DIGITAL DISTRIBUTION IN AND FROM AFRICA: A COMPARATIVE ANALYSIS OF THREE CASES

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This paper discusses technological innovation and related transformations in the value chain of audiovisual content in Africa. Our focus will be on distribution, because (1) distribution has since long been identified as an important challenge for Africa's film and media industries, and (2) recent innovations, particularly related to web and mobile connectivity, affect the distribution of and access to audiovisual content. We will refer to these as a second wave of digitization, and a disruptive form of innovation. The first disruptive innovation wave is understood as the switch from celluloid to (first videotape and then) digital filmmaking, which propelled local industries such as Nollywood.

Film; video; Africa; value chain; digitization

INTRODUCTION

Scholarly research on the interrelations between technology and cultural industries has traditionally been rooted in Western contexts - for instance, the Frankfurt School trail of thought, theories of techno-determinism (De Vinck 2011, 170-172), social determinism (eg. Mackenzie and Wajcman 1999) - and in the context of globalization theory (Appadurai 1996, Straubhaar 2007, Castells 2000).

Studies on innovation and related evolutions within Africa have focused on development and democratization (for instance, Heeks 2009), research into the social and activist use of mobile technology in developing regions (such as the activist and research network Mobileactive (www.mobileactive.org)), and the appropriation and domestication of popular media through new technology, allowing for new "public spheres", in the sense of Habermas (Wasserman 2011, p. 5).
In the context of African media and cultural studies, most research has looked at the first 'wave' of digitization[1], with digital recording and DVD/VCD-technology propelling Nollywood (the hugely successful South-Nigerian popular cinema genre) and indigenous industries elsewhere (Haynes 2000, Krings in Saul & Austen 2010 pp. 74-91, Rasmussen 2010, Meyer 1999). Given the strong presence of foreign content, there have also been accounts of global cultural flows leading to cultural hybridization (Okome 2007) or even semi-Americanization (Louw in Wasserman 2011, pp. 32-35) of African production.

In contrast, hardly any – if any – scholarly research has looked at technological innovation in the spheres of video and media distribution in Africa. We contend that a second 'wave' of digitization is taking place, with improved connectivity facilitating innovations of a more radical nature, and creating new market practices: online and mobile video-on-demand diffusing African creative audiovisual content. This is especially interesting because distribution is commonly viewed as one of the major, if not the biggest, challenge of African film industries (Mhando 2010, Diawara 2010). This second 'wave' of digitization is not just a matter of technology 'arriving' in Africa and giving rise to new distribution systems. We assume it to be a range of interrelated events and evolutions – economic, technological, social. The new practices raise questions regarding access and affordability, pricing and business models, the context in which these evolutions take place, and the value chain at large. This is what this paper will address. Our research question will thus be:

How does technological innovation, particularly the growth of broadband connectivity and the proliferation of mobile technology, affect the value chain of film and video in Africa, particularly its distribution? What audiences are targeted and reached through it, in social-economic terms and in terms

1 Nollywood emerged after video recording equipment and VHS became available in the 1980s, later to be replaced by optical disks.

of where they are? What type of content is distributed, what pricing models are used, and why? How does all this relate back to incumbent distribution networks? What are the relevant contextual variables affecting these innovations?

Our methodological approach will be exploratory: we have interviewed management staff of three firms active in online and/or mobile distribution of locally-produced content in different regions: Lagos (Nigeria), Nairobi (Kenya), and Cape Town (South Africa). Neither our methodological approach – purposeful sampling and semi-structured expert interviews - nor Africa's reality as a diverse and socially/economically stratified continent, allow for generalizing statements. What we set out to do through the analysis of our cases, is look for cues on how technological innovation is materializing in the spheres of audiovisual distribution in Africa.

Before turning to our cases we will give a brief, selective review of the elements in innovation and value chain theory relevant for the task at hand. We have referred to the increased web and mobile connectivity on the continent as to a second 'wave' of digitization. We will discuss the theoretical elements needed to argue why we regard our cases as examples of disruptive technological innovation. After this we will briefly point out the most important characteristics, in our view, of the relevant value chain in Africa as compared to the West. This will provide us with a minimum of context in which to situate our cases.

TECHNOLOGICAL INNOVATION; THE FILM AND MEDIA VALUE CHAIN(S) IN AFRICA

By "innovation" we are primarily referring to "technological innovation", i.e. innovation related directly or indirectly to technology. Flichy (1995) makes this relationship explicit with his concept of "socio-technical frameworks". Technology emerges from a framework combining a techno-functional and a market and usage-focused dimension. Innovation, then, is the result of the interplay between technical and social actions and interests: of users, industry players, vendors, et cetera.
Moreover, innovation usually comprises an element of economics. For Schumpeter (1964, pp. 59-62), more than just science or knowledge it is related to business activities and market dynamics: actions of individual entrepreneurs, new organizational or market forms, the introduction of new technology in the marketplace. Finally, innovation can be procedural (i.e. building on existing technology to improve or otherwise modify it, without radically changing the nature of the market or industry), or disruptive (Burgelman 1989). Disruptive innovations bring with them a "game change", determined by new technology and other contextual factors.

The term "value chain" was theoretically defined by Michael Porter as "the set of activities through which a product or service is created and delivered to customers" (Porter 2001, p. 74). Originally used to assess value flow within individual firms, the concept is now used for industries too (De Vinck 2011, p. 181; Finney 2010, p. 2). In the context of film and media distribution, the most basic chain shows value flowing from production/creation, over distribution and exhibition, to consumption, with financial value flowing back 'upstream' (De Vinck 2011, p. 182). Many more detailed models were drafted after the American motion picture industry and the European and American independent film industries. Efforts have been made to account for the recent processes of convergence between sectors and delivery platforms, blurring technological and market boundaries, and rendering the traditionally linear value chain increasingly complex (ibidem p. 519).
No such value chain models exist representing the film and media industries in Africa. Though in the ambit of one research paper it would not be realistic to undertake this task, it seems warranted when discussing part of an industry, to provide a minimum of insight into its particulars. That is what we will do before discussing our case studies.

Production/creation
Film financing and production processes in Africa are different from the US studio and the European public funding system. There are at least two largely unrelated circuits of production. One is often referred to as African world cinema: funded by and/or in co-production with a European country, supported by festival grants, produced for big (festival or cinema) screens, and in a narrative and aesthetic style targeted at foreign audiences. The movies circulate in international festivals such as Cannes and Berlin and the biannual Fespaco festival in Ouagadougou, much more than amongst African audiences (Diawara 2010).
South-Nigerian Nollywood is the best-known exponent of a second circuit: that of African popular filmmaking. Production here is in large part a matter of individual entrepreneurism. Financing comes from private sources, such as support from friends and family (Southwood 2013). This production field cannot be compared with

the budgets, degrees of specialization and fine-grained organization in the West. Both in style and technical refinement it is made for television rather than cinema screens. In fact it is often regarded as closer to soap opera than feature film (idem; Ebewo 2007; Haynes 2006). The movies are distributed on optical disks through retail networks inside Africa and in the Diaspora. Their producers are often also their directors and screenwriters.

Distribution
It is often said that Africa, apart from retail vendors of movies on optical disks, does not have cinema distributors. This is partly due to the low volume of movies produced for big screens and the fact that, despite a few exceptions, cinema theatres are far and few between, and have a preference for US studio or Bollywood fare (Mhando 2010, Rorvik 2012).
The approach to intellectual property rights (IPR) too, is different from the American and European systems. In the popular movie circuits the idea of IPR is largely discarded: movies are produced on micro-budgets within very short production cycles and sold for a flat fee to a distributor controlling a retail network. The movies are then traded as a 'commodity' product, and it is not uncommon for a distributor to illegitimately press extra copies to boost sales numbers. Shortly after release the movies become available in pirate networks. Interestingly, such IPRs possess great potential value, since there is no territorial demarcation of rights and no established windowing system. Contrary to Western distribution licensing, the rights almost always have global reach. For distributors of content appealing widely to African viewers, this represents large potential revenues.

Exhibition
Cinema theatres in Africa are rare and expensive, and do not usually screen locally-produced film. African movies tend to circulate in semi-formal networks where they are rented out, sold, or shown in video clubs. Along with the growing popularity of locally-produced content, they are increasingly aired on television, albeit in competition with Nollywood, Bollywood and Latin-American shows. Broadcasters often consider themselves a promotion platform for the movies, paying very small fees or sometimes even requiring payment for airtime (Bekker 2012).

Consumption
Before Nollywood, African-produced film was a rarity within Africa. Nollywood's success points towards a large demand for African productions, or at least for productions with a closer fit to local cultures and tastes, than the movies that had circulated traditionally. The notion of what is "local", however, warrants some debate. Nollywood is regarded as local though it reaches audiences worldwide; Tanzanian Bongowood, too, has transnational appeal within the East African region. It appears that what is meant by "local" content, then, is "content produced within Africa" – "continental", so to speak. The distinction is tricky though: African-produced world cinema, because of its style and aesthetics, is not normally considered "local", while new "Black" genres emerging in the Diaspora (hip-hop being the strongest example) resound strongly across the continent. To what extent African audiences seek "local content", and what content exactly this is, is also related to questions of cultural capital and financial means. African audiences are price-sensitive, but middle classes with increasing disposable income (and rising quality standards: Ekenyerengozi 2012) are growing steadily (McKinsey 2010).

Case studies
We will discuss three case studies selected from countries in different regions: Nigeria, Kenya, and South Africa. While this increases data variety and thus suggests higher validity, these countries have more in common than might be expected. All three are regional economic powers, and they are all considered innovation hubs (Swart 2011, p. 27; Grosskurth 2010, p. 161). It is therefore not surprising that the more advanced initiatives in digital distribution, most likely to provide relevant insights, are to be found there.

iROKO TV (www.irokotv.com, °2011), based in Lagos and London, and now expanding to Johannesburg and New York, is a video-on-demand platform diffusing Nollywood content to Diaspora and Nigerian audiences. It is part of iROKO Partners, which also distributes Nigerian music through its online and mobile platform iROKING. iROKO TV is used most by African people in the West, and is most accessed through its web (as opposed to its mobile) platform. iROKO Partners employs about 100 people, the majority of whom work for iROKO TV. It has a catalogue of approximately 6.000 movies.
Nairobi-based **Buni TV** (www.buni.tv, °2012) too, is a video-on-demand platform, though not for Nollywood movies, nor for the Kenyan equivalent, Riverwood. Buni TV targets upper-middle class audiences within Africa or of African descent who want to watch "high-quality, professionally produced, modern" African content on their smartphones (Lora-Mungai 2013). It is interested in altering Africa's image as producing generic, low-quality

content, and promoting its more dynamic, more contemporary and higher-quality productions: film, music videos, comedy, documentaries. The content has links with contemporary pop culture and is drawn from the Diaspora as well as from within Africa. Buni TV is a start-up incubated in Buni Media, which has a presence in Los Angeles and Barcelona too, and which is active in production, animation, special effects, and publishing. Buni Media has a team of 88 people, 8 of whom work exclusively for Buni TV. Buni TV has about 20 distribution license deals and a partnership with VOD-platform africafilms.tv, giving it access to about 1.000 more films.
Bozza (http://bozza.mobi, °2012), from Cape Town, is a stand-alone start-up. It is a mobile platform for talent discovery, the initial phase of which was funded through equity investment, and now looking to expand. Targeted at giving African creatives (in music, film, poetry, and other disciplines) the opportunity to self-promote and self-distribute, it seeks audiences in townships and urban slum areas interested in what is made within or about their communities. It seeks to service urban bottom-of-the-pyramid[2] users across Africa who possess older-type feature phones (Kaye 2012). CEO Emma Kaye is convinced that in the future her audiences will 'migrate' to smartphones, and Bozza plans to 'migrate' with them. Bozza's team consists of 10 people. It has at least 2.000 contributors.

Nollywood has, over the past decades, become a strong brand and a mass product, reaching people continent-wide and far into Diaspora communities. It could be argued, therefore, that **iROKO TV** with its online offer is not necessarily providing access where before there was none; rather, through the 'anywhere, anytime' character of video-on-demand it has made it easier to watch the movies: it fills a 'comfort'-related gap in the market. Movies can be viewed free of charge, with an additional subscription option: 5USD per month gives access to iROKO TV +: more recent movies in an advertisement-free space. iROKO TV+ has about 7.000 subscribers.
iROKO TV counts about 650.000 registered users, and iROKO Partners has reached more than six million unique users since 2010 (www.irokopartners.com), most of them in the West: US, UK, Canada and Germany are its largest markets. Diaspora viewers access iROKO TV through computers rather than mobile phones, as is common in Africa. However, the advent of LTE[3]-network infrastructure to Africa's capitals is expected to boost opportunity for the mobile distribution of creative content. Media analyst Russell Southwood (2013) writes: "Initially iROKO Partners was largely focused on Diaspora Nigerian audiences but since it started (...) it has seen its home country Nigeria go from 12th by share of views to 6th position. With fast mobile broadband on its way through LTE (...) the 27% who are currently making mobile searches to it, will soon be using it."

Nonetheless, connectivity issues in Nigeria are but one of the reasons why iROKO TV targets Diaspora rather than Africa-based audiences. iROKO's "freemium"[4] pricing model requires sufficient income from advertising, and advertisers in the West pay larger fees than in Africa. Target audiences in the Diaspora are more likely to have the financial means for a subscription fee than Nigerian users. Contrary to Kenya's pioneering mobile payment system M-Pesa, Nigeria does not have a widely accepted and trusted system for mobile payments in place (Ugwu 2013). What is more, Nigerian audiences viewing feature-length movies on handheld devices face high traffic costs, while telecom operators are infamous for charging high percentages on revenue generated through their networks. "We are not charging within Nigeria, but if we were, we would be forced to go through the mobile operators, who keep more than half (60 to 90%) of each payment. That makes no sense for us" (Nduka-Agwu, iROKO's head of business development, 2013).

For now, iROKO TV's mobile offer is limited to short promotional videos: trailers, 'funniest scenes' etc., while full movies are restricted to the computer-accessed online platform. In contrast, its sister organization iROKING delivers music to Nigerian audiences through mobile phones on its own platform and on a range of third-party platforms. Playing mp3-files requires less sophisticated handhelds, and data costs are smaller. Both platforms, for now, are fully concentrated on the West for profit, but plan to build audience awareness and generate revenues within Africa in the future through advertising and various subscription options. Strategically, though, until the required technological context (the network, good and affordable smartphones, a system for mobile payment) is in place, it makes more sense to stay focused on iROKO's audience base in the West (Ugwu 2013, Nduka-Agwu 2013).
Buni TV's mission speaks directly to our research question: "to revolutionize the way African film and other video content is distributed and consumed on the continent by leveraging Africa's mobile boom, including Kenya's mobile payment ecosystem" (executive summary 2012). Like iROKO TV, Buni TV is a video-on-demand platform for African creative content, incubated within a larger company. Contrary to iROKO, it primarily targets Africa-based – for now, mainly Kenyan – audiences, with an offer for online and mobile viewing. Within Africa, it focuses on

2 "Bottom of the Pyramid" people are defined by the World Bank as living on less than USD 2,5 daily. During our interviews, Bozza's Emma Kaye stressed that she uses the term 'loosely', i.e. referring to lower-class users (not living in destitute poverty).
3 "Long Term Evolution" is the newest generation standard for mobile networks.
4 "Freemium" refers to a free offer supplemented with a (paid) premium offer.

upper-middle class audiences who possess smartphones – about 7% of all mobile phones in Kenya (Lora-Mungai, 2013). Apart from distribution through its own platform, it wants to offer its services as a distributor to third-party platforms such as Hulu or Netflix (Lora-Mungai 2013).
By February 2013 Buni TV had reached 1 million views, 60% of them from Africa (mainly Kenya, with a marginal spill-over to Tanzania and Uganda, where many Kenyans live), and 22% from the US and Europe (Balancing Act Africa 2013a). Its registered user-base consists of approximately 300.000 users. Its focus on Africa goes hand in hand with a focus on mobile distribution: 33% of Buni TV's traffic consists of mobile views. 77% of new visits come from mobile devices (executive summary 2012).

Buni TV's focus on mobile distribution seems to suggest that Kenya's network infrastructure and data pricing models are more accommodating than in Nigeria. Though we have not retrieved technical information to corroborate this, according to our iROKO TV spokesperson mobile connectivity in Kenya is better than in Nigeria. Kenya is also the cradle of M-Pesa, the world's first mobile payment system, and has traditionally been very focused on ICT and mobile innovation. For the past years, the Kenyan government has regarded ICT-innovation as one of its top strategic future priorities (see, for instance, ICT Board Kenya 2012). Though Nigeria is known as one of the best places for ICT, this might suggest that Kenya has, if not a better, then at least a very good technological and economic context for video-on-demand initiatives.

"Kenya is better, definitely. The country basically said, this is what we want to be, the number one IT people in Africa, and they are getting there. (...) Interestingly, in South Africa you have the poorest connection [in comparison to Nigeria and Kenya], a sad contrast with the other advantages the country has." (Nduka-Agwu 2013)
Buni TV does not target the majorities. Its editorial policy is relatively selective. It does not distribute popular cinema but positions itself as "Afropolitan": pan-African with a global outlook, holding African content to the same standards as Western content. It wants to purvey the "modern African experience" which today's growing middle classes can relate to (Lora-Mungai 2013). Since Buni TV is part of a production company, it also diffuses content produced in-house. More importantly for our research question, it has started producing video specifically for small screens: locally appealing short comedy clips with little visual detail, perhaps inspired by the recent success of stand-up comedy in Kenya. This is one of the first cases where the specific African context and habitus for web-browsing is feeding back into production choice: a strong preference for mobile internet, a preference for locally relevant content, and growing middle-class audience groups exposed to - the production quality of - a global offer which they seek in local productions as well.

Currently Buni TV's offer is available for free, but a freemium pricing model is to be launched in April 2013. For viewers accessing through computers – mostly in the West - there will be a subscription offer for unlimited viewing, comparable to iROKO TV+. For people watching exclusively on mobile phones – mostly in Africa - this fee will be set significantly lower. Mobile viewers will have the option not to pay for a subscription but to pay micro-amounts for specific pieces of content they wish to watch on their handhelds. In anticipation of a subscription model, Buni is withholding and building its catalogue of feature films. It is not making the films available yet, but is promoting them through trailers while working to acquire their digital distribution rights. Documentaries, music videos, and television content are offered for free.

Contrary to iROKO TV with Nollywood, Buni TV is not merely providing an extra medium for readily available content. It has a curated offer which cannot be found in physical retail networks in Africa, and which is only partly aired on television. It is spread over international festival programs and a variety of blogs and online magazines. It could be suggested, therefore, that Buni is addressing a gap in the market for the currently unmet demands of a specific audience segment.

Our third case, **Bozza**, is a mobile application, or "app", for self-distribution and talent discovery. It targets urban lower-class users across Africa, focusing primarily on South Africa, Zimbabwe, Kenya, and Nigeria.
Bozza launched in March 2012; by July the app had been downloaded more than 4.000 times. It now has 2.000 poetry contributors reaching 17.000 readers (African Perspectives 2013). We have not been able to retrieve more recent statistics: a new version of the app will be launched in May 2013, and Bozza is not making any public statements until then.

The company has made it a priority to design and develop for the handhelds used by its target audience: older-type feature telephones with small screens (Kaye 2012). Before content is uploaded, it is compressed in a way to

keep data charges – the only costs incurred by users – at a minimum. According to CEO Emma Kaye, this is done without compromising on viewing or audio experience. Designed specifically for legacy phones, quality-wise Bozza 'works' best on those phones.

As Buni TV's Marie-Lora Mungai and iROKO TV's Adibeli Nduka-Agwu, Emma Kaye believes that locally-relevant video is a large commercial opportunity in Africa. But contrary to iROKO TV with Nollywood and Buni TV with "Afropolitan" content, it has focused on yet another type: the creations of people who may be relatively well-known locally, but have no visibility outside their communities, let alone internationally.
While Buni TV draws its offer from a variety of sources (festivals, blogs, producers), Bozza works bottom-up, addressing a gap in the market for what it calls "hyper-local, premium user-generated content" (Kaye 2012). And while iROKO TV's and Buni TV's audiences within Africa are upper-middle class, Bozza has chosen to target the lower-income strata with a free offer.

None of our cases have received public support, though all have obtained different measures of start-up funding from private sources and two are part of a larger company. All of them have also secured partnerships, some of which are quite new to the African video and media value chain. iROKO TV has a deal with Youtube, giving it high ranking when users search the platform for "Nollywood". The partnership also gives iROKO extra customizing options for its various channels, more upload capacity, and advertising possibilities, the revenues of which are shared between the two partners.

Buni TV has a partnership with Safaricom (Kenya's biggest mobile operator) for organizing payment through the M-Pesa platform, as well as for promotion through text-marketing. Samsung (leader for Android telephones in the African marketplace (Goldstuck 2013) is developing a Buni-application for Android handhelds in Africa and has made Bozza available in its app-market.
Both Buni TV and Bozza plan a further roll-out to strategically important markets in other regions (invariably concentrated around Nigeria, South Africa, and Kenya), though this is dependent on further funding.

Buni's editorial policy limits the potential volume of its offer, which it is in the process of growing. It has secured a joint acquisition agreement with the Dakar-based video-on-demand platform Africafilms.tv. At the same time, it is building its audience base. One way in which it attempts to establish itself as a brand for high-quality video, is by sourcing external brand-reinforcing videos. It embeds videos from external sources, and it has associated itself with three film festivals, helping it to acquire attractive content: Africa in Motion and Film Africa in the UK, and the Kenya International Film Festival.

iROKO TV and our two younger cases have different perspectives on contracts with content contributors. iROKO TV buys exclusive digital distribution rights for a flat fee and for a fixed number of years. The company has a formal approach to IPR management but has one foot in Nigeria's Nollywood industry, where producers prefer fixed amounts of money upfront to shared revenues. The volume of movies it licenses and the ubiquity of fraudulent practices in the Nollywood marketplace, make simple and transparent account paramount (Nduka-Agwu 2013). Buni TV and Bozza work with shared revenues revolving around a 50/50-split, which is not uncommon in the West either (De Vinck, personal communication, 2013). According to Lora-Mungai of Buni TV, video-on-demand in Africa is in its infancy, making shared risks and revenues the fairest option: "No one knows the potential value of an African film on VOD yet, we are just building the eco-system. There is no history to go and say 'that film made 200, 2.000, or 20.000 USD'. If we were to opt for flat fees, we would not know how to price the films as we do not know their potential yet."

COMPARISON OF CASES; RELEVANT CONTEXT

We have looked at different cases pertaining to an industry, part of which – its distribution sphere - is going through a phase of disruptive innovation (Burgelman 1989). Indeed, our cases combine new technology with new business practices and emerging industry models. When we compare them, we see three young players with clear commonalities and differences. They share a focus on locally-produced content, despite important differences in the type of content worked with. All three confirm the importance of mobile technology for digital distribution in Africa, but approach this in different ways: from targeting Diaspora audiences while waiting for an African mobile ecosystem to grow (iROKO TV), over a mixed model (Buni TV), to an (urban) Africa-targeted approach (Bozza). Viewing content on Africa-focused Bozza is free, while the other two firms have a 'freemium' approach. Roll-out plans on a mid-term invariably include South Africa, Nigeria and Kenya, and in the case of Buni

TV and iROKO TV also Diaspora audiences in Europe and the US. This is not surprising since digital distribution rights are global, Diaspora audiences are large and widely dispersed, and at least in the case of Nollywood, their demand is unquestioned.

The table included below summarizes the answers to our research question for each firm analyzed. Though not generalizable to the continent, we believe this gives important clues about the direction in which digital distribution in Africa is evolving. Some of these clues point in a direction that seems characteristic of web distribution in general (hybrid pricing models, for instance, are also common in the West), while also suggesting differences (a larger emphasis on free content and efforts to keep data costs at a minimum, in view of the price-sensitivity of African audiences).

	iROKO TV (°2011)	**Buni TV** (°2012)	**Bozza** (°2012)
Headquarters; presence	Lagos; London, New York, Johannesburg	Nairobi; LA, London, Barcelona	Cape Town
Content	Nollywood	"High-quality" modern, Kenyan and international content.	User-generated, hyper-local
Catalogue	appr. 6.000 movies	100 videos + access to Africafilms.tv library (+1.000 movies)	(at least) 2.000 contributors
USP	Enhanced comfort: anywhere anytime	Anywhere anytime + curated offer	Hyper-local
contracts with rights holders	Money upfront	shared revenue (currently limited)	shared revenue (currently limited)
Other content types	music through iROKING	shorts, animation, music videos, documentaries	Poetry, music, video
Target audiences (socio-demographic)	mass audiences in Diaspora; elite in Nigeria	"Afropolitan"	Lower-income
Target audiences (geographic)	Mainly Diaspora; within Africa, mainly Nigeria	Africa (Kenya), Diaspora	Africa (South Africa, Kenya, Nigeria,..)
Audience numbers	750.000 registered users	300.000 registered users	Min 17.000 downloads
Platform	Mainly online; mobile app for promotion	online and mobile	mobile
Business model	Freemium + advertising; part of a larger company	Freemium + (limited) advertising; part of a larger company	Free + (limited) advertising; stand-alone
Partners	Youtube	Safaricom; Samsung; Africafilms.tv; film festivals	Samsung
Deals with content contributors	Flat fee	Shared revenue 50/50. Also acts as distributor to third party platforms	Shared revenue 50/50 or more (i.e. more revenue for content contributor)

This table does not address the question of relevant context. Some of this context was sketched earlier, when we highlighted particularities about the film and media value chains in Africa. Through analyzing our cases we have seen how they take advantage of certain circumstances (falling prices for increasingly powerful handhelds, growing middle classes, an increasing demand for local content) while being challenged by others (lack of a commercial ecosystem, piracy, faulty network infrastructure, a weak advertising market, etc.). There are also national/regional specificities. When Lora-Mungai contends that "the African VOD space is (...) bound to explode thanks to the inevitable rise in high-speed internet access on the continent, the falling costs of bandwidth and data, and the sustained demand for local content", she speaks from the Kenyan context. Nduka-Agwu in Nigeria and Kaye in Cape Town see several remaining hurdles: insufficient network capacity and the lack of an ecosystem for mobile commerce, data costs and non-mobile friendly platforms. Although local initiatives offering

access to African movies through mobile phones are emerging[5], Nduka-Agwu does not believe that the current network in Lagos would allow yet for a smooth viewing experience of feature films: "I see much potential in online distribution in Africa. We have now seen the very tip and we can feel what is possible, but the infrastructure is not quite there" (2013).

Nigeria has the advantage of being very populous: 150 million people, and many more across the Diaspora, constituting an enormous core market for Nollywood, while Kenya is much smaller but has formulated the clearest innovation-related policy targets of the three countries. South Africa's productions do not seem to enjoy the regional resonance that Nollywood or Tanzania's Bongowood have, but the country has a much better system in place for production funding. Obviously political stability, innovation policy and economic outlook are all important contextual variables that differ from country to country.

Digital distribution in Africa seems to have entered a phase of growth, after being pioneered four years ago. There are now about six players in the field (Balancing Act Africa 2013b). According to Lora-Mungai the industry will start to consolidate, and newcomers will face a market much more difficult to enter. "Unless you have a very different take on the business, (...) if you want to start off now you will not succeed. Some will die off and some will partner, like we did recently." Indeed, the start-up success of our three cases may well be related to the fact that they are not in each other's direct playing fields. The non-territorial nature of digital distribution in Africa can be expected to force newcomers into unexplored niches.

IMPACT OF DIGITIZATION ON THE VALUE CHAIN

What remains to be done, is to confront our new insights with the incumbent value chain: is it affected by these innovative practices, and how?

In the spheres of production, the most important transformation related to mobile distribution is arguably the emerging production specifically for the screens of handheld telephones. This is not an entirely new phenomenon. In 2007 South African artist Aryan Kaganoff released his acclaimed "cellphilm" *SMS Sugarman* (Bisschoff & Overbergh 2012). The Kenyan small-screen animation clips made by Kulahappy (www.kulahappy.com) are another example. In the future this might lead to new specializations becoming more important (optimizing content for mobile distribution, developing interfaces and applications, scripting skills for much shorter stories, etc.) than traditional specializations for films.

Mobile and online distribution of African popular cinema is providing an extra medium of access to movies traditionally diffused along physical retail networks. It is not suggested that this will replace the physical networks any time soon, especially not in rural areas. However, traditional vendors have recognized its importance and are showing interest in its future opportunities (Ugwu 2013). Digital distribution is also opening possibilities for a more diversified and segmented offer of African-produced content, as we have shown. It remains to be seen how successful and economically robust the pioneering initiatives which we have discussed will be.
Exhibition is converging strongly with distribution. Indeed, what is the difference between a platform *diffusing* content, and the content being *exhibited* on the same platform? Of our cases, only Buni TV takes up a role as a more 'traditional' distributor to third party platforms. For the other cases, we could speak of a strong convergence between exhibition and distribution, or suggest that the platforms are new types of *exhibitors*, while telecom players (the technological networks underpinning the distribution) are new types of *distributors* within a digitized value chain.

This brings us, finally, to the question of new players. Clearly, mobile operators are becoming increasingly important, not only for distribution but also for marketing and, at least in Kenya, monetization. Digital platforms have entered the fore, providing enhanced visibility in exchange for advertising revenue. Mobile distribution being central to Africa, there is little doubt about the importance of both local (Safaricom's Yolo) and global (Huawei, Nokia, Samsung) mobile manufacturers.

5 For example the Afrinolly-app, aggregating links to Youtube video content.

CONCLUSION

We have compared three African companies active in the online and/or mobile distribution of local creative content. We have theoretically described them as disruptive innovations because more than improving existing technology they appear to be 'game changers', propelling changing market dynamics, new business models, and new proportions of power and importance between different types of players. Looking for cues as to in which direction digital distribution in Africa might be evolving we have looked at the content they diffuse, business and pricing models, target audiences, and relevant contextual variables.

All of our cases have a well-circumscribed market proposition and have met with success in their start-up phase. It is too soon to tell, though, how well they will fare in the future. This is in large part contingent on contextual factors, i.a. market evolutions (eg. agreements with telecom operators, the evolution of African creative content in quantity, quality, and genres), the technological context (eg. network infrastructure) and national/regional policies. According to our respondents the industry of digital distribution is starting to consolidate and its commercial opportunities are large, but there are many hurdles still to take. These may vary from country to country but are invariably related to technology (networks, applications, devices), policy (to improve infrastructure and stimulate innovation), and specificities of the industry itself (lack of incumbent distribution, the challenge of building a new eco-system).

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