innovation. Backers can thereby bring inputs to entrepreneurs (Hervé and Schwienbacher, 2018).

Whatever the type and importance of CF, what is the place of Africa in general in crowdfunding ecosystem?

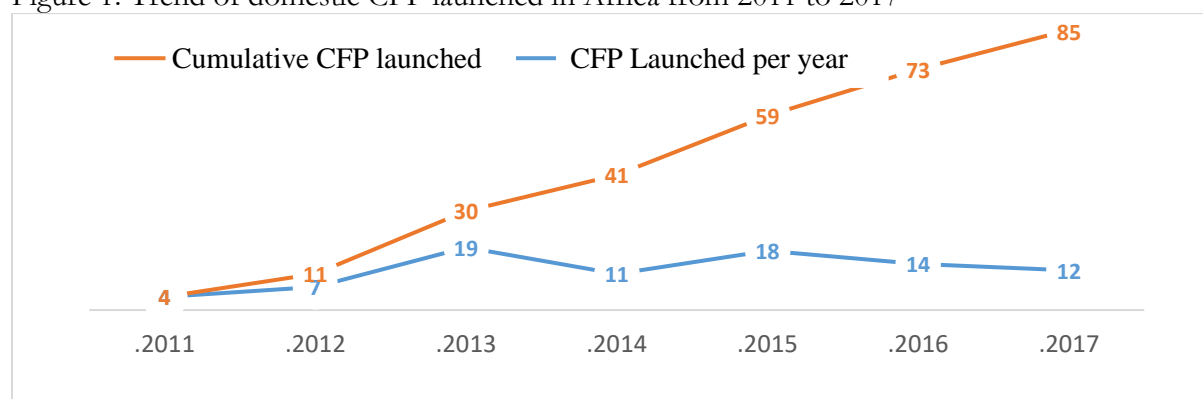
4. The evolution of the African crowdfunding industry

4.1. Arrival of the CF in Africa and Cross -country patterns

The first CFP began operating in Africa during the years 2008-2009. It is the American platform KIVA. It is three years later, in 2011 that the first African domestic platform (Thundafund platform specializing in the financing of innovative and creative projects) was launched in South Africa.

According to the report published by Boum and al. (2016), Africa already had 39 CF platforms at the end of 2014. This number increased to 59 in 2015. Since 2012, around 90 CF platforms have been launched in Africa. However, Year 2014 was a critical year for African CF platforms: more than half of the websites dedicated to these platforms were closed this year and more than 60% of the platforms that closed in 2014 were launched in 2013 (Boum and al., 2016). Until December 2017, Africa has around 85 domestic platforms operating in the continent. Figure 1 highlight the number of CF platforms created in Africa per year and also the cumulative effect over the years. It appears from these graphs that there an average of 11 platforms created every year since 2011 and, the year 2013 was the most eventful year with around 20 platforms created. It appears from Figure 1 that there is a permanent growth of CFP in Africa.

Figure 1: Trend of domestic CFP launched in Africa from 2011 to 2017

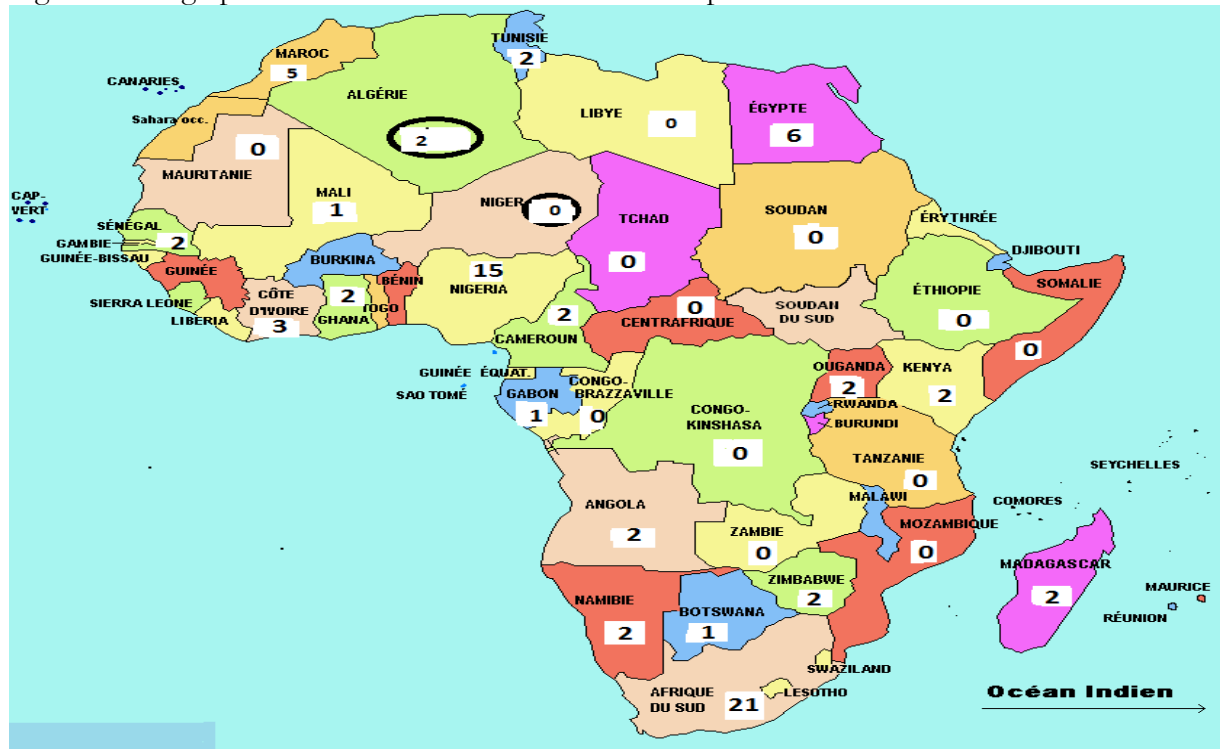


Source: authors

According to CCAF¹ 2020 report, overall, the alternative finance market across Continental Africa raised \$209.1 million in 2018. The overall regional leader by market share was East Africa. At \$121 million, this region had a 58% market share in 2018. Southern Africa is the next largest, with a 21% market share (\$43 million), followed by West Africa at 14% (\$29 million). By contrast, Central Africa had a mere 7% market share, with a negligible volume of only \$1 million reported in North Africa. Leading national markets in Africa include Zambia (\$40.7 million), Kenya (\$35 million), South Africa (\$27.4 million), and Uganda (\$16.7 million), accounting for 19%, 17%, 13%, and 8% of overall African volumes respective domestic platform contributed to the market volume at 24% in 2018 (Ziegler et al., 2020). The distribution of domestic CPF in Africa in 2018 is given below (Figure2). Additionally, the websites of these platforms are presented in appendix 1.

¹ Cambridge Center of Alternative Finance

Figure 2: Geographic distribution of domestic African's platform in 2018



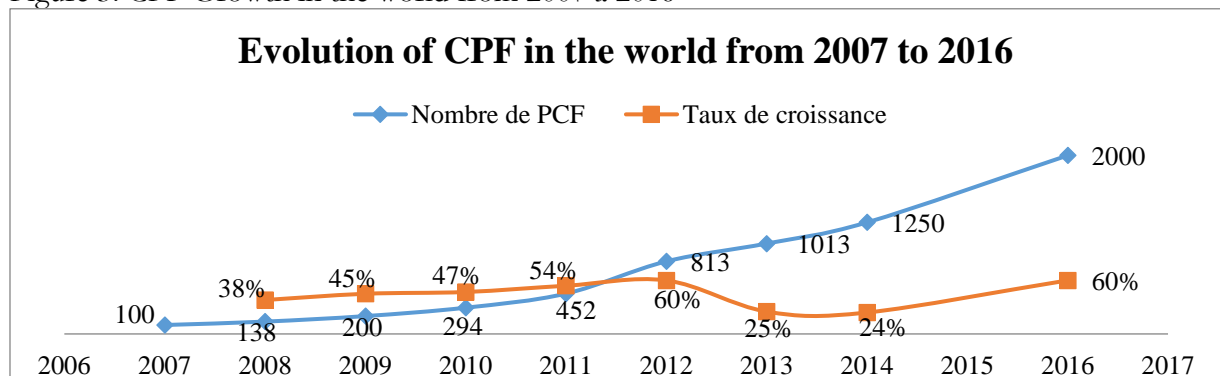
Source: authors

The first African domestic CFP were launched in 2011 in South Africa, followed by Nigeria and Kenya, which hosted their first domestic CFP in 2012. From 2011 to 2018, more than 22 of the 54 countries in Africa saw the creation on their territory of at least one domestic CFP. we observe an almost heterogeneous proliferation of these platforms in all the sub-regions of the continent. South Africa and Nigeria leading the domestic platform creation in the continent with respectively 21 and 15 CPF.

4.2. African crowdfunding industry in the worldwide ecosystem

According to Ziegler et al. (2020), Overall, 1,227 unique platform of alternative finance were localised trough the world in 2018. 47% of these platform operate within more than one country or jurisdiction, providing 2,322 firm-level across the world. According to the firm level observation as seeing in table 1, there was 632 platforms in Europe, 438 in China, 334 in the Asia-Pacific region (excluding China), 270 in Latin America and the Caribbean, 66 in the Middle East, 171 in Africa, 143 in the US and Canada, and 87 platforms in the UK. Concerning de CPF evolution, the figure 3 show the trend. We observe globally an exponential growth of crowdfunding industry with a year growth rate of 38% in 2008, 45% in 2009, 47% in 2010, 54% in 2011, 60% in 2012, 25% in 2013 and 60% in 2016.

Figure 3: CFP Growth in the world from 2007 à 2016



Source: adapted from Adhikary & al. (2018) ; Huffspot, 2017 ; Demiray & Burnazque (2019)

But this exponential growth occults the weak performance of Africa in crowdfunding industry both in terms of platform proliferation and volume market. According to the recent statistics of CCAF as showing in table 3, In total, the global benchmarking survey revealed the existence of 1,801 platform-level observations for 2019 and 1,660 platform-level observations for 2020, given firms that operate in multiple countries (Ziegler & al., 2021).

Table 3: regional distribution of CPF in the world, 2019-2020

Regions	2019			2020		
	Domestic	Foreign	Total	Domestic	Foreign	Total
EUROPE	317	406	723	305	416	721
ASIA PACIFIC	272	184	456	201	194	395
AMERICA	174	164	338	142	135	277
AFRICA	42	242	284	39	228	267
Total	805	996	1801	687	973	1660

Source: CCAF, 2021. The 2nd Global Alternative Finance Market Benchmarking Report

From the table 3, we observed a drop down of a number of platform from 2019 to 2020. This fall down is substantial and concern all regions. This general character can be associated to COVID-19 Crisis and don not occult the regional heterogeneity of platform distribution over the world. When breaking down the CCAF data by region, 317 domestic platforms and 406 Foreign platforms for a total of 723 Platforms were observed in Europe in 2019, 456 in Asia Pacific (272 Domestic and 184 foreign platforms), 338 in America (174 Domestic and 164 Foreign platforms), 284 in Africa (42 domestic and 242 Foreign platforms). Africa, with 15,7% and 16% of platform operating in 2019 and 2020 respectively appear as the less active region in term of platform proliferation. In term of domestic platforms, Africa represent only 5,2% and 5,6% of the world platforms respectively in 2019 and 2020, coming far after Europe (39,3% and 44,4%), ASIA (33,7% and 29,2%) and AMERICA (21,6% and 20,6%). In term of foreign CFP density, Africa is the region with less domestic platform (14,6%) against 42,3% for Europe, 51,2% for America and 50,8% for Asia in 2020.

Globally, the impact and role of alternative finance continues to grow, with alternative finance platforms having facilitated USD \$304.5 billion in 2018 (Ziegler et al., 2020). This volume represents a 27% annual decline against the \$419 billion recorded in 2017. As with the year 2017, the leading markets for alternative finance were China, the United States, and the UK, with \$215.39billion, \$60.9billion and \$10.25 billion recorded respectively. Africa came at the last position in term of performance with a market volume of \$ 209.1 million. In each region, the most performant type of platform Dept platform which represent 88,18% of volume market in Africa against 5,6% for the Equity type of platform as showing in table 4.

Table 4: Total platforms level and Volume by Region and Model Categories-2018

	Dept	Equity	Others	Total
CHINA	215.37 b	22.18 m	5.80 m	215.39798b
US	57.67 b	2.55 b	696.50 m	60.9165b
CANADA	705.69 m	43.52 m	158.94 m	908.15m
UK	9.31 b	870.19 m	76.60 m	10.25679b
EUROPE	6.60 b	883.32 m	237.75 m	7.72107b
APAC	5.34 b	504.84 m	277.28 m	6.12212b
LAC	1.70 b	45.61 m	39.05 m	1.78466b
MIDDLE EAST	754.14 m	35.63 m	10.78 m	800.55m
AFRICA	183.76 m	11.85 m	13.53 m	209.1 8m

Source: Ziegler et al., 2020

4.3. Socio economics impact of Crowdfunding in Africa

It should be noted that since 2008, that is before the creation of first African domestic platforms, African entrepreneurs have regularly raised funds on platforms based in European Countries and in America. For this purpose and according to Danedjo (2015), from 2009 to 2014, more than 200 thousand \$ have been raised by Cameroonian entrepreneurs on various platforms based outside Africa (Kisskiss Bank, Indiegogo, Kickstarter, etc.).

According to Boum and al. (2016), CF projects in Africa raised \$ 126 million in 2015; that represent 0.4% of the world total. These funds were raised from CF platforms based on the continent and abroad. In this kitty, African origin platforms collectively raised \$ 32.3 million, which represents 0.1% of the world total. As for the CF platforms based abroad, they brought \$ 94.6 million to finance projects in Africa in 2015. In total, there are 4,939 CF campaigns that were launched by the platforms based in Africa in 2015. Among 4,939 projects launched, around 67% were able to receive funding. The funds collected by these platforms based in Africa were mainly used to finance start-ups and SMEs (\$ 17.7 million), and real estate projects (\$ 13.6 million).

According to Chao & al. (2020), despite the crowdfunding phenomenon in Africa is somewhat lagging other regions and is still at its infancy, a socioeconomics impact of crowdfunding is observed in Africa. Socioeconomics impact of CF in Africa, are perceived in three ways notably as source of incoming capital in many African, as modernisation vector of cultural form of financing, and Africa's Diaspora-Country relationship keeper in terms of social help and country development. Globally, the impact and role of alternative finance continues to grow in Africa, with alternative finance platforms having facilitated USD \$ 209.1 million in 2018 in Africa (Ziegler & al., 2020). According to CCAF, African volumes in a variety of crowdfunding models reached US \$182 million in 2016, growing 118% from US \$83 million in 2015 (Ziegler et al. 2018). From a regional perspective, whereas 41% of these volumes have been recorded in West Africa, 28% have been recorded in Southern Africa, 24% in Eastern Africa, and the remaining 7% in North and Central Africa. From cultural perspective, the crowdfunding phenomenon is congruent with traditional communal reciprocity culture of sub-Saharan African individuals (Wolf, 2017; Berndt, 2016; Oruezabala & Peter, 2016). In fact, crowdfunding is a modern form of credit associations in the African context, where individuals invest in the businesses of others (Berndt, 2016). These credit associations have existed in many African cultures under variety of appellation for decades (Susu in Ghana, Mabati in Kenya, Ekub in Ethiopia, Tontine in Cameroun, and Stokvels in South Africa (Coetzee 2013)). Oruezabala & Peter (2016) note that 78% of SMEs in Gabon context derived their funding from personal funds, family, and credit associations that is the same funders observed on crowdfunding platform. Therefore, Crowdfunding appear as a modernisation of credit association model in African context. Looking the Diaspora-relation impact of CF, African migrants support entrepreneurial activities by helping family members and friends in their countries of origin via the mediation of crowdfunding platforms (Chao & al., 2020). Again, this may be in tandem with remittances which serves as an important source of incoming capital in many African countries. Indeed, remittances sent by African migrants reached nearly \$40 billion in 2010, an amount equivalent to 2.6% of Africa's gross domestic product (Mohapatra and Dilip 2011). CF platform as a media useful for Africa Diaspora in financing entrepreneurial activities in their country have a positive impact in socioeconomics development of African countries.

5. Opportunities and potential inhibitors of crowdfunding development in Africa

5.1. The African specific factors which augur a dynamic development of crowdfunding in the continent

These factors can be classified in two categories: economics factors and sociocultural factors.

▪ Economics factors

The importance of SMEs in African economies and their access to bank credit: need for an alternative source of financing. According to figures from the European Investment Bank (EIB) (2017), only 22% of SMEs in Africa were able to take out a bank loan or credit during 2016; 81 million SMEs are facing a funding gap in sub-Saharan Africa and overall, 45% of firms in Africa cite the lack of funding as a major constraint for their development. From what precedes, the CF seems opportune insofar as it undermines several constraints prior to obtaining a bank credit notably the constitution of savings, the constitution of guarantees, etc. Along the way, youth unemployment and the brakes on entrepreneurship in Africa, are problems to which the CF could be a lasting solution. In fact, in Africa, young people represent more than 50% of the population (World Bank, 2014) and almost 60% of all the unemployed. What is more, 12 million young people enter the labor market every year (OIF, 2015). The high youth unemployment rate is justified by the low demand for labor by existing businesses. Therefore, the promotion of entrepreneurship presents itself as the adequate solution. However, access to finance² undermines the development of entrepreneurship in Africa. In Senegal for example, 51% of young people give up entrepreneurship because of the difficult access to finance because banks and donors are reluctant towards them because of the uncertainty about the profitability of projects (Oumou and al., 2014). Faced with this behavior of banks and the desire to undertake young Africans to get out of unemployment, an alternative source of financing would be of great benefit for these young entrepreneurs. From then on, the CF is adapted for this cause because having the particularity of exploding in an infinitesimal way the global risk that a project involves on a large number of individuals. Finally, joining Digital Finance in Africa can be a signal of a favorable breakthrough for the CF on the African continent. According to recent statistics provided by the EIB (2017), it is established that in digital financial inclusion, sub-Saharan Africa is, in several respects, the most advanced region. Mobile banking services provided by financial technology companies, FinTechs and telecom operators are gradually filling the gaps of traditional banks (EIB, 2017). Given the above figures, it is therefore possible to postulate that the CF could be quickly be appropriated by the large majority of the population of Africa.

▪ Sociocultural factors

The African demography is an asset for the African CF. According to figures produced by DESA (2017), Africa will have 1,704 million inhabitants by 2030 and 2,528 million by 2050. According to this report, by 2050, Africa will have nearly 1 billion young people under the age of 18. They will represent 40% of the children of humanity. The strong increase in the young population in Africa today constitutes an opportunity for the CF industry in view of the following facts: young people have a great capacity of ICT adaptation but above all, the size of the population is the one of the most significant determinants of the growth of CF platforms in a country (Dushnitsky & al, 2016). In a second step, financial culture in sub-Saharan Africa, socio-anthropological realities militate for a prosperous place for CF in Africa. In Africa and since the pre-colonial period, economic organization is determined by the almost collective form of ownership of the means of production and the enjoyment of the goods produced. Economic policy is essentially oriented towards the preservation and conservation of sociality (Nguebou & Fabre, 2011). In practice, the system is based on certain principles and certain values, including the tontine which is defined according to Nguebou & Fabre (2011) as being the production of the community, in the community by the community and for the community. According to Nene et al. (2014) more than 40% of young entrepreneurs in West Africa use the family and tontines to start their project. The CF, which is a sort of tontine model (David Gras & al; 2017), is therefore a solution to the modernization and internationalization of tontines for a greater grouping of Africans in order to support their brothers with projects and SMEs.

²Only 25% of Africans have access to financial services, EIB (2017)

5.2. Digital divide as the main potential inhibitors of crowdfunding development in Africa?

Crowdfunding platform is considered as a triple innovation (Assadi, 2018). For this purpose, its diffusion toward the world can be analysed following the Diffusion of innovation theory of Rogers (1983, 1995, 2003). According to Rogers (1995), diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system; where the innovation can be anything that is seen as new, from the perspective of the adopters. Rogers (2003) claims that innovation is diffused through a population in a social system based on key attributes such as compatibility and complexity perceived by early adopters. Tolbert and Zucker (1983) showed that initial adoption of an organizational innovation could be explained by the characteristics of a city. In this sense, early adoption follows a contingency style argument (Van de Ven, Ganco & Hinings, 2013). As complexity factor, capability of use innovation by potential adopters proxied by digital divide could act as inhibitors of crowdfunding industry in Africa.

The mechanism on CF is based on internet and social media. The market of crowdfunding required three main actors which are: platform, entrepreneur and crowd. Crowdfunding as an online operation required first digital skills for the users. Platform as two-sided market to perform its activities need a digital infrastructure, social media and more internet users. The presence of internet users (investors) constitute a potential for value creation by platform to entrepreneur. But in Africa context, these factors are not at their best level compared of those to most developed country in terms of crowdfunding. This gap is known as digital divide. Digital divide was first measured in a binary manner: Internet access or not (Kling, 1998; Ben Youssef, 2004; Brotcorne and al, 2010). The notion later on advanced to include many other dimensions of digital divide such as quality of devices, degree of autonomy in use, level of contribution in the production and distribution of information on the Internet (Hargittai, 2003). According to Castells (2002), digital divide refers to inequality of access to the Internet. (Van Dijk, 2006) defines the digital divide as the gap between those who do and do not have access to computers and the Internet. Some authors as (Wilson, 2006) consider digital divide as an inequality in access, distribution, and use of information and communication technologies between two or more populations. This last definition is the one adopted in this work. Following this definition, several authors (Van Dijk and Hacker, 2003; Norris, 2001; Wilson, 2006) are in agreement that there are four types of factors affecting digital divide: The lack of “mental access”, The lack of “material access”, “the lack of skill access”, “The lack of usage access”. While the lack of mental access refers to a lack of elementary digital experience, the lack of material access means a lack of possession of computers and network connections. The of digital skills also known as information skills refers to the lack of skills needed to search, select, and process information in computer and network sources. The lack of usage access means the lack of meaningful usage opportunities (Van Dijk, 2006). Compared to the world global situation, these level of digital divide in Africa is analyzed in the following paragraph. The figures and statistics come from 2021 International Telecommunication Union (ITU) report on Africa.

▪ The lack of material access in Africa

The digital divide is a wide range concept. It can exist between those living in rural concept and those living in urban areas, between the educated and uneducated, between economic classes and on global scale between more and less industrially developed nations (Van Dijk and Hacker, 2003). In this study, digital divide is analyzed at the global level by comparing Africa to others regions. Although fixed broadband subscriptions per 100 inhabitants and international bandwidth per Internet user increased across most countries in the period 2018-2019, Africa remain at the bottom regarding the digital gap. Compared with other regions, Africa has one of the lowest fixed broadband subscription rates, given the absence of legacy infrastructure and the relatively lower costs of deploying wireless broadband infrastructure. ITU estimated a fixed broadband subscription rate of 0.5 per 100 inhabitants for Africa in 2020, a figure that is well below the global average of 15.2 subscriptions per 100 inhabitants. In the period 2018-2019, one-third of countries

show declining subscription rates of their fixed broadband levels. The total international bandwidth across the region represents only 1.5 per cent of the total world international bandwidth. At the individual user level, there were 30.8 kbit/s per Internet user in the Africa region in 2019, compared with 131.3 kbit/s per Internet user globally. Approximately 45 per cent of Africa's population is more than 10 km away from fibre network infrastructure. Regarding internet access, ITU estimated that only 14.3 per cent of households in the Africa region had Internet access in 2019, compared with 57.4 per cent globally. The proportion of individuals using the Internet in 2019 totaled 28.6 per cent in Africa¹⁰ and 51.4 per cent globally. The table 5 built from World Economic Forum data show the gap between African countries and others country concerning some digital divide indicators (internet users score, broadband quality, etc).

Table 5: digital divide gap in African countries in comparison with the world

	MCTS		MBBS		FBBS		FIS		IU		DS	
	Sc	Rk/141	Sc	Rk/141	Sc	Rk/141	Sc	Rk/141	Sc	Rk/141	Sc	Rk/141
Algeria	121.9	61	96.7	35	7.3	85	0.0	119	59.6	83	4.0	99
Angola	35.9	138	18.9	131	0.7	119	0.2	90	14.3	133	24.1	141
Benin	82.4	122	19.8	130	0.2	125	0.0	118	20.0	125	44.7	104
Botswana	150.0	12	77.6	65	1.8	105	0.1	96	47.0	96	44.9	103
Burkina Faso	97.9	103	29.9	124	0.1	131	0.0	121	16.0	130	2.9	135
Burundi	47.1	132	11.4	138	0.1	137	0	124	2.7	141	37.1	64
Cameroon	57.6	128	23.7	128	0.1	130	0	117	23.2	121	48.3	85
Cape Verde	112.2	82	66.8	83	2.9	101	0.0	125	58.2	87	50.6	78
Chad	37.6	136	4	141	0	141	0	125	6.5	140	31.5	136
Congo, De	36.2	137	15.9	134	0	140	n/a	n/a	8.6	139	30.5	138
Côte d'Ivoire	100	29	61.6	87	14	116	0	112	46.8	99	46.4	95
Egypt	79.4	109	53.9	100	13.4	87	0	109	46.9	98	61	44
Ethiopia	31	141	13.9	137	0.1	135	0	113	18.6	127	45.8	100
Gabon	100	25	91.8	40	2.7	109	0	101	62	81	36.6	129
Gambia	100	22	36.8	117	0.4	127	0	114	19.8	126	50.6	79
Ghana	100	26	91.8	41	0.4	126	n/a	n/a	39	105	53.5	69
Guinea	80.1	108	30.4	121	0	139	n/a	n/a	18	128	39.2	124
Kenya	80.3	107	41.9	112	1.4	114	0.2	87	17.8	129	59.1	49
Lesotho	113.8	79	59.0	92	0.3	122	0.1	97	29.0	113	41.5	119
Madagascar	33.8	139	15.6	135	0.2	129	0	108	9.8	138	35.5	132
Malawi	32.5	140	27.2	127	0.1	133	0	122	13.8	135	30.7	137
Mali	95.9	76	30.3	122	1.3	118	0	125	13	136	43.3	110
Mauritania	103.7	94	49.7	104	0.3	120	n/a	n/a	20.8	124	48.1	87
Mauritius	151.4	11	65.3	85	21.6	48	15.4	15	58.6	86	55.7	60
Morocco	124.2	52	59.1	91	4.3	93	0.1	94	64.8	75	48.0	88
Mozambique	39.8	135	15.1	136	0.5	124	0.1	98	10	137	29	139
Namibia	112.7	81	91.5	44	2.5	103	0.0	111	51.0	95	43.9	108
Nigeria	73	117	30.7	120	0.1	136	0.0	116	42.0	102	40.4	122
Rwanda	65.7	124	39.0	114	0.1	134	0.0	106	21.8	123	49.4	84
Senegal	0	91	41.5	113	1.6	113	0.0	125	46.0	100	53.4	71
Seychelles	184.3	3	80.5	61	20.3	51	n/a	n/a	58.8	85	59.9	47
South Africa	100.0	10	76.0	69	4.8	104	0.4	81	56.2	91	37.9	126
Tunisia :	100.0	47	76.1	68	17.5	78	0.2	88	64.2	78	53.9	67
Uganda	57.3	131	33.6	118	0.0	138	n/a	n/a	23.7	120	40.4	121
Zambia	74.3	116	56.6	95	0.5	123	0.0	105	14.3	134	41.7	118
Zimbabwe	74.5	114	52.3	102	2.8	108	0.2	85	27.1	115	48.3	86
% CLR	52%		61%		83%		67%		66%		55%	

Source: compiled from World Economic Forum, The Global Competitiveness Report, 2019

MCTS: Mobile-cellular telephone subscriptions; **MBBS:** Mobile-broadband subscriptions

FBBS: Fixed-broadband Internet subscriptions; **FIS:** Fiber internet subscriptions; **IU:** Internet users;

DS: Digital skills among active population; **%CLR:** % of country with lower ranks (from 100 to 141)

Among the 141 countries of World Economic Forum survey, more than 50 % of African countries have a bad rank in term of digital diffusion/Adoption. In term of MCTS, more than 52% of African countries are among the bottom 41 countries in the world. When regarding the FBBS, the figures reveals that more than 83% of African countries are among the bottom 41 countries in the world. In term of MBBS, more than 52% of African countries are among the bottom 41 countries in the world. The same weak performance is observed when regarding the **FIS and IU for which** 67% and 66% respectively of African countries are among the bottom 41 countries in the world. Concerning digital skills, 55% of African countries are among the bottom 41 countries in the world. These statistics reveal the weak adoption of digital technologies in African.

▪ The lack of usage access and digital skills in Africa

The digital divide approach based on inequalities in internet access has evolved into a divide that includes differences in skills to use the internet (Fuchs, 2009; Selwyn, 2004; Van Dijk, 2005). Several studies have demonstrated that once access to technology is equal, the differences in how effectively it is used relate to economic, cultural, and social variables (Jara et al., 2015). Digital skills research acknowledges that both basic skills necessary to use the internet and skills required to comprehend and use online content should be accounted for (Eshet-Alkalai & Amichai Hamburger, 2004; Gui & Argentin, 2011; Mossberger et al., 2003; Van Deursen et al., 2016). From this point of departure, several authors have suggested specific skills, mostly related to information searching. According to GSMA³, lack of infrastructure is not the main reason for the relatively low numbers of individuals using the Internet. The much bigger gap is associated with individuals living in areas covered by a mobile network, but not using the Internet. At the end of 2019, 272 million people were connected to the mobile Internet across sub-Saharan Africa, while 800 million were still offline, mainly because of the high cost of smartphones, relative to average income levels, and limited digital skills among rural and less literate populations. In addition, the lack of quality of access, which it has termed “meaningful connectivity”, has been identified as one key reason why people are not using the Internet in Africa. A significant skills gap exists in Africa. Compared to others region, Sub-Saharan Africa registered lowest score in terms of skills in general and digital skills especially (Schwab, 2020). The gap is 30.3 compared to the Europe and North America score which is 74.3. As shown in table 6, the Sub-Saharan Africa scores concerning skills and ICT adoption are the lowest in the world.

Table 6: Regional score of Skills and ICT adoption

Regions	ICT adoption	Skills	Innovation capability
East Asia and the Pacific	70.3	67.3	54.0
Eurasia	59.5	66.1	35.5
Europe and North America	70.4	74.6	58.1
Latin America and the Caribbean	50.9	58.7	34.3
Middle East and North Africa	57.6	62.9	41.3
South Asia	35.1	50.1	36.3
Sub-Saharan Africa	34.3	44.3	29.4

Source: World Economic Forum analysis, 2020

Contrarily to Europe and North America which have a high score in terms of innovation capability (58.1), Skills (74.6) and ICT adoption (70.4), Sub-Saharan Africa has the lowest score concerning innovation capability (29.4), Skills (44.3), and ICT adoption (34.3). These figures confirm the presence of important gap in ICT adoption between Africa and others regions due to skills in general and digital skills particularly.

³https://www.gsma.com/mobileeconomy/wpcontent/uploads/2020/09/GSMA_MobileEconomy2020_SSA_Eng.pdf

6. Conclusion

Since 2007, crowdfunding platforms have abounded on the web and the phenomena is an actual topic of debate which crosses both the theoretical and the empirical fields. The questions take shape from the democratization of the Internet and are synthesized in particular around the place of the merchant on the web. They are now major players in the financing of SMEs and entrepreneurship. The CF knows strong growth and sign up in one wider movement of disintermediation of traditional actors.

Specifically, in Africa, the financing of small businesses and innovative projects faces limited access to bank credit, a modest size and liquidity of the stock markets and a low penetration rate of private equity. In this context, the success of crowdfunding and more generally of the collaborative economy testifies to the seizure of these potentialities by Internet users on the continent.

In this article, we have tried to describe and understand this new mode of financing. In addition, we were interested in showing that Africa, through its economic and socio-cultural realities, has an interest in participating in the development of Crowdfunding. However, Africa industry of crowdfunding remain at the bottom in regional classification. This study reveals digital divide as the main potentials inhibitors for the crowdfunding industry takeoff in Africa. Three main aspects of digital divide are preponderant: The lack of “material access”, “the lack of skill access”, “The lack of usage access”. The lack of material access deal with high cost of access in Africa. ITU data show that telecommunication and ICT services are becoming more affordable and prices have generally followed a downward trend over the last four years across the world, including for mobile-voice, mobile-data and fixed-broadband services. At the regional level, Africa has the least affordable prices. In terms of affordability of fixed services, Africa is the region with the highest fixed-broadband basket prices compared with other regions. The lack of broadband access is a handicap for Africa crowdfunding, because more the broadband is good quality, more is the operational effectiveness of platform. Low bandwidth will prevent meaningful use of many applications, which in turn will have a negative impact on the development of a digital economy.

Issue from documentary and exploratory study, this work has many limitations. The way country protects the interest of investors (crowd), the perception of use of public funds in the country can shape the diffusion of crowdfunding in the country. The future research could take into account the institutional aspect in the region. The quality of institutions in the country headquartering the platform may play an important role in the crowdfunding diffusion in the country. As future avenue of research, we are considering to study empirically the drivers of crowdfunding dynamic of domestic platform using institutional theory perspective.

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Appendix 1: portal of domestic African crowdfunding platform operating in 2017

Crowdfunding Platforms launched in Africa as of 20/11/2017					
N°	Pays	Nber	Dénomination	Year of création	Web site
1	South Africa	21	Fundfind	2013	www.fundfind.co.za
			StartMe	2012	www.startme.co.za
			Thundafund	2011	www.thundafund.com
			Angel Investment	2011	www.angelinvestmentnetwork.com
			investmentNetwork	2011	www.investmentnetwork.com
			ChangelivesNow	2016	www.changelivesnow.co.za
			Different.org	2014	https://different.org/
			Jumpstarter	2013	www.jumpstarfund.com
			Backabuddy	2015	www.backabuddy.co.za
			Crowdinvest	2012	www.crowdinvest.co.za
			Patreon	2013	www.patreon.com
			Sun Exchange	2015	https://thesunexchange.com
			CitySoirée	2013	www.citysoiree.co.za
			Reality Africa	2015	www.realtyafrica.com
			Realityy Wealth	2014	www.realitywealth.com
			CandyStick	2015	https://candystick.co.za
			Ubuntu Finance	2015	www.moneyweb.co.za
2	Algérie	02	Chriky	2015	www.chriky.com
			Tziiza	2013	www.tziiza.com
3	Angola	02	Techinafrica.wpstarter	2017	Techinafrica.wpstarter.agency
			Deya	2017	www.deyamais.com
4	Bénin	02	MasterCorp	2016	www.e.mastercorp.net
			Tho-Kpohon	2014	www.aced-benin.org
5	Botswana	01	Popagano Crowdfunding	2017	En cours de construction
6	Burkina Faso	00	/	/	/
7	Burundi	00	/	/	/
8	Cameroun	02	Guanxi Investmemt ;	2017	www.guanxi-invest.com
			Africun	2016	www.africunplateforme.one
9	Cap-Verdes	00	/	/	/
10	Comores	00	/	/	/
11	Congo	00	/	/	/
12	Ivory Coast	03	Orange collecte	2015	collecte.orange.com
			coproprio	2014	www.coproprio.com
			Invest ivoir	2014	ivoirininvestweebly.com
13	Djibouti	00	/	/	/
14	Egypt	06	Zoomaal	2013	www.zoomaal.com
			Shekra	2013	www.shekra.com
			Yomken	2012	www.yomeken.com
			Aflamnah	2012	www.aflamnah.com
			Aqarfunder	2015	www.aqarfunder.com
			Tennra	2015	www.tennra.com
15	Eretria	00	/	/	/
16	Ethiopia	00	/	/	/
17	Gabon	01	G-starter	2017	g.starter.com
18	Gambia	00	/	/	/
19	Ghana	02	FarmableMe	2013	www.farmable.me
			SliceBiz	2014	www.slicebiz.com
20	Guinea	00	/	/	/
21	Equato. Guinea	00	/	/	/

22	Guinea-Bissau	00	/	/	/
23	Lybia	00	/	/	/
24	Kenya	02	M-chamga	2012	Changa.co.ke
			Babandu	2013	www.babandu.com
25	Lesotho	00	/	/	/
26	Liberia	00	/	/	/
27	Madagascar	02	Kapital plus plus	2016	www.kapitalplusplus.com
			Fanjava	2016	www.fanjava.com
28	Malawi	00	/	/	/
39	Mali	01	BabyloanMali	2017	www.babyloan.org
30	Morocco	05	Afineety	2013	www.afineety.com
			Smala & Co	2014	www.smalaandco.com
			Cotizi	2011	www.cotizi.com
			Atadamone	2014	www.lesco.ma
31	Mauritius	01	Small step Matters	2017	www.smallstepmater.org
32	Mauritania	00	/	/	/
33	Mozambique	00	/	/	/
34	Namibia	02	Investor Network	2015	Investornetwork.com
			Namstarter	2017	Namstarter.rlabsnamibia.org
35	Niger	00	/	/	/
36	Nigeria	15	Imeela	2016	www.imeela.com
			Donate-ng	2016	www.donate-ng.com
			Malaik	2015	www.malaik.com
			ScholarX	2017	www.scholax.com
			FundaSolva	2014	www.fundo.solva.com.ng
			234Give	2012	www.234give.com
			Casagruppo	2013	www.casagruppo.com
			Naturfund	2015	www.naturfund.com
			Farmcrowdy	2017	www.greentecthcapital.com
			Funmilowo	2015	www.funmilowo.com
			StartCrunch	2014	www.startcrunch.com
			NaijaFund	2013	www.naijafund.com
			Helpfundng	2016	www.helfundng.com
			FinoFund	2015	www.finofund.com
			pitchoffice	2013	www.pitchoffice.com
37	Uganda	02	Akabbo	2014	Akabbo.ug
			UCN	2013	ucn.crowdfunding.com
38	Centrafica Rep	00	/	/	/
39	RD Congo	00	/	/	/
40	Tanzania	00	/	/	/
41	Rwanda	01	Yewou	2015	www.yewou.com
42	Sao Tomé-et-P	00	/	/	/
43	Senegal	02	Waallam	2017	www.waallam.com
			Jaappalé	2016	www.jaappale.org
44	Seychelles	00	/	/	/
45	Sierra Leone	00	/	/	/
46	Somalia	00	/	/	/
47	Soudan	00	/	/	/
48	Swaziland	00	/	/	/
49	Chad	00	/	/	/
50	Togo	03	ABREC	2015	Abrec.financeutile.com
			Mivafunding	2013	Mivafunding.com
			OmobilierFunding	2014	Omobilier.o-mobilefunding.com
51	Tunisia	02	Cofundry	2014	www.cofundry.com
			Afrikwity	2013	www.afrikwity.com

52	Zambia	00	/	/	/
53	Zimbabwe	02	Tswanda	2016	www.tswanda.co.zw
			Found-4-Crowd	2015	www.f4C.co.zw
54	International CFP created specifically for Africa	03	Afrikstar	2013	www.afrikstar.com
			Islamic Relief S.A	2012	www.islamic-relief.org.za
			itsaboutmyafrica	2015	www.itsaboutmyafrica.com