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A significant number of organisations and individuals have assisted the research team in this endeavour. In Rwanda, Professor Felix Akorli and Grace Magambo helped identify key participants and undertook a number of interviews. Professor Akorli put much initial effort into enabling our interviews with the Rwandan Minister of ICT, Dr Igance Gatare, as well as representatives at the Rwanda Development Board and the Rwanda Utilities Regulatory Authority. Claude Migisha provided valuable support in helping to co-ordinate the outreach event at the end of the project with support from RDB and the Chamber of Tourism. In Kenya, the work done by Charles Katua on the parallel project in the Kenyan tourism sector has been important in informing our findings in Rwanda.

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1. EXECUTIVE SUMMARY

1a. Introduction

East Africa was the world’s last major region without submarine fibre-optic broadband internet access, and until the summer of 2009 had been forced to rely on slow and costly satellite connections for access. However, the region has recently been connected via fibre-optic cable – in theory, allowing much greater speeds at much lower prices.

This rapid transformation in the region’s connectivity has prompted politicians, journalists, academics, and citizens to speak of an economic revolution fuelled by information and communication technologies (ICTs) happening on the continent. While some research has been conducted into the impacts of ICTs on economic processes and practices, there remains surprisingly little research into changing connectivity in East Africa.

Here we summarise research examining the effects of this changing connectivity in the Rwandan tourism sector. We seek to understand what impacts changing connectivity is having, who benefits and who doesn’t.

1b. Connectivity

Tourism is a sector where connectivity and the internet have been discussed as having the potential to have significant impact. However there has been little research done on how the internet has impacted low-income country tourism destinations like Rwanda. This research drew on 59 in-depth interviews to examine internet and ICT use in this context.

Inputs

Connectivity can support inputs (that is tourism resources and sights) where online visibility allows locations to be presented to the rest of the world. An online presence of Rwandan natural resources, sites and culture was found, but the benefit of that online presence was negligible.

It is already easy for tourism firms to make a case for Rwanda when it comes to its core Gorilla trekking activities, which are well known globally. However, as the country looks to expand into a wider range of tourist resources, sites and events, Rwanda will have to work hard to compete both regionally and internationally.

New resources and cultural sites were less clearly presented online.

Skills and knowledge development can enhance how tourists experience Rwandan sites and services, and skills development has been done online elsewhere. Presently, skills development is typically done offline in Rwanda, through workshops and training. It is only particularly motivated actors in the tourism sector who access online knowledge and self-learn online.

Transformations

Resources and sites are transformed into services to be consumed by tourists. Changing connectivity has played a key role in this transformation, particularly in making organisational logistics easier for Rwandan firms to handle. Online communication simplifies and improves trust between firms both locally and internationally.

Digital communication does not appear to have completely replaced previous offline networks, however. Building links through attending international tourism trade fairs and networking are still crucial elements of tourism in Rwanda and this means that it is difficult for new firms to establish themselves.

For the firms within Rwanda who provide services, changing connectivity brings new risk. Now online information and communications flows make tour bundling easier so that it becomes possible for firms outside Rwanda to take on more responsibilities. Some intermediaries are already being marginalised asafar as offering outsourced hotels directly online. In the future, it is likely that more firms, particularly those who engage in more generic activities, may become disintermediated.

Distribution

Whilst Rwandan firms have pushed towards becoming involved in online distribution of tour resources to customers, the successes of Rwandan firms have been limited. Competition and the locational advantage of outbound tour operators close to customers continue to mean that tourists prefer these firms. Also, many Rwandan firms have difficulties in negotiating the diverse range of websites, social media sites, tourism services and other online resources. It takes time and skill to understand how best to use these resources. Rwandan firms realise that there is great potential in online visibility and internet adoption. Yet, there is still room for further development through undertaking more strategic activity and better understanding of the available tools.

1c. Recommendations and opportunities

Examples of innovative activity were observed in Rwanda which point to opportunities for better use of connectivity. However, often these were activities only undertaken by one or two firms in the sector. Sharing innovative activities could thus lead to wider improvement.

Online destination management

Destination management remains important. It provides visibility and information for tourists who are often not clear about where they want to go, and what they want to do. Online destination management should include extensive information on tourism elements – the natural resources, cultural tours and activities that are possible. This is crucial as Rwanda looks to diversity the range of available attractions to tourists beyond Gorilla and wildlife tourism.

Destination management is also about having more than just one single website. It is about how a bundle of complex cultural and geographic information about a tourist destination reaches customers. This information is as likely to come from ‘pushes’ and generating interest in social networks and other online applications as it does from ‘pulls’ of customers searching for information and visiting websites.

Online knowledge and learning

Although online learning resources have not been used much so far in Rwanda, the production of such resources could be valuable in areas where the sector is looking for improvements. Online learning resources would be particularly useful in jobs where staff turnover is frequent and attending workshops is less viable. This is especially the case with activities like customer services and with management skills in tourism.

Support internal systems and management development

Cohesive internal information systems and skilled management form the fulcrum of more dynamic firms in the tourism sector, and improve the ability of firms to use online resources and services. Adoption is likely to be driven by better managerial training in tourism. Further activities could also push improvements. For instance, promoting knowledge building through hotel and tour associations, and visits to places of best practice might inspire Rwandan firms to improve their tourism services.

1d. Summary

Many tourism firms have adopted and are actively using digital connectivity. But, digital connectivity alone has not led to transformation. Rather, a set of wider barriers prevents the transformative effects of connectivity being realised. Barriers can relate to skills in integrating available technologies into businesses. Online resources and services were also found to poorly fit the needs of the Rwandan sector and this could limit viability. Finally, well-established firms and relationships with outgoing firms have led to a static tourism trade network that is still crucial elements of tourism in Rwanda. Now that better connectivity is available, the goal should be to tackle these secondary barriers to the effective use of connectivity in order to drive improved benefits.

Online services

In our work in the sector, we often observed that one or two firms were using online tools or services efficiently. Thus, sharing best practice in the use of online services and online resources for the tourism sector could be invaluable, and might best be led by well-established tourism associations who could support improved diffusion of knowledge in the sector. However, there are cases where online tools and services fit poorly in the context of Rwanda. With poor fits of online services, it is worth associations and policy makers exploring the options for in the specifically focused African online tourism services that are emerging.

Youth and online media channels

Online media use in Rwandan firms is sometimes seen by managers as a time-sink or as being overly complex. Yet, it is an increasingly important online resource – in how customers find, share and decide on tourism experiences. There is a tendency for tourism firms in Rwanda to outsource social media activity to external consultants, for which they are often overcharged and where they lose direct interaction with through these vital resources. With successful examples in mind, it would be prudent for hotels and tour operators to reach out to young employees. Employing a tech-savvy young staff member as a social media co-ordinator can often be done for a relatively low cost, and can allow firms to build social media benefits and skills in-house.

Branding and niche approaches online

Going online is often not a matter of reaching ‘more of the same’ customers. Firms which strategize and then push to reach specific demographics or targeted segments of customer are generally found to be more successful. There were successful cases of firms who had strategically pushed into niche areas (e.g. bird watching, community tourism, and regional customers). Online activities are a crucial element of such approaches – in looking for such niches and ensuring that they reach a critical mass of customers.

Similarly, for growing Rwandan firms, expansion may not necessarily come through offering extra itineraries and gaining more customers of the same type. Cross branding for different demographics (for instance, by language, by budget) can allow different types of growth. Given that there is little awareness of such approaches it is crucial that these ideas are also linked into training and skills development.

Continue to support internet access within hotels

The Rwandan government has taken positive steps to push internet access in hotels, and support problems when they have occurred. This support has been useful for improving tourist impressions of the quality of hotels in Rwanda. It has also contributed to allowing tourists to interact online when they are traveling, which could increase the country’s online visibility. As demands for connectivity grow, attention to access should be maintained to ensure that hotels keep up with the needs of customers and with bandwidth intensive online resources.
2. OUTLINE

2a. An introduction to the larger project and the contexts of the work

East Africa was one of the world’s last major regions that was not connected to the world’s submarine fibre-optic grid, and until the summer of 2009 had been forced to rely on slow and costly satellite connections for access. However, the region has recently been connected via a fibre-optic cable, in theory allowing much greater speeds at much lower prices.

This rapid transformation in the region’s connectivity has prompted politicians, journalists, academics, and citizens to speak of an ICT-fuelled economic revolution happening on the continent. However, while some research has been conducted into the impacts of ICTs on economic processes and practices, there remains surprisingly little research into changing connectivity in East Africa.

This report focuses on changing connectivity in the Rwandan tourism sector, seeking to understand what impacts changing connectivity has on, who owns the benefits, and how these changes relate to expectations for change. It is currently spearheading new types of development fuelled by ICTs, or does engagement with the global economy enabled by connectivity reinforce inequality, underdevelopment, and economic extravagance? The in-depth research presented in this report seeks to increase our understanding of these questions, as well as provide insights on policies and strategies that might help enhance the potentials of such rollouts in tourism.

In-depth interviews with 59 firms and policy makers linked to the Rwandan tourism sector were undertaken. These were used to study the modes of communications, and highlight the potential effects that information and communication technologies (ICTs) and broadband connectivity were having on the sector. Thus, research principally draws on empirical data as its basis.

2b. Research goals

In Rwanda, tourism has been an important contributor to GDP, national exports and employment (WITC 2013) and it is regarded as one of the key sectors that can drive Rwanda’s economic development. Indeed tourism has been identified as a significant sector in enabling Rwanda to achieve its core Vision 2050 goals (GGF 2009).

Impacts of the internet on the Rwandan tourism sector are important to examine. Tourism as an industry is in change and globally it is a sector that is being radically transformed by the use of the internet, where marketing, information gathering, holiday booking and recommendations are increasingly done online (Balskus & Law 2006). Yet, it is unclear exactly to what extent these transformations are affecting developing countries such as Rwanda. Given changing connectivity, we wish to understand how effective use of this connectivity can bring benefits.

Five interrelated questions are posed with regard to the project goals outlined in the previous section:

1. How are ICTs, including mobile devices, old satellite and new broadband internet connectivity, variability integrated into value chains and flows of knowledge, commodities and capital in the Rwandan tourism sector?

2. Is the Rwandan tourism sector characterised by innovative uses of broadband connectivity or unexpected challenges to broadband use?

3. How are changes in the use of methods of communication and internet access linked to altered socio-economic conditions of economic actors?

4. How do these changes differ from academic discourses surrounding potential effects?

5. Are ICTs fuelled economic revolutions happening on the continent?

In the next section, we draw on global value chain and global production network frameworks to build understanding of how Rwandan destinations, firms and services in tourism integrate into the international delivery of tourism. In order to orientate research, we also explore the ways in which the literature has envisaged the internet as transforming the sector. In Section 4, we outline the research approach undertaken which forms the basis of empirical work.

Later sections summarise the empirical research findings in the tourism sector as related to the five research questions outlined above. We analyse connectivity and internet use in the sector (Section 4), how changing connectivity has transformed relations and activities in the sector (Section 5), how it is changing relationships of ‘production’ (Section 6), and highlight innovations associated with changing connectivity (Section 7).

This work then leads to conclusions in two areas. In Section 8, drawing on fieldwork, we summarise who has benefited from changing connectivity in the tourism sector in Rwanda. Contrasting these findings with policy discourses, we identify some additional risks and policy recommendations around ICT, changing connectivity, and the tourism sector in Section 9.

3. THEORETICAL FRAMEWORK

In this section, we outline a systematic framework to examine the economic effects of broadband connectivity in tourism, drawing on global production network and value chain frameworks. Following an introduction to these frameworks, we discuss two additional elements: first, how to apply these concepts with regard to the tourism sector in Rwanda; and second, we discuss the extensive literature around internet and tourism. This work highlights the different roles that connectivity might play in tourism, and forms the basis of our empirical analysis in the subsequent sections.

3a. Using value chains and production network models to conceptualise tourism

Selecting models

Activities in the tourism sector in Rwanda are best understood when Rwandan firms and policy are considered to be part of a global tourism sector that moves beyond national borders. Adopting a rational perspective in which components of tourism are international (e.g. airlines, travel agents and tourists) could lead to an inadequate understanding of the power, motivations and practices in Rwandan tourism.

International studies of tourism have typically adopted two principal perspectives in analysis. One perspective draws on business literature to examine the approaches that firms, regions or even countries can take to be successful. A second perspective has employed socio-cultural perspectives which particularly focuses on the behaviour and decision making of tourists (Riisendal & Dobbage 1998; Newadomi 2014). While these two perspectives have value, they also have weaknesses. Management literature tends to focus on a single firm or the national sector. This can neglect the increasingly international fragmentation and flexible linkages between firms that occur in reality. An over focus solely on tourist behaviour tends to underplay the fact that tourism at its heart includes many more generic resources and products (hotels, flights, restaurants) which through supply-side activities construct unique tourist experiences (Blanch 2009, Riisendal & Dobbage 1997).

In this work, we are interested in how changing internet connectivity is reconfiguring economic relations in tourism. Thus, our interest is particularly on analysing changes in relations amongst interlinking firms and customers in tourism. Adopting approaches from economic geography and global production network enables us to systematically analyse tourism. It also allows us to overcome the weaknesses of managerial approaches through analysis of the complex and often dynamic processes of production. While we include customer perspectives in models, this work positions the choices and behaviours of tourists as only one element in how tourism activities are created and experienced.

Below we first outline the two models used – global value chains and global production networks. We will then briefly comment on their origins and their relevance to tourism.

Economic geography and globalised production

Global value chains (GVC) models look to examine

“The full range of activities which are required to bring a product or service from conception, through the different phases of production (including a combination of physical transformation and the input of various producer services), delivery to final consumers, and final disposal after use.” (Kaplinsky & Morris 2001 p.4)

Global value chains models draw on business understandings around how production activities are vertically integrated or outsourced in interlinked chains of activity (Porter 1998). GVC models thus take a relational orientation,
The central flow in this diagram can be considered as the value chain. It is a set of transformations of a product by interlinked firms in core production. Outer layers highlight global production networks, some of the wed national, sectional and global networks that influence this core value chain.

It is not immediately clear from Figure 1 if such models are suitable to the tourism sector. GVC and GPN models originate in analysis of globalised industrial production where attention is typically on goods which are transformed through successive sets of production activities. However, we argue that underlying concepts - around globalised relations, fragmented production and uneven power are also crucial in service sectors. Indeed these models have been usefully applied to tourism, for instance to analyse ownership of tour companies in Kenya and power relations in international hotel groups (e.g. Christian 2012, Christian & Nathan 2013, Nowadzanski 2014). As with non-service sectors, these models have allowed scholars to focus on the power and relations and link them to the complex supply-side dynamics of tourism. Such literature has provided a useful perspective for discussion of the often uneven spatial distributions of such sectors and the relationships which orientate these distributions.

We thus argue that these models do have potential for analysing service sectors such as tourism. In the next section we introduce the Rwandan tourism sector before carefully applying these models to the case.

3b. The Rwandan tourism sector

Outline of tourism
This section introduces the structure, institutions and policy of the tourism sector in Rwanda. This provides the basis for the GVC and GPN analysis in the subsequent sections.

Outline statistics
In terms of its proportion of global tourism, tourism in Rwanda consists of only a tiny piece of the global pie, yet it is a crucial element of the Rwandan economy. Table 1 compares travel and tourism statistics across the East African region. It highlights that Rwandan tourism is smaller than neighbouring East African countries. This is not surprising given that Kenya and Tanzania have been renowned for many years as home of the big game safari. However, given the small size of the country’s economy, tourism is still significant in Rwanda. Most notably, tourism expenditure is an important contributor (28%) to the country’s GDP, given the small size of the country’s economy, tourism is still significant in Rwanda. Nevertheless, tourism expenditure is an important contributor (28%) to the country’s GDP.3 Tourism is one of the significant growth industries in Rwanda at around 4.3% per year (UNWTO 2016, WTTT 2013), linked to steady growth of tourist visitors to Rwanda (as shown in Figure 2).

Indicator | Rwanda | Uganda | Tanzania | Kenya
--- | --- | --- | --- | ---
Direct contribution to GDP ($ bn) | 0.2 | 0.9 | 1.5 | 2.1
Direct contribution to GDP (%) | 3.1 | 3.7 | 6.8 | 5.0
Total contribution to GDP (%) | 7.5 | 8.8 | 13.2 | 12.5
Expenditure as share of exports (%) | 28.0 | 23.9 | 26.8 | 19.1
Contribution to employment (%) | 6.5 | 7.6 | 11.5 | 10.9

Table 1: Impact of travel and tourism in East Africa
Source: World Travel and Tourism Economic Impact Data (WTTT 2013)

This paper principally focusses on tourists from outside Africa for two reasons. First, Rwandan strategy in the tourism sector is targeted at this “high-end” international tourism. Such groups also contribute larger sums to tourism expenditure, and they are the main focus of tourism sites and companies. Second, they are also the most likely to be using the internet within their tourism activities.

In this research, the focus is on international tourism, but growing regional and local tourism are also considered. Regional tourism is outside the main strategies of Rwandan policy and firms, and is rarely a fit with the types of costly facilities and connectivity being developed in Rwanda. Nevertheless, regional tourism is still worth exploring. Statistics highlight that in national parks in 2011, 21% of activities sold were to Rwandan residents.4 Very recent integration of the East Africa Community (EAC) also promises growing regional tourism. As such, in interviews we included questions on local tourism, and we also interviewed a number of local travel agents to understand the use of the internet around local or regional customers.

In terms of international tourist activities, Rwandan tourism is still strongly dominated by “Gorilla tourism.” Gorillas are an animal very close to being extinct, and those families located in uplands in the north of Rwanda are presently the most accessible in the world, making them a compelling selling point for tourists (the only other locations of gorillas are one less accessible site in Uganda, and groups in war-torn DR Congo). Costs for visiting the gorillas are very high. The current cost of a gorilla permit alone is $750. This means that they are only accessible to tourists who are highly affluent even by international standards.

Rwandan institutions and politics in tourism
Tourism has been identified as a priority sector to achieve the country’s development goals as set out in the Vision 2020 strategy (Govt 2009). The Rwandan Ministry of Trade and Commerce (MINICOM) is responsible for tourism in the country. Originally the agency that manages and implements policy was the Office of Tourism and National Parks (Office Rwandais du Tourisme et des Parcs Nationaux – ORTPN), which consisted of two elements – the Rwanda Tourism Agency (RTA) and the Rwanda Wildlife Agency (RWA). The main mandate of ORTPN was to ensure the promotion of sustainable tourism and the conservation of wildlife. At the beginning of 2009, ORTPN amalgamated into the Rwanda Development Board (RDB). This is a cross-ministry agency which drives economic development and investment in the key sectors of Rwanda. This change was in response to the call for stronger private-sector focus within tourism. It was perceived in government that investment was crucial for modernisation of facilities and for encouraging wider tourism growth, and so a sector that was more orientated towards the private end was considered crucial (USAID 2008).6

Figure 2: Tourism arrivals Rwanda 2006–2013
Source: UNWTO tourism database (UNWTO 2014)

Figure 3 summarises the most recent year of incoming “holiday and leisure” arrivals broken down by origin of tourists. As can be seen, roughly 50% of inbound tourists come from Europe, US, India and China whilst the remainder tend to be visitors from neighbouring DR Congo, Uganda and Burundi.

Figure 3: Breakdown of incoming “holiday and leisure” arrivals into Rwanda 2012 (with secondary breakdown of Europe and Africa)
Source: UNWTO tourism database (ibid.)

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Table 1: Impact of travel and tourism in East Africa
Source: World Travel and Tourism Economic Impact Data (WTTT 2013)

Tourism is also one of the significant growth industries in Rwanda at around 4.3% per year (UNWTO 2016, WTTT 2013), linked to steady growth of tourist visitors to Rwanda (as shown in Figure 2).
 Rwandan tourism has a number of identified risks. First, because tourism is mainly focused around gorillas and the neighboring region of the Volcanoes National Park (Nielsen & Spenceley 2010) solely relying on one single selling point is a risk, particularly given that sustainability requirements pose limits on the growth of tourists to such sites. Second, even with evidence of growing tourist numbers, Rwanda is still an uncommon destination for tourists. It still receives low comparative levels of expenditure by tourists for the region as shown in Figure 4. This is because it is often “seen as an add-on to an East African safari tour, principally to visit the gorillas.” (Mbti 2017 p.7)

A key observation regarding value chains is that tourism is a more dynamic nature of the supply-side of the chain. The supply-side is not constant but depends on the type of activities and services provided to different categories of customer. For instance, a domestic tourist will visit different sites or use different accommodation to international tourists. Thus, value chains are more reconfigurable in the tourism sector, and certain sets of relations relate to specific types of consumer.

As a consequence of this strategy, new ideas for tourism and activities are much effort is needed on diversifying the industry to include a wide range of products and experiences.

Beyond private-sector growth, recent policies have therefore considered how to overcome these problems – expanding tourism by attempting to diversify sights and increase expenditure by tourists:

“...Whilst recognising the importance of this iconic product (giraffe tourism), much effort is required on diversifying the industry to include a wide range of products and experiences. This diversification may consider strengthening Meetings, Incentives, Conferences and Exhibitions (MICE) tourism, birding, culture, agro-tourism, adventure products and others.” (Mbti 2018 p.9)

As a consequence of this strategy, new ideas for tourism and activities are beginning to emerge in Rwanda. However such initiatives are still quite new and as we will discuss, at present the core motivation for international tourists to visit Rwanda has barely changed.

Value chain models and tourism

Given the various orientation of the tourism sector, mapping the value chain is a more difficult task than in sectors where a physical commodity is passed along a supply chain. Figure 5 provides an overview of the different roles in the tourism sector. This figure draws on recent discussions regarding value chain models between East Africa in the literature (Walby 2007, Christian 2012, Christian & Nathan 2013, Dowley 2008). The actors and roles are discussed below.

### Table 2: Estimate on costs and profits in the value chain for a typical tour

<table>
<thead>
<tr>
<th>Cost ($)</th>
<th>% of total tour costs</th>
<th>Income after costs</th>
<th>Calculation notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outbound operator (OTO)</td>
<td>6500</td>
<td>22%</td>
<td>Tour prices vary widely in Rwanda. The cost here is based on the published cost of one mid-range tour firm based in the UK. Assuming peak season travel.</td>
</tr>
<tr>
<td>Flights (bundled with OTO)</td>
<td>600</td>
<td>10</td>
<td>Assuming UK based tourists</td>
</tr>
<tr>
<td>Inbound operator in Rwanda (ITO)</td>
<td>4420</td>
<td>13%</td>
<td>Using charges of mid-range firm (likely to be lower in reality when OTO and ITO are in relationships)</td>
</tr>
<tr>
<td>Transport/Visas</td>
<td>405</td>
<td>6</td>
<td>Take figure from interview high end guide ($60 per day)</td>
</tr>
<tr>
<td>Lodges</td>
<td>1553</td>
<td>-</td>
<td>Cost of one evac. $75 – $3</td>
</tr>
<tr>
<td>Natural resources</td>
<td>1625</td>
<td>25</td>
<td>Three nights with tour operator reduction: 2 x Virunga lodge: $383 1 x Sarena Kigali $276</td>
</tr>
<tr>
<td><strong>% of total tour costs</strong>, calculates the percentage that tour operators receive after they have paid for all the services they bundled.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Income after costs</strong>, estimates the percentage that tour operators receive after they have paid for all the services they bundled.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes on calculation:

Based on the average of four days/three nights spent in Rwanda from Nielsen and Spenceley (2010) itinerary is based on a typical 4-day itininary from OTO and ITO.

This calculation intentionally misses out on the regional ICT element as it introduces further complication to the profits and losses, so the above looks a little unrealistic as in reality not many would just visit the region for 4 days

As outlined previously, global production networks consider the networks of actors at multiple levels in the production of a product or service. Here we examine how such models apply to the case of Rwandan tourism. In this section we particularly highlight four key considerations: territorial embeddedness in Rwanda, network embeddedness of the tourism industry, networks around private ownership of tourism facilities, and wider financial networks.

**Territorial embeddedness**

The form that tourism takes in Rwanda is strongly influenced by local conditions. Underlying this is the position of Rwanda as a mountainous but small country, where natural resources are often located in remote areas. This influences the logistics of tourists and tourism firms in Rwanda. In particular two key points can be highlighted: In terms of topography, sites are not always accessible, and some hotels, lodges and sites are located in inaccessible areas which may be difficult to contact.16 As a CEO of a London-based outbound tour operator noted, topography affects how logistics can be done in country:

“...almost all of what we do (in Rwanda) is private vehicle driven trips where the vehicle will go to the client. You have to have a guide and a vehicle, you want that from a reputable company so there is some backup, and when they are booking a lodge they need to be booked – not only a room for the client but also a room for the driver and that’s got to work. For us it makes sense to use a grounded handler for that”.

In this outbound firm, the interviewee later discussed how other countries in the region used different forms of logistics. In particular, where else, hotels and lodges were able to deal with logistics and transport without the needs of local ‘ground handlers’. However, in Rwanda this has not been possible given the complexity of tour organisation,17 and thus topography shapes the logistics of tourism.

Table 2 outlines an illustration of where value is captured and created, drawing on the typical ‘high-end’ stay in Rwanda – a four day including a visit to see gorillas.

Whilst this calculation is crude, several key observations can be made. Table 2 highlights that it is those with the ability to reach end consumers who are liable to extract the most value i.e in the table outbound firm gains $1500 after bundling costs whilst inbound firms gain $850. This is in line with similar work in Huyan value chains (Christian 2012), and suggests that firms where reaching consumers are liable to extract most power and control of value chains. The value calculation also suggests that in Rwanda there are a number of roles with the potential to build viable business. Although estimates are crude, clearly both tour operators and guides18 can be profitable, even with a relatively low level of customers.

Finally, the value chain calculation highlights a high level of intermediation, and clear motivations for disintermediation. Customers are often mediated by two or more actors (inbound and outbound tour operators) from actual services they receive, and this infuses cost. Similarly, other value chain disintermediation might also reduce costs (ITOs selling direct to the customer, ITOs cutting out ITOs, services selling direct to the customer, guides integrating elements of ITOs into their operations).
Rwandan tourism is particularly marked by the need for sustainability and community awareness. Popular resources in Rwanda are often set in areas of national parks. Gorillas are also endangered species where it is vital for their survival to ensure that their territory is not destroyed. Thus, Rwanda as a stable destination relies on the responsible stewardship of national parks. There are also demands on tourism firms around ‘community awareness’. This concept relates to the international media coverage of Rwanda as a ‘post-conflict’ country still recovering from the fallout of the Genocide and with many social issues. Even perceptions of local communities and tourists are difficult to change. However, Rwanda has an opportunity to redefine itself.

Portfolios, reaching into an increasing range of countries (Niewiadomski 2014)....

Private ownership (e.g. banks, internet) may require new forms of relations. Yet, network embeddedness (what this consultant is alluding to) is the fact that tourism is changing. New operators. As one consultant on African tourism outlined:

…”What you do see here is over reliance of relationships with tour operators, Europe, and the US can send them clients every year.”

It is not uncommon for eco- and community elements to exist as part of African tourism activities, but in our exploration of tourism in Rwanda a large majority of firms integrated elements around sustainability or community development into their structures. Thus, embeddedness in communities is a crucial element for firms in the tourism sector in Rwanda. As Rwanda looks to attract growing private investment from international groups and financiers, how this commonality of integration of sustainability and community goals fits with the needs of more generic chains and strategies is crucial to understand.

Network embeddedness

Rwandan tourism has been shaped by Gorilla tourism. International tourist visits have typically come through tour booking with outbound tour operators. For Rwanda firms, network embeddedness has been around the long-term relationships with outbound operators. Many activities in the sector have been shaped by this structure of long-term relationships with outbound tour operators. For instance, one key expenditure for the Rwandan government in the context of tourism has been in financing stands in global tourism fairs, to allow Rwandan tourism firms to build links to outbound firms. The outcome, and consequently skills of Rwandan firms are also shaped by this. It is not uncommon for eco- and community elements to exist as part of African tourism activities, but in our exploration of tourism in Rwanda a large majority of firms integrated elements around sustainability or community development into their structures. Thus, embeddedness in communities is a crucial element for firms in the tourism sector in Rwanda. As Rwanda looks to attract growing private investment from international groups and financiers, how this commonality of integration of sustainability and community goals fits with the needs of more generic chains and strategies is crucial to understand.16 Thus, embeddedness in communities is crucial.

• A concession to the South African private company African Parks to manage Akagera National Park;

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When these outbound networks are likely to continue to be valuable, it may be that Rwandan firms have become comfortable in understanding and organising the logistics of tourists, but they have less experience in customer marketing.

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What you do see here is over reliance of relationships with tour operators, Europe, and the US can send them clients every year.”

“They have sat complacently in those contractual relationships for many years. Some are seeing their numbers drying up and they don’t know what to do there and they are not prepared for direct bookings, not prepared for even client service”

What this consultant is alluding to is the fact that tourism is changing. New drivers (i.e. the growth of large tourism chains and the expansion of the internet) may require new forms of relationships. Yet, network embeddedness which shapes experience, relationships and skills may make it difficult for Rwanda firms to take advantage of these new opportunities.

Private ownership

International hotels, airlines and tour operators are looking to expand their portfolios, reaching into an increasing range of countries (Niewiadomski 2014). This growth has affected Rwandan tourism. There is increasing integration of Rwanda firms in global tourism whether that be multinationals or regional groups. Examples found in this work include:

• Hotel chains such as Serena have invested in upgrading their Kigali facilities;

• Lodges located around the Volcanos National Park are part of Kenyan and Ugandan eco-tourism groups/collectives;

• A concession to the South African private company African Parks to manage Akagera National Park;

• Massive private-sector investment in the new conference centre in Kigali;

• Growing presence of multinational firms (US, UAE, India) who have established physical presence as local travel agents in Rwanda.

These Rwandan firms that are part of multinational chains need to coordinate efficiently across multiple locations, but also have to integrate within the territorial and networks norms in Rwanda that have been outlined above. This dual set of requirements can lead to a number of tensions around human resources and inputs. For instance, firms are keen to maintain their reputations and standards across nations. It may be that the skills of local staff cannot meet the high level required by these multinational chains. The same is true of inputs such as local handicrafts and food supplies which will need to meet certain levels of quality and professionalism to be trusted by large firms (Shaw & Williams 1998)

How firms build skills locally as opposed to bringing them in from elsewhere will have important implications for the wider impact of tourism in Rwanda.77 For example, one observation during interviews was that those tourism firms in Rwanda which have a high level of embeddedness in the Kenyan tourism/trading sector (Kenya being tourism training is better) or even internationally in Rwandan operations. Further, trade-off between local and imported resources (people, produce, services) are also important to the poverty effects of tourism. As other research has shown some firms can be providers of inputs such as food and employed as staff in tourism. How multinational tourism firms choose to balance local versus imported resources will have a direct bearing on poverty effects(Shah & Williams 2011).

In this work, we are particularly interested in how changing connectivity has influenced these tensions – does connectivity allow locals to improve knowledge and skills to become better integrated? Or does it support simpler sourcing and co-ordination of resources from abroad?

Finance

Networks around financial systems are crucial in orientating activity. Specifically, integration into international banking institutions is an important element of online provision (i.e. by supporting online financial transactions). Rwandan financial integration in terms of financial elements like ATM’s, Visa payments, international banking and online services like PayPal influences how digital connectivity can be used in the country.

Building new tourism assets and upgrading services is costly. This is indicated in the large proportion of FDI devoted to Rwanda’s tourism sector. To finance upgrading, access to international investor and loan providers is important. Thus, a combination of how Rwanda is perceived by foreign investors, and the type of firm (local, regional, international) that is able to access favourable finance, will ultimately influence how the sector is able to develop.

Summary

Key elements and issues are outlined in Table 3 which links back to Dicken’s models of GPNs that were shown in Figure 1.

Table 3: Elements of production networks as applied to Rwandan tourism

<table>
<thead>
<tr>
<th>Production network element</th>
<th>Key elements in Rwanda</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human resources</td>
<td>Skills of local staff to meet more complex needs (hotel management, conservation, etc)</td>
</tr>
<tr>
<td>Goods, foods etc.</td>
<td>Politics of local vs regional vs international inputs ( sourcing of foods, handicrafts)</td>
</tr>
<tr>
<td>Logistics</td>
<td>Geographic factors that affect how tourism is set up (terrain, landlocked, need for air vehicles) (territorial embeddedness)</td>
</tr>
<tr>
<td>Financial system</td>
<td>Money for investment in upgrading sites, systems and how this favours multinationals</td>
</tr>
<tr>
<td>Investment friendly environment of Rwanda</td>
<td>Investment friendly environment of Rwanda</td>
</tr>
<tr>
<td>Structures of payment systems and how tourism integrates into them</td>
<td>Structures of payment systems and how tourism integrates into them</td>
</tr>
<tr>
<td>Regulation, co-ordination, control</td>
<td>Status of physical, natural and community resources which demand tourism in Rwanda embeds sustainability and community initiatives (territorial embeddedness)</td>
</tr>
<tr>
<td>Co-ordination norms in some places around tourists going to local tour-operators or agents – payments, trust, etc (network embeddedness)</td>
<td>Co-ordination norms in some places around tourists going to local tour-operators or agents – payments, trust, etc (network embeddedness)</td>
</tr>
<tr>
<td>Governance and associational structures within Rwanda (territorial embeddedness)</td>
<td>Governance and associational structures within Rwanda (territorial embeddedness)</td>
</tr>
<tr>
<td>Underlying environment for tourism visa conditions, business environment, etc</td>
<td>Underlying environment for tourism visa conditions, business environment, etc</td>
</tr>
<tr>
<td>Perceptions of Rwanda as a safe country given history and location close to troubles in DR Congo and how this affects co-ordination and logistics</td>
<td>Perceptions of Rwanda as a safe country given history and location close to troubles in DR Congo and how this affects co-ordination and logistics</td>
</tr>
</tbody>
</table>

These elements of global production networks are used in two ways in this work. First, firms are looking to upgrade and capture (or create new) value in tourism value chains, and connectivity is one element in this process. Certain elements of production networks can limit the potential for improved growth and improved growth and connectivity might allow access to finance, skills. Second, Rwanda is looking to move away from a homogenous tourist sector focused on one national resource. The goal is to create a diverse set of tourist attractions and sites. Using connectivity is one way that growth can be kick-started. Here, Rwanda is moving into more competitive sub-sectors of tourism, and different forms of embeddedness will determine the effectiveness in attracting investment, firms and ultimately customers. GPNs will also influence the outsourcing behaviour of firms which locate within Rwanda. Thus, it is worth considering that, even with highly effective use of changing connectivity to drive tourism, the ultimate impacts and benefits of tourism may be linked to a far wider set of factors.

3c. How has the internet been theorised and perceived as aiding tourism?

There is rich literature which has examined the effects that connectivity had on tourism. In this section, that literature is explored in more detail. This review provides a more detailed understanding of the types of transformations that changing connectivity might bring to the tourism sector.

The internet and the changing face of tourism

The four-fold categorisation used in the value chain in Figure 1 – inputs, transformation, distribution and customers – is used to examine how connectivity has affected links to different elements of tourism in the literature.

Inputs: resources and facilities

Resources and facilities are at the heart of a tourism experience. Therefore, from a visibility perspective, bringing resources and facilities online is crucial. This can include integrating visuals and using social media to drive improved visibility and demand from customers (Blahut & Law 2009). Visibility and marketing for countries or districts is often linked as ‘Destination Management’ and ‘Destination Management Organisations’ (DMO) in the literature. Online DMO is one element of this, where visibility and information of a country or region is important in customer search and information needs (Palmer 2007).

It is also worth highlighting the growing role that the internet might play in education and learning around tourism. As organisations and sites look to improve tourism experiences, quality of service and improved management are vital. Online learning can provide more flexible and cheaper ways of training and building the knowledge of trained staff, particularly for multi-nationally spread firms (Blahut & Law 2008).

Transformations: Services and logistics

Changing connectivity can also play a key role in improving so-called ‘business functions’ which allow businesses to operate more efficiently and reduce costs. Examples of facilities include information systems that allow tracking and monitoring of room (or resources) availability. Online booking and payment systems can also improve the efficiency of co-ordinating and arranging services(b). Beyond this efficiency argument, growing online tourism networks allow disparate activities and firms to integrate (Mike & Gill 1998). Online integration is not new, and there has been a long history of online booking through videotext systems; computer reservation systems (CRS); and later wider tourism booking in global distribution systems (GDS) (Kracht & Wang 2010). Recently, online travel agents have provided such direct booking functionality and flexibility online for the customer through the web.”

This idea of growing flexibility also highlights the potential of the internet to improve integration of tourism services. Tourist activities tend to involve a heterogeneous set of actors and thus integration is crucial to ensure more
Internet availability is one element in contributing to these more pro-active consumers. Consumers are able to access and discover an increasing range of information on different tourism opportunities and increasingly experience information as rich media before departing on trips. Drawing on this information, tourists are demanding more flexible and customisable tours. Further, consumers can now find and be involved in niche sectors of tourism, which are able to build sufficient customers via the internet (Steinbauer & Werthner 2007).

The internet also potentially offers stronger bargaining power for consumers to reduce costs in tourism activities. For example, consumers might cut out customer-facing tasks when booking flights, hotels and excursions directly online (rather than by paying intermediaries) (Buhalis & Zirke 2017). It also potentially allows greater agility to respond to customer demands and better customise their activities (Buhalis & Law 2008).

**4. METHODOLOGY**

The research presented in this report examines tourism in Rwanda as part of a global sector. Our research focuses on the relationships and linkages between tourism firms and customers which traverse multiple countries, and how changing connectivity affects linkages. The key roles in tourism were initially mapped during desk work and this mapping of core roles was used to determine sample selection for qualitative work.

Glen the Rwandan focus, the majority of the research focused on actors in Rwanda itself. The work in Rwanda was supplemented with research with actors in the East African region who link into Rwandan tourism, and also outbound actors (in the UK) who had more direct interaction with customers.

Fieldwork in the tourism sector in Rwanda took place over two principal periods, September 2012 to March 2013 and April 2014. The second period of fieldwork was important in that it was used to clarify and update tentative results through repeat interviews with firms and policy interviewees in order to verify the conclusions of the initial work.

Interviews lasted approximately one hour with interview themes drawn on the research questions and GVC/GPN frameworks outlined in the previous sections. These interviews looked to explore changing connectivity, as well as the effects in reconfiguring value chains and production networks (see appendix 13b for sample interview questions). Interviews were transcribed and are included in Table 4.

**Table 4: Interview coverage in tourism sector**

<table>
<thead>
<tr>
<th>Main role</th>
<th>Comment</th>
<th>Number of interviews</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural resources and tourist attractions</td>
<td>General managers of such resources</td>
<td>3</td>
</tr>
<tr>
<td>Services</td>
<td>Guides, drivers, handicrafts producers/sellers</td>
<td>6</td>
</tr>
<tr>
<td>Hotels and hospitals</td>
<td>Managers of hotels and services</td>
<td>7</td>
</tr>
<tr>
<td>Inbound tour operators (ITO)</td>
<td>Managers and directors of tour operators/located in Rwanda</td>
<td>19</td>
</tr>
<tr>
<td>Rwandan travel agents</td>
<td>Managers of travel agents – involved in flight arranging, logistics and visa, based in Rwanda</td>
<td>9</td>
</tr>
<tr>
<td>Outbound tour operators</td>
<td>Managers of tour operators located in Kenya and consuming countries</td>
<td>11</td>
</tr>
<tr>
<td>Sectoral actors</td>
<td>Actors involved in cross-sector of overlapping roles – software vendors, associations, policy actors</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>59</td>
</tr>
</tbody>
</table>

Analysis of the interview data is ongoing. Transcripts of interviews were analysed using Nvivo qualitative software for code-based searching and reporting (Miles & Huberman 1994), where tentative results and outputs were discussed with key actors and interviewees to ensure that they were a fair representation of what was occurring in the sector. These interviews also provided a forum for additional inputs and participation triangulation on early conclusions.

**Summary**

Trends around connectivity and tourism have revealed a number of ways in which connectivity might transform value chains in tourism. However, it is important to point out that this work has thus far focused on developed countries as tourist destinations. Some research has brought up the relevance of the internet for developing countries (such as Christian 2012, Karanasiou & Burgess 2008, Minghetti & Buhalis 2010) but otherwise no systematic examinations exist. The literature is therefore unclear as to the extent to which tourism trends are applicable to locations such as Rwanda. Our analysis, drawing on empirical work, can provide some insight into this literature gap.

**Distribution: Bundling and marketing**

The growth of the internet in tourism has led to it becoming a key platform in terms of providers reaching and interacting with customers. There are a range of different options when it comes to online visibility. This includes simple online websites and web adverts. There are also specific travel-based websites and resources which firms might take advantage of (such as TripAdvisor and travel blogging sites). Generic online resources such as Facebook, YouTube and online mobile apps also offer larger but less focused customer bases to push tourism services.

Not all customers gather information through direct links to service providers. Customers increasingly look to peer recommendations and feedback online to influence their trips and service choice. This can be through feedback mechanisms that tourism websites provide themselves, but with the growth of online networks it goes far wider, where content on social networks presents and markets tourism through customer social network activities (Ng & Drezel 2015). There is also growth of specific reputational focused services that have become integrated into tourism related site and searches, of which trip advisor is currently the leading actor (Blümer & Hoog 2011).

Many of these online channels provide a means for firms to connect to customers in the tourist sector. Online channels have particularly been utilised of use for small firms where firms can reach and engage with customers more flexibly (Krafft & Wang 2010). As customers look for more customised tourism experiences, competitive firms can use the internet to engage in multiple demographics and markets more easily. By varying branding and adapting online products according to different customers, firms can have greater agility in responding to customer demands (Buhalis & Law 2008).

**Customers**

In their work on trends in tourism, Isaniades & Dabbaga (1997) have suggested a shift in tourism. Customers have moved away from standardised itineraries oriented towards a mass-market. Instead, they increasingly demand customised and flexible tourism, and there is a push towards more individualised creation of tourism experiences (Urry & Larsen 2011).

As outlined above, online travel agents and tighter integration suggest streamlined logistics for arranging tourism and travel. These systems might lead to disintermediation of those actors who have previously been responsible for organising logistics, such as travel agents. In these cases human/firm intermediaries are often replaced with newly digitally oriented intermediaries, where a growing wealth of internet resources – search engines, tourism meta-search engines, internet travel agents and traditional firm websites – now look to provide integration for consumers (Kracht & Wang 2010).

Finally, online feedback is important for business functions. Feedback can come from online feedback forms, websites, social media and information from SES/online travel agents and provide firms with rich sources of information about customers and activities. Such feedback can be a source of data which apprises tourist services of a better way to manage operations, predict needs and understand the demographics of customers (Zhang et al. 2009). It also potentially allows greater agility to respond to customer demands and better customise their activities (Buhalis & Law 2008).

**Table 4: Interview coverage in tourism sector**

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</tr>
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<td>Total</td>
<td></td>
<td>59</td>
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</table>
5. CHANGING CONNECTIVITY

5a. Types of connectivity

Table 5 provides an indication of the typical levels of connectivity amongst actors in the value chain. The different forms are introduced below:

<table>
<thead>
<tr>
<th>Role</th>
<th>Best connection type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Attractions</td>
<td>0</td>
</tr>
<tr>
<td>Guides</td>
<td>0</td>
</tr>
<tr>
<td>Hotels</td>
<td>0</td>
</tr>
<tr>
<td>Services</td>
<td>0</td>
</tr>
<tr>
<td>Tour Operators</td>
<td>0</td>
</tr>
<tr>
<td>Travel Agents</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 5: Connectivity by role
Source: Authors’ fieldwork

The level of complaints around connectivity was high and more excoriating in tourism as compared to the agricultural sectors we reviewied in Rwanda, particularly relating to the fact that connectivity is vitial to this sector. Slow and inconsistent connectivity can directly hit the bottom line of these businesses. This is highlighted by a small hotel owner who described how consistent connections and immediacy are important in tourism:

“We need it (connectivity) to be very fast. It’s a bit slow and sometimes it gets some interruptions within the network. So it takes time to rebuild the network and it impacts our business if most of the work we are doing is online.”

One manager of a restaurant in Kigali focused on tourists, also suggesting that inconsistent connections influence the types of business he can run:

“We do this (business) to be able to attract tourists. They need to be able to see it on the web... However, if there are issues with connectivity, it can impact our business.”

5b. Connectivity in Rwanda

In a 2012 survey undertaken by the Rwanda Utilities Regulatory Agency (RURA), hotels were found to have a wide array of connection from 128kbit to 1Mbps. Apart from a few top-tier hotels, hotels tended to use WiMax connections, which struggle during peak use. Thus the survey found unsatisfactory slowdown during peak times when hotels were busy (RURA 2013). This survey did not include lodges close to the natural attractions, but our interviews suggested that due to their remote locations, it was often difficult to access high-quality connections. As such, they tended to integrate expenses but custom internet solutions to provide low-speed connections for customers (for example, using satellite internet). Some tour guides use the internet. In particular, more pro-active tour guides and those who worked in fixed roles used mobile internet. Being available and responsive to queries that arrived through the internet supported their freelance roles and helped with maintaining relationships. Other guides and drivers tended to co-ordinate through mobile phone communication.

For tour operators, whose main role was often in logistics of various in-country services, access to the internet is becoming vital. Connectivity levels varied, but that variance highlights the diversity of tour operators in Rwanda more than it says anything about internet use amongst tour operators. Small firms may organise tours as one element within a range of tourism activities offers, and these firms can survive just through USB wireless modems. Larger professional Gorilla safari tour operators might have offices with 5-10 staff and such firms had more reliable broadband or WiMax offerings in order to serve their needs. Similarly, travel agents in Rwanda had a diversity of internet connections according to the size of the firm, and here modern or WiMax connections were most common.

It is also worth pointing out those who are not connected. From interview discussions, it was found that those involved with inputs into the tourism value chain, particularly low-income groups, tended to be less connected. Those involved in food selling and handicraft tended to be linked into value chains through face-to-face and mobile phone communications. In a similar way, smaller hotels and restaurants may have minimal connectivity, particularly those which focus on regional and local business customers (ibid.).

Limits to connectivity

From the perspective of tourist firms in Rwanda, growing connectivity is an important element of tourism. However, in interviews, there was a wealth of complaints from firms about connectivity provision.

First, the internet is paying a key role in Rwanda and larger firms (such as hotels, tour operators and travel agents) are interested in high-bandwidth connectivity and have a budget for this. Yet, even with reducing prices of connectivity, the costs of the most consistent (i.e. non-mobile) connections is prohibitive. This high cost is highlighted in discussions with a manager of a large, internationally based hotel using a WiMAX connection, which would appear to be the type of company that would have had a high bandwidth connection:

“... fibre optic is a bit expensive. You know like one gigabit, with MTN because our provider is MTN, it is about 8 million, 500,000 RWF [US$1150/1460 per month].”

One manager of a travel agent, part of a multi-national chain used a slightly slower WiMAX link, but was dissatisfied with the price:

“It's high, trust me... we have to look at how to get it subsidised because I think internet is cheaper everywhere else.”

Beyond the high price, internet access was characterised by a lack of transparency around ISP service. One frequent example was complaints in interviews that bandwidth was often overstated and costs were not well publicized by ISPs. Another example was highlighted in large hotels and firms which wanted to access fibre directly. What fibre has been laid in some places, particularly in urban areas, information on getting connected was surrounded by much confusion. The government report on connectivity and hotels highlights this confusion:

“hotels are not able to connect even if the fibre is passing in front of the hotel... Hoteliers are told that the BSC's (Rwanda ISP) backbones are reserved for public institutions whereas some hotels in town are connected to BSC's fibre.” (ibid. p13)

In another case, a recently employed director in a rural natural resource spent many months trying to get connected into the fibre network. He eventually found that his offices had already been lumped into the fibre before he was employed.

“...I have realised that for them to come and connect us from the road side to here it will cost us so much.”

There was also disappointment that changing connectivity had not led to great improvements in the speeds of all connections in Rwanda. This disappointment was especially felt by actors outside the metropolitan Kigali region where the hope of a fibre-optic backbone had not been realised in terms of speed. As one manager of a natural resource described, this promise has not been fulfilled:

“... when it was laid what we were promised by the media, by the time of course the government, it was saying it was going to be high speed internet, but using my small phone here, it's just slow all the time. I don't know how they're going to fix it and make it high speed like they promised they would.”

The problems outlined above, slow speed and inconsistency, have been attributed to a number of issues. One key element is the growing popularity of the internet. ISPs are not maintaining sufficient capacity, and saturation can often occur during peak times. For example, one general manager of a tour company whose offices are located in Kigali described issues with his WiMAX connection:

“...how do I personally feel with the internet here in Rwanda? It needs to be faster. We’re going to put up an animation as our landing page on our website... We opted not to do that because we realised that if you try to open that in Rwanda, it would take 5 or 10 minutes to load.

‘Web pages are much more complex than the web pages we had 10 years ago. (In Rwanda) I feel like I’m browsing the internet like it’s 1995. It frustrates me quite a bit... there is no ongoing talk about internet business in Rwanda until we actually get decent internet, is sort of how I feel.”

Given that in tourism, customer consumption also occurs within Rwanda. Limits in connectivity do not only relate to businesses functions: they also affect customers when they are in country. This manifested itself in multiple ways. First, as detailed in the government report on hotel connectivity mentioned above, connectivity is crucial for hotels as it can affect customer ratings and recommendations:

“... guests visiting the country noted significant progress in hotel services (like quality of rooms and foods, hospitality and customer care. But at the same time, the same visitors pointed out the slow pace in improving internet speed in hotels’ lobby, rooms and internet kiosks.” (Ibid. p4)

Second, beyond hotel internet access, connectivity problems can affect financial and payment systems. One general manager of a high end hotel in Kigali (who did not wish to be recorded) described the consistent of payment services as “terrible, terrible”. Lack of consistency particularly related to dropouts on the internet, which could be unbearable to customers and lead to complaints and bad reviews. As he described “customers get embarrassed when it doesn’t work.”

A manager of one tour operator that focused on natural resources had also experienced customer complaints around the inability to withdraw money from cash machines in the locality due to connectivity.

“The internet we have is not fast enough to allow the use of ATMs everywhere in the country so you find that the use of ATM cards is hindered by low capacity of the internet. So the government and other people need to work on it and make sure it’s fast all over the country because we lose a lot of money.”

...
“you have a slowed connection for a period of about three hours in the morning and again in the evening and whenever that happens, there’s delay… there’s potentially loss of business.”

Poor connectivity is not solely the fault of ISPs though. Given the high price, hotels may prefer to oversaturate cheaper internet connections than pay for a higher rate.

“We have realized that most of hotels that use fibre optic have stable internet compared to the hotels that use wireless technologies. The problem is more probably not the technology, but the problem may be linked to the bandwidth, which is not enough to satisfy the guests’ needs.”

The hoteliers said that the internet is slow during morning hours and when there is a conference or meetings because of the high numbers of participants using hotels wireless internet. The main challenge is how to address in hotels industry is the internet bandwidth they subscribe to.” (Biel p.12)

There are also problems in connectivity for tour operators and travel agents located in business buildings. Building owners who supply bandwidth to offices may also cut corners. This was a concern of one operation manager of a tour operator whose offices were located in a central office area.

“Founders of this building are sort of kind of greedy; they never like get a limit and say: hey, you have a slowed connection for a period of about three hours in the morning and again in the evening and whenever that happens, there’s potential loss of business.”

There are also atmospheric condition to consider around wireless internet connections (internet over the mobile network and WiMAX) as they can experience slowdown due to weather conditions, particularly during the rainy season.

To overcome such issues, many firms had tried to switch ISPs at some point in their history. Some had also adopted multiple types of network to allow redundancy where internet is vital. For larger hotels, the approach would be to use fibre but with a fall-back of LAN connection. For tour operators a modem redundancy where internet is vital. For larger hotels the approach would be to use fibre but with a fall-back of LAN connection.

5b. Introducing elements of changing connectivity on VC access to information and communication

The previous section outlined basic characteristics and problems around connectivity in the value chains. This section looks to expand the discussion to provide a summary of the online presence and activity of the firms interviewed. To support this discussion, Table 6 shows a survey of the online integration of firms interviewed. In particular it builds a simple classification of website level, and use of e-commerce and social media.

Examples of an ‘entry’ and ‘medium/high’ websites are shown for two tour companies in Figure 6 below. The top image is a smaller tour company operating with a fairly simple HTML-based website. It provides useful information and contact details, but little beyond this. The bottom image is one of the most sophisticated websites from a Rwandan tour firm. This one is more visually rich and includes YouTube materials, links to social media and rating blog content.

Natural resources and attractions tended to have higher-quality websites and were more active in social media. Being part of public bodies meant that attractions were presented as part of well-funded central sites (e.g. RB), National Museums (that have resources to run these online activities. Service providers, such as guides, merely access information through the internet. They are much less likely to create and use online resources such as websites.

Hotels and lodgings were increasingly looking to attract interest online, not only from tour operators but from a growing number of direct clients. Hotels tended to have a higher quality of web resources available to them as shown in Table 6. Hotels and lodging were also the only area of tourism where firms were dipping their toes into e-commerce. As highlighted for two hotels in kigali in Figure 7, hotels tended to have customised online reservation forms (which would lead to email being sent to firms).

As illustrated in Figure 8, some hotels have also integrated into online travel agencies such as expedia.com.

### Table 6: Summary results of simple web presence analysis by value chain role

<table>
<thead>
<tr>
<th>Role (number)</th>
<th>Website Quality</th>
<th>Other elements of web use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attractions (3)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Guides (6)</td>
<td>0%</td>
<td>31%</td>
</tr>
<tr>
<td>Services (2)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Hotels (7)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Tour Operators (19)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Travel Agents (9)</td>
<td>0</td>
<td>22%</td>
</tr>
</tbody>
</table>

**Key to categories:**

- **Low**: Email only and no website, or evidence of website but not accessible
- **Entry**: Websites present with some information and simple contact forms
- **Medium/High**: More comprehensive website, professionally produced and/or including images and ‘blog’ style updates to site
- **E-commerce**: Website e-commerce-enabled (e.g. customer can directly purchase using a visa card)
- **Active social media**: One of Twitter or Facebook is used and has been updated in last month

### Summary

In sum, internet connectivity is widely used in the tourism industry in Rwanda. It is not a case of firms reluctantly using the internet; rather, it is central to their operations, and this includes even smaller tour operators, travel agents and some guides.

However, the problems that they frequently run into around slow, inconsistent, costly connections and confusing information have not been resolved by changing connectivity. The internet is used extensively by tourist firms and these limitations are problematic.

The review on tourism and the internet has highlighted opportunities for actors to improve their operations and upgrade by taking advantage of changing connectivity. Yet, limitations in connectivity are a real barrier to these improvements.

It was also outlined in the review that it is not just Rwandan firms that are looking to upgrade and disintermediate. International and regional firms are also looking at opportunities to expand. Thus there is a risk that Rwandan firms with lower-quality connectivity can be a factor in pushing Rwandan firms to peripheral positions in increasingly interlinked global value chains.

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*Figure 6: Website for two tour operators in Rwanda*

*Figure 7: Two online reservation setups for hotels in Rwanda*

*Figure 8: Travel agents in Rwanda*

*Figure 9: WEBSITE FOR TWO TOUR OPERATORS IN RWANDA*
6. EFFECTS OF CONNECTIVITY

6a. Input

In line with previous work, we explore two elements around natural resources and services. First, we examine if Rwanda has increased the online visibility of these inputs. Second, we look at whether digital connectivity has been used to support knowledge building and skills of staff in order to enhance tourism experiences.

Visibility of country and resources

Online visibility is an essential element of promoting a country or a region. We discussed such issues with one tourism consultant focused on East Africa:

"...you’ve got to look at people’s search patterns particularly when you look at some of the challenging markets... in the states [US] their searches often start with 'Africa' and then go down to a destination level before they even approach a business. I think having destination sites is still important because of lack of awareness of a product."

"...you’re still going to get the highest volumes of people search for say just Kenya instead of a particular region. And destination sites are still a common way that people access that.”

Thus, with customers looking for tourism information online, destination management sites can be the first port of call. This is particularly the case for less informed tourists who might have more general regions and activities in mind when they are searching.

In Rwanda, the national online destinations site is run by RDB. Given the small size and number of destinations in Rwanda, these are all integrated into the main “Rwandan tourism” website (www.rwandatourism.com). This site also has active Facebook and Twitter feeds as well as using photo galleries and YouTube videos to enhance the multimedia experience.

The website is regularly updated and contains useful information about Rwandan tourist sites and hotels. However, such a website is not at the same level of the glossy marketing of those that one sees elsewhere (e.g., South Africa, Israel, India). As outlined in Figure 9, the destination site is broadly similar to its East African neighbours, all of which follow a more information-driven (rather than marketing-driven) approach.

When asked about destination management, some tour operators and service providers suggested that the Rwandan site provided useful information for customers. Indeed, when asked about online sources of referrers, the Rwandan providers suggested that the Rwandan site provided useful information for Rwandan tourist sites and hotels. However, such a website is not at the same level of the glossy marketing of those that one sees elsewhere.

Yet, there remained some important issues. Firms in the sector are reluctant to directly criticise any arms of the government, but there were implications that some elements were inadequate. As one freelance guide and driver commented, there is still more work that might be done in provision of information:

"...we are not spending a lot of time in developing and arranging this information for them [customers] online, because there are some things that are in existence but they are not advertised anywhere, so I think we need to concentrate more on... all the information on the websites.”

5c. Summary

In summary, variation in connectivity comes from multiple conditions. Costs, perceived usefulness of the internet along with location and size determine the type of connection and level of online presence.

We can also observe some limitations in people’s ability to connect. There are inconsistencies and problems in the operation of connectivity that may limit how connectivity is used. Notably, wireless connections are more prone to dropouts and saturations than more costly connections. In terms of web presence, many firms only have very simple websites with low use of social media and e-commerce, and this may limit their ability to reach international customers.

In the next section we examine connectivity and web presence in more detail to understand how they are changing if at all firms in the tourism value chain, and Rwandan tourism more generally.
As mentioned above, this lack was particularly the case when it came to moving beyond well-known tourist attractions. National tourism websites were often limited in providing details about lesser-known attractions, such as birding, conferencing or outdoor activities. This lack of information can lead to potential tourists relying on less reputable sources. For instance, one freelance tour guide commented:

> "... information online has never been enough for everyone, you know sometimes there are some things you can go and search and not get clear information."  

You just find like blogs for different people, just relating to what you are trying to find. You are trying to search and see what the real value is. You can get information about like we say travelling in Rwanda, let’s say it in Rwanda and this is a hindrance... So, basically there’s not enough, so we actually still want more of that.

Here the guide suggests that lack of information about elements of tourism on official sites, can lead customers to rely on blogs and other less reliable sites.

There were also problems around duplication of information amongst competing tourism sites. For example, the main RDB tourism site also includes tourist information, the new East African Tourism site (http://www.eastafrica-travel.com) duplicates some information around Rwanda, and the Rwanda Tour and Travel Association (http://tranewsweb.com) has similar information on visa and recommended hotels and groups to the main tourism website. Thus, there may also be a risk of diluting the message here.

From our interviews with key policy makers in tourism in Rwanda, it is apparent that the focus of national marketing and visibility is still offline. Rwanda has particularly been at odds at employing PR firms to improve the nature of coverage of Rwanda in the mainstream media. Indeed, the country has reportedly spent millions in order to push a more favourable image of the country to reshape external perceptions following the 1994 genocide (Both 2010). Presenting Rwanda as an attractive tourist destination is one element that supports this change in image of Rwanda, moving from a dangerous post-conflict country to one that is attractive to tourists. Thus, whilst online national resources were present, we argue that they still take a back seat to these wider PR and marketing approaches in Rwanda.

Improving skills and knowledge

The section focuses on how the internet has been used to improve the skills and knowledge of managers and employees in the tourism sector. As outlined previously, literature suggests that new online resources could be an important part of extending and improving training through courses, and setting up some tourism courses. Online learning might support training within tourism workplaces. However, online learning has not been found to support any type of e-learning. A survey commissioned by IFC on tourism training in Africa describes this in detail:

> "... tourism is something that can be internet based. Tourism is even a buzzword in the travel industry. Online logistics, booking is a must. Without internet, I would not be able to offer my services. Everything would take time. Imagine I want to book a ticket for a passenger who is going to New York flying with Ethiopian Airlines. That would mean that I have to queue at Ethiopian Airlines, then send a fax to New York that we have drawn tickets. But now we do everything without me moving."

For managers, mobile internet is also useful in allowing coordination and enabling them to organise and communicate when they are not in the office or in headquarters.

Online logistics, whether via email or online, have provided a number of benefits to actors in Rwandan tourism. With processes around logistics becoming simpler, firms are able to focus on increasing numbers of customers or improved quality of service. In terms of value chains, this simplification also supports logistics changes in these areas. It supported small firm entrance, regional integration and enabled outbound tourism to increasingly become involved in logistics. These are outlined in detail below.

It was striking that during interviews, we came across a large number of tour operators and travel agents who did not operate at a large scale. These tended to be firms that served on a low number of bookings. Such firms might be started on a part-time basis, as illustrated by one small travel agent behind who did not wish to be recorded who started her travel agency after working in another agency. Her initial contacts were through previous contacts that she made in that firm. Initially she was based in her home, operating using a mobile internet connection and a mobile phone. Over time, with growth in customers she has now moved to a small office in downtown Kigali.

In other cases, small firms had emerged when entrepreneurs were able to use the internet to increase their reliability (gaining customer trust) and to become tour operators. For new market entrance, there were many factors driving entrepreneurs to start tourism firms that were less related to connectivity, such as building networks to clients and knowledge of the tourism sector.

Changing connectivity did have a positive effect. It reduced entrance barriers, as highlighted by one recent tour operator entrant:

> "... tourism is something that can be internet based. Tourism is even a buzzword in the travel industry. Online logistics, booking is a must. Without internet, I would not be able to offer my services. Everything would take time. Imagine I want to book a ticket for a passenger who is going to New York flying with Ethiopian Airlines. That would mean that I have to queue at Ethiopian Airlines, then send a fax to New York that we have drawn tickets. But now we do everything without me moving."

Furthermore, there is some potential for smaller firms to grow in the tourism sector. This was highlighted by a one-person travel agent who was asked about his hopes for his firm:

> "... we can get the information and... [but we rely on a written confirmation which is normally sent on the internet, on the phone we ask for availability but when you want to book we do it through the internet."

Online resources when they are present are also useful as they can speed up the information searching and booking processes. As described by one travel agent involved in air booking:

> "... without internet, I would not be able to offer my services. Everything would take time. Imagine I want to book a ticket for a passenger who is in New York flying with Ethiopian airlines. That would mean that I have to queue at Ethiopian Airlines, then send a fax to New York that we want our clients to have tickets. But now we do everything without me moving."

For managers, mobile internet is also useful in allowing coordination and enabling them to organise and communicate when they are not in the office or in headquarters.
Simplified co-ordination also created other risks. Outbound tour operators, previously focused on the distribution side of tourism, are looking to get involved in the transformation side. One CEO of a larger outbound tour operator based in the UK discussed this change. His firm focused on tours in multiple countries in the southern African region, and they were already de-integrating inbound firms in many locations:

"...[in other words] we are changing the way we do business. There are different systems ... which companies use to make it easier,"...

Even larger ones tended to use a set of un-integrated systems, as described by the founder of one of the larger tour operators:

"... there are some [firms] that will want to use it [systems] on the operation side, some will want to use it in the product development side, some are ones that will capitalize on the actually on the operation and accounts. It all depends on the company.

These limitations become problematic when firms attempt to integrate into online services. For instance, how are hotels supposed to integrate with online travel agents when they do not use standard systems that record bookings? How are tour operators supposed to deal with payment services (online or offline) when they do not have ways to track payments?

In Rwanda this lack of internal system use led to limited use of online services. Hotel room booking online is a case in point. Some large hotels in Rwanda with integrated systems may have their own online room booking services on their website and are also likely to integrate with online travel agents. However, in general online booking is not present as discussed by one hotel owner:

"... hotel reservations and other services concerning hotels, these days they are being done online. But, most of hotels here are not online, so it’s a big issue ... We are making our services to be online so we must try to put most of the hotels here.

For smaller firms, room reservation firms might appear on websites, but these will often fold back into manual communication on submission (as examples shown previously in Figure 4). Other hotels simply provide an email address for inquiries. This lack of online information was discussed by one lodge manager. He was reluctant to automate his booking given the often small size and high end focus of his lodge:

"... we don’t have yet an on line booking system for [bush name] for example you know and people can’t go on the internet and see whether the tents are available for them then they email us ... it’s only small tent camps, I feel bad if it’s not necessary at the moment.”

This lack of integration also affects the ability of hotels to effectively use online travel agents [OTA] services. A number of OTAs have coverage of hotels in Rwanda, but these work in interesting ways. As outlined by the general manager of a medium-sized hotel:

"Yeah, I’m linked to two [OTAs], we are linked to Hotel.com and we are linked to Expedia. What happens, when we did the contract, on a daily basis we get a list of new rooms. Those are available for Expedia ... they say give me four rooms.

For Expedia we go through [Intermediary firm]. So we don’t deal with Expedia directly, the tour company deals with Expedia."

As this quote highlights, OTAs have adapted in Rwanda to provide the ability for less integrated firms to use these services. First, hotels have to specifically assign rooms to Expedia to avoid risks of double booking, due to lack of systems. Second, booking (and payments) are not automated but come through an intermediary firm, typically by email. Thus, OTAs have adapted their services for hotels.

One can recount similar low adoption around other online tourism services. For instance, we found similar cases – provision of debit/credit card payments in ITDs, bookings for Gorilla permits, provision of hotel room/bed availability to DTBs, and use of online services such as web statistics/social media/ trip advisor. Literature on the internet and tourism has suggested that these services could allow firms to upgrade in the value chain. Larger agencies could involve a moving from involvement in “transformation” – service provision and logistics – to distribution – and reaching tourist directly. Services are one element that might enable this agility. They allow consumer booking and payment at a distance, enable tighter integration with outbound tour operators and allow firms to gauge customer demands. Unfortunately, poor adoption of services means limited upgrading of tour operators and hotels in this direction.

Summary

In sum, digital connectivity is much used in the Rwandan tourism sector, and its use in communication is perhaps the most pronounced use of connectivity found. Communication online simplifies the logistics of bundling tours which is the predominant way that tourism is sold in Rwanda. This can improve the quality of inbound tour operators, but it also poses risks from regional and outbound operators who may take on too much responsibility for logistics (and hence more value).

Tourism service-enabled hotels, tour operators and tour operators to more closely link up the value chain, particularly to integrate with consumers. However, it is difficult for firms to adopt services which require skills and costs for integration.

6c. Distribution

In the previous section we discussed that one benefit of online services is that they might allow Rwandan firms to better integrate with customers. In this section we expand this discussion focussing on how Rwandan firms can be more digitally and market to consumers.

Marketing to customers

In the literature changing connectivity has been suggested as offering the potential to improve visibility (Buhalis & Law 2008, Law et al. 2010), as hotels and tour operators could market direct to customers as a way to increase their sales (and potentially disintermediate outbound tour operators). As outlined in section 4b, quite a large number of hotels and tour operators have websites that advertise their offerings. Firms are also aware of the potential of social media, seen as an opportunity simply to reach more customers in their current markets directly (i.e the typical UK, US high-end consumer). This is highlighted by the quotes below from managers – one from an international hotel and one from a natural resource

"How do we use the internet to target the clients? One way is for our own to have our own website. So that people who need us might find us not just physically but from wherever they are.

I mean our website is one of our biggest things than ago, I mean we put the website address on our business cards, on our e-mail signatures, I mean we put contact us through the website, we send out our news letters through the website like our fb newsletter through the website.

Note in these quotes, managers imply a status quo in terms of customer types. They are not attempting to understand or reach new demographics. Rather, they are simply about reaching existing customer types. With a few exceptions (see section 6b) this focus on existing customers was the case across the majority of Rwandan firms.

Gains from the use of web resources bringing new customers is possible, but often these numbers are small. For instance, in tour operators rarely see direct customers as the main source of business – most customers still book through outbound tour operators. As illustrated by the manager of one of the well-known Rwandan tour operators this impacts on how they design their web-presence for visibility:

"...we put an effort to do it and last year we updated our website...

...But as a customer you are that tour operator’s client ... he’s the one who gives you that information ... whenever you ask a question that he does not understand or he cannot answer properly, he contacts us since we are on the ground.

...It’s an interaction between us and the other agent and then he contacts the client.

Tour operators or hotels may also not focus on extensively updating and capturing their social media streams with the presence of online firms. As expressed by a manager of one tour operator:

... the source market companies, they need social media ... a lot of social media interaction is tailored for the consumers and our customers come through, we have relationships with all those companies around the world, those companies are reaching the customers, they are using social media and internet to reach direct to customers."

Low levels of marketing online were not solely linked to value chains, they also linked to capacity. Tour operators and hotels are often unclear of exactly the best way to exploit web resources and social media, and may delegate these roles to external staff disconnected from the strategic centre. Here we highlight such delegation in these snippets from tour operators:

"[on Facebook] ... There is a colleague of mine he is the one who used to go check on the Facebook page on my behalf. No stop I didn’t really use that Facebook page at all.”

"[on online marketing] ... what’s happened is most guys have not embraced internet marketing.”

"[on websites] ... He doesn’t update the website because I think it. Some know when the website is kind of poor you don’t get much people they just you knew when you open a website and didn’t attract you don’t need to go further.”

Online marketing and visibility was often connected to the idea of referrals in interviews and of the importance of recommendation and links as a source of customer livelihoods but ultimately through an OTD or go directly to a hotel or OTD. Referrals were particularly important for smaller hotels and new entrant tour operators where attracting customers through recommendations could be crucial to their survival. As described by one small tour firm manager: customer referrals now increasingly comes from online resources:

"I think recommendations are a crucial issue in tourism ... they are going to choose a company, they just base on the other people who use the company, 90% of the decision taken in tourism are based on recommendations and mostly through internet, so it’s an important thing for sure.

Indeed, this view was also recognized by a regional consultant who outlined that in his view, sources of referrals were increasingly online:

"...the number one is online. The number two not that far behind was family and friend recommendations.

...But when you look at where people are getting those recommendations, it’s almost entirely online. These family and friend recommendations that..."
Communicating with customers online

For Rwandan firms that become more involved in the distribution of tourism, they will find themselves in increasing communication with customers. Such communication was found to mainly be occurring through small – hotel booking, offering queries, or tour operators discussing itineraries.

Changing connectivity has been beneficial to some managers. It gives them or their staff the ability to provide quicker replies to customers and conceivably distribute richer media (particularly images) to them using the growing bandwidth available to them. At the same time, moving interaction leads to new demands from customers. As one manager of a popular tour operator outlined, customers expect prompt replies:

“There are some individuals who have absolutely no patience and they want the answer right away and when that answer is delayed they look for another alternative. It means that there’s potential for you as a company to lose that business.”

For another manager of a more marginal tour operator these demands meant becoming increasingly involved in communicating with customers outside office hours:

“They send you an email and if you respond after four hours then it has no value because they have already lost the faith. But fast internet even with my blackberry I saw an email I can respond very fast, don’t even have to rush to office and connect.”

Those new demands can be particularly trying for firms. For instance, the director of one of the most popular tour operators in Rwanda suggested that with professional websites and correspondence, customers expected instant service:

“The expectation is that everybody’s running 24-hour global booking offices. And that’s challenging... Two-thirds of our business is coming from the US.”

“If you lose that time, you lose a day, in effect, for them (here referring to time that mean US and Rwanda are not in sync). And that can be challenging. And if there is a problem in the quote or something that they misunderstand, you can lose another day. So there’s an element of frustration.”

“I think of all us are trying to cope with how we deal with a 24-hour world. At a faster speed... And that’s where you’re now, aren’t you? The possibilities are huge, but dealing with it is very complex.”

In terms of the content of customer interactions, Rwandan firms tend to be capable of undertaking satisfactory interactions with customers. However, the types of interactions needed for high customer service can be demanding. The manager of one leading African-focussed outbound tour operator in the UK described what a professional process looks like at length:

“If we get an email enquiry or anything like that what we really want to do is get them on the phone... The website is a source of inquiries. It’s a very useful tool whilst the clients are researching.”

“The key thing that we are selling is expertise... the key thing is the understanding with the client. Because no matter how much stuff you put on the website, what you actually need to do is listen to a client, have an understanding to what they are looking for and then guidance to that. That’s the key.”

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“They often use the technology to help them research or to show them things but the key thing is the discussion and using your knowledge to help them. It seems very valuable but if it’s not something that they will do they will research on their own but the key thing really is the discussion.”

As outlined by this manager, customer interactions are complex. They often involve both online elements but also include phone discussions; and they can be lengthy exchanges. It is inevitable that outbound firms with dedicated customer service assistants, in the same timezone, speaking the same language and easily available at the end of a phone line are most appropriate for customers. Simply put, when customers are looking for tailored high-end trips as is common in Rwanda, it is inevitable that inbound Rwandan firms will be less well equipped to handle customers directly.

Summary

As outlined in the literature review, it is certainly the case in Rwanda that inbound firms, particularly hotels and tour operators, are interested in moving into distribution and reaching customers directly. Yet, as this section has showed, there are many limits that make it difficult for these firms to reach customers – skills, networks and standardisation. Adoption of online services that can simplify customer interaction has been low (as outlined in the previous section).

In addition, web presence and social media curtail is often limited. Firms may put up websites, and do some referrals through approaches such as banner ads, emails and mailing lists. While such approaches can work to some extent, in some interviews it felt like the last decade of social media, 2005 and user-generated content has not been fully appreciated by these firms. Using the web to either actively find customers is a matter of engaging with more complex information ecosystems. Firm often do not have the time or resources for such engagement, simply using a website with an occasional nod to some social network activity.

Finally, Rwandan tours are generally not standardised, and they are bundled.

The intricacies and time elements of interacting to enquire and customising a tour for a client can be daunting for outbound tour operators when using referrals. Whilst this might be compensated for by superior local knowledge in inbound firms, it currently has little effect given the little time that tourists tend to spend in Rwanda (and the range of sites).

Inbound firms that have found particular riches in terms of specific referrals, networked into groups of tourists or online searching can lead to direct customer (see next section). Yet, these types of customer remain in the minority. These interactions may be sufficient to allow smaller hotels and tour firms to survive, but we do not perceive that these categories of tourists are driving widespread upgrading of inbound tour firms, hotels or lodges and disintermediating outstanding ones.

6d. Customers

This section outlines the types of consumer activity in Rwanda, particularly targeting interactions that currently exist. As previous discussed, core tour operators still consist predominantly of affluent tourists coming to the country for a few days to visit the main sites.

However, there is a growing niche and domestic customers and these provide opportunities. For example, one freelance guide who had built his skills around birdwatching had been able to build direct customer from online referrals. Another tour operator had linked into Kenyan NGOs and had gained a number of tours by word of mouth within these organisations. In these referral processes, online referrals were an important element which supported the networks and strategies of these respective enterprises.

In terms of customers, it is also worth highlighting that tourist activities do not relate solely to pre-trip searching and booking, and post-trip feedback. With changing connectivity, tourists are increasingly demanding to use the internet to find out where they are in their destination, particularly in hotels, lodges and restaurants.

As outlined earlier, provision of good quality internet access for customers support tourist visit with hotels and trips (IFRA 2013). Beyond this, online tourism consultant in the region discussed at length how online referrals are now also coming through tourists posting online whilst they are on holiday.

“I’ve got the stats somewhere but it’s 75% of Americans now, while they’re traveling, are updating their Facebook at least once a day on their phones.

“It’s something that people will commonly do now, post their photos while they’re there, at the end of the day, talk about what they’ve done...”

“They are doing the marketing for you but you need to leverage that... if they can check in on a page on Facebook, if they can tag their photos and content that they put up there to your place, it comes successfully to the top of your page – and obviously to your friends and family who are going to respond.”

Thus, provision of connectivity for tourists is becoming a vital source of referrals. In general, the internet was available in hotels and lodges but consistent bandwidth was a problem. On one hand as was shown in section 4, this related to glitches and network issues. On the other hand it linked to growing demand from customers. As outlined by the owner of one exclusive lodge:

“Five years ago, they had no internet. Three years ago, when you start putting it up, they then start an email home saying, ‘I’m safe, I’m safe’. See you in two weeks. Now they download movies. Now they make movies.

“They go to see the gorillas. It’s an hour. So they have the whole hour there, and they’re trying to survive on YouTube to somebody else. And then they say, ‘You internet’s hopeless’. And you have to say, ‘I can’t remember when we were doing a recording studio for you’. That’s the experimental take-up of internet in the world, isn’t it?”

As highlighted by this quote, demand for bandwidth is not static. Websites are increasingly interactive and customers wish to undertake even more ambitious activities when they are on their trips. Such activities may seem frivolous to some hotel owners, but as outlined by the consultant above they also serve a purpose in the new social network driven world of peer recommendation.

These issues pose questions as to how connectivity keeps up with growing demands. At a hotel and lodge level it suggest constant awareness of needs. For policy makers, changing connectivity is not a one-shot event, but likely to be an ongoing process if tourism is to remain visible and connected.

6e. Summary

Changing connectivity, alongside growing use of the internet in tourism has led to new demands in Rwanda. In terms of resources and sites in Rwanda, online visibility is an important element in making tourists aware of sites and their relevance. At present in Rwanda, online visibility provides some support to core sites and activities, but there is little evidence that it has supported beyond Gorilla’s strategies. In terms of online knowledge building to improve Rwanda as a destination, findings were that online activity was mainly informal, undertaken by more active and entrepreneurial actors. It is an area that can be improved.

In terms of transformation and how services and tourism businesses work, changing connectivity and the coming on line of customers still does not mean that core tour operators and tourism will still consist predominantly of affluent tourists coming to the country for a few days to visit the main sites.

However, there is a growing niche and domestic customers and these provide opportunities. For example, one freelance guide who had built his skills around birdwatching had been able to build direct customer from online referrals. Another tour operator had linked into Kenyan NGOs and had gained a number of tours by word of mouth within these organisations. In these referral processes, online referrals were an important element which supported the networks and strategies of these respective enterprises.

In terms of customers, it is also worth highlighting that tourist activities do not relate solely to pre-trip searching and booking, and post-trip feedback. With changing connectivity, tourists are increasingly demanding to use the internet to find out where they are in their destination, particularly in hotels, lodges and restaurants.

As outlined earlier, provision of good quality internet access for customers support tourist visit with hotels and trips (IFRA 2013). Beyond this, online tourism consultant in the region discussed at length how online referrals are now also coming through tourists posting online whilst they are on holiday.

“I’ve got the stats somewhere but it’s 75% of Americans now, while they’re traveling, are updating their Facebook at least once a day on their phones.

“It’s something that people will commonly do now, post their photos while they’re there, at the end of the day, talk about what they’ve done...”

“They are doing the marketing for you but you need to leverage that... if they can check in on a page on Facebook, if they can tag their photos and content that they put up there to your place, it comes successfully to the top of your page – and obviously to your friends and family who are going to respond.”

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7. INNOVATIONS

The previous sections have focused on the overarching trends around connectivity in the tourism sector. Here we outline activity mainly related to isolated examples of innovation and/or good practice around use of connectivity that might be more widely replicated. Here we use the examples of the value chain introduced previously, inputs, transformation and distribution, to order analysis.

Inputs

As outlined previously, destination management for countries and regions is still crucial. Tourist may not have decided their tour location, or they may require further information. Countries and regions that are more visible are likely to reap rewards. However, with the expansion of new media platforms and social networks, single online DMO sites are not enough. Thus, it is an open question how destinations use these platforms and networks for visibility.

One approach can be through national online publicising of special events. When these are of sufficient interest and well publicised, it is possible that those interested will drive branding through their networks and social network posts. One successful case in Rwanda has been the integration of websites, social media and multimedia into “Kwitu izina,” the annual ceremony for naming baby gorillas born during the previous year. Use of social media, online video and a micro-site for the event, has contributed to huge publicity generated for this event, and was supported by people posting on online networks such as Twitter and Facebook. Indeed, in 2013, the event earned runners-up position in the World Tourism Association’s “Innovation in Public Policy and Governance” award.

Similar cases of unique events pushing online visibility were also mentioned during our parallel work in Kenya. Attracting attention through social media and new networks is difficult. However, it may be that a more systematic attempt to amplify unique cultural events online could generate new types of destination branding.

In addition to online visibility potentially supporting resources, building skills and knowledge was also outlined as an area where connectivity could improve destinations. Research in this area highlighted some innovation around use of mobile apps that might be pushed further.

Use of online mobile applications was particularly relevant to those involved in tours such as drivers, guides and tourists at natural resources. For instance, one driver for a tour firm explained:

“I have the map, the map app – it’s like GPS if there’s a place I don’t understand when I’m driving around I can put it on – even the it cost money it cost some units my units. But I have got that app on my phones.”

Another freelance guide also outlined mobile application use related to working on bird-watching tours which were less familiar to him:

Interviewee: “What else do you use internet for, besides emailing other tour guides or your clients, what else are you using internet for?”

Interviewee: “Basically it’s about learning more about my profession whatever I don’t understand, like of recent I got a dictionary, also this dictionary about only bird watching so whatever I don’t understand a terminology which is not common I can go in my apps.”

Other similar examples found were around use by tour guides of dictionary applications for translation and animal identification. Whilst such mobile applications do not make up for good training and skills, they help to improve customer service and support learning, particularly amongst tour guides. Thus, how such applications might be used more widely to support learning in the tourism sector could potentially be a fruitful activity to explore.

Transformation

We have previously outlined how changing connectivity has improved communication, particularly as part of organising the logistics of tours. However, use of online tourism services (e.g. online travel agents, use of feedback sites) has been adopted less and often peripherally, due to their poor fit. Sitting between these two poles has been a more positive growth in the use of generic online services by some firms in tourism. This type of online service includes applications such as online calendaring and document editing, online messaging tools and document-sharing applications.

Online service was not widespread, but a few firms with computer-savvy staff had used it to their advantage. For example, inbound tour operators often spend much time receiving requests from outbound tour operators for almost identical itineraries and images that they need to provide to their networks or customers. As outlined by the manager of one of the larger inbound tour operators, some had taken advantage of applications like Dropbox to simplify the time-consuming process of distributing multimedia materials:

“I’m able to send very heavy photos and share them with people who are very far away... if I had to send it over the internet via e-mail then it would take forever... I am able to create that shared folder and share it with many different people in many different parts of the world.”

A general manager of a Kigali restaurant that had recently added two guest rooms for tourists, also described how they were using Google calendar to organise their bookings:

“we keep track of our guest house reservations using Google calendar, which we have synced to all 3 email accounts, so that any one of us can view, add and change reservations from our own individual, even though we all have access to the Heaven email account. We can do it through our individual email accounts.”

Guides and drivers also reported that they had begun to use a range of phone applications particularly media messaging software, to keep more easily updated with their management:

“I’m using a Blackberry messenger... I think one of the application I’m using often is like WhatsApp application... but the most thing the most important thing for me is just to have my emails on hand wherever I am.”

The use of generic services highlights that online tools can be favourably used by smaller firms and hotels. Whereas, specific tourism services sometimes poorly fit, these generic services allow adoption by firms for their specific needs.

In early sections of this report we discussed how difficult it is for Rwandan firms to be able to use online resources to compete with outbound tour operators for customers. This difficulty has been linked to the close interaction and trust required in customer relations. One innovative approach to overcoming this problem was observed in the ways that several more successful Rwandan companies had strategically expanded outside East Africa. We found three cases of large tour firms that had grown from East Africa and established representatives in the UK and US. In these cases, these strategic decisions had made prior to the growth of connectivity. Nevertheless, presence in customer-source countries combined with improved online availability in the destination country is a Rwandan seemed to be mutually supportive in some cases. Even though these three firms only had a single staff member or a notional office outside East Africa, having a website with a UK or US contact number for queries, and ability to take local bank transfers (in the UK and the US) was beneficial to these firms. It should be added that these strategies relied on substantial financial resources and personal connection. Indeed, all
these firms had directors who had personal links outside the region that had been used to spur their expansion. Clearly changing connectivity in such a case can facilitate improved reach of inbound firms into new territories, but for less well linked firms it highlights geographic barriers that can limit even well-connected firms from undertaking successful distribution strategies.

**Distribution**

During research, we came across several innovative ways in which Rwandan firms were looking to reach new customers. Again these were not systematic, but highlight potential new approaches for firms in Rwandan tourism.

Rwandan firms have generally struggled with how to best use social media. Nevertheless, we found sporadic cases of tour guides and smaller tour operators who had managed to use social media to link to customers. Tour operators and guides found that by ‘friending’ customers and integrating themselves and their firms into their photo sharing, tagging and networking activities on social networks they were able to render themselves more visible to future customers. As described by one freelance tour guide, social network use had generated referrals for himself:

> “we become friends on Facebook and when they post the pictures of the trip they are like ohh I’ve just been in Africa I was in Rwanda I did gorillas. Put photos and the first question was who was your tour guide … even last month I had a trip and this was from Facebook because a friend posted some pictures and those saw pictures and contacted me.”

Another driver of potential requests is the TripAdvisor website. For instance, freelance tour guides who are present on the platform can gain some recommendations from customers and therefore visibility:

> “Customers… so on trip advisor and say we were in Rwanda, our guide was this and this so when they look up your name then your website comes up then they open your website so it’s very important being a tour guide and having your own website.”

This entwining of tour providers and tourists as a way to drive new customers can work and is a viable strategy for smaller firms. But, it requires skill, strategic thinking and an investment of time that many firms do not make.

Rwandan firms that were looking to move into distribution, tended to pursue haphazard marketing approaches. There was scant evidence of firms strategising to reach specific segments or nationalities of customers. Putting up a web presence was often articulated by firms in Rwanda as ‘having a global reach’ and ‘reaching more of the same customers’. Yet, there were cases of strategic approaches to marketing taken by tour operators. For instance, one exclusive safari company had recently created a new brand which was discussed by its director:

> “Launched a new brand that we are going to use to take care of the lower budget, of tourism ... we are able to take care of them in different ways — when they come to us and we are able to lead them to that brand and we are able to take care of their needs.”

A second firm, had similarly launched an eco-tourism campsite in Rwanda. In both these cases, firms were able to use separate online websites and branding to market for these specific demographics. Different branding and approaches (both online and offline) proved effective ways for tour operators to attract new segments of customers. Such processes are liable to be resource intensive but they can avoid compromising existing branding. Commonly tour and travel firms in Rwanda who expanded ended up with websites and itineraries that became generic with a plethora of options but little clarity.

8. **Changing Value Chains**

The extended empirical discussion in the previous sections has highlighted the effects that digital connectivity has had on the Rwandan tourism sector. Here we summarise this analysis by seeking to understand how changing connectivity relates to value chains and production networks.

We discuss four key elements of how connectivity has changed value chains: how changing connectivity has improved efficiency; if changing connectivity has led to firms adapting products and reaching new customers; if Rwandan firms have been able to remove intermediaries and go more direct to customers online; and if firms have been able to diversify and move to new markets using better connectivity.

Through online communication and co-ordination, firms have been able to become more efficient. As discussed, efficiency is enabled by improved trust, management and quality of service amongst tourism firms and resources in Rwanda. To put it another way, value chains are better integrated through improved connectivity. Yet behind this new efficiency and management, the core products and ways of selling in the Rwandan tourism sector have not radically changed. The Rwandan product is still wildlife trips as part of a wider high-end East African safari. Policy makers have sought to push a diversity of resources and sights, but these have not been widely taken up.

Disintermediation in the tourism sector is complex. In terms of firms in the value chain, virtually every actor is looking to disintermediate others using better connectivity. Three of the most significant types of potential disintermediation in Rwanda are hotels who wish to get direct bookings through online travel agents; inbound tour operators that are looking to reach tourists directly online; and outbound tour operators who wish to reduce their reliance on inbound tour operators in country.

None of these disintermediation processes has occurred at a wholesale level as yet. Some larger hotels are growing their direct customers from online travel agencies (particularly business customers). But, where core tourism comes through international tours, firms need to build relations with these bundled value chains (i.e. outbound firms). Small inbound tour operators have had some successes reaching customers directly online, disintermediating when they look to referrals or niche customers. Yet, it is difficult for Rwandan firms to interact with foreign customers who are located distantly and may be speaking foreign languages and/or are in other timezones. Alongside these difficulties, customer is more comfortable paying local outbound tour operators, where paying what are often large sums direct to firms in Rwanda seems risky. Thus, going through local outbound tour firms is still favoured by customers. We found that outbound tour operators (and particularly regional tour operators) disintermediating inbound tour firms were more of a threat. Evidence from neighbouring countries in Africa suggests that as logistics become easier to organise from afar, inbound tour firms find themselves marginalised.

The more complex logistics of typical tourist activity in Rwanda — the remote location, the perception of security, the need for a 4x4 vehicles — mean that this marginalisation has been less observed in Rwanda so far, but it should still be considered an important future risk.

In terms of finding different markets, one common path was of small travel agents growing to become dual travel agents/tour operators with the aid of better connectivity. We also highlighted that some firms had used online communication alongside their personal networks to reach niche or domestic customers (i.e. community tourism, from a certain country). These approaches were taken by the minority of firms but do point towards visible small-scale strategies and upgrading to different markets. This evidence also highlights the continuing importance of networks outside Rwanda to drive customer referrals, and this can be a barrier to firm growth.

To summarise value chain changes, the biggest risk to Rwanda is the static nature of the sector. New diversification of tourism in Rwanda has failed to capture a mass of new customers so far, and whilst there have been some changes amongst small firms, the core activities of tourism remain unchanged.

It is worth pointing to the ways that these trends fit into wider production in the global tourism sector. One argument that can be made is that online travel resources and services often point poorly with the way that the firms are territorially embedded in the Rwandan setting. For instance, online services tend to work with specific standardised facilities — a hotel room, a vehicle, a flight can then be booked - and then potentially dynamically integrated together. Yet local elements in the Rwandan context — the need for a car and driver, non-standard sightseeing trips, lack of hotel information systems — mean that Rwandan sites and settings are unlikely to be well integrated into digital databases and services. Another example of this poor fit is that a website such as Trip Advisor does not have categories for tour operators and tour guides, and this means their gain from referrals is liable to be lower than hotels whose services are clearly specified in this service. In both of these cases, firms of globally defined standardisation of tourism are one element which reduces the ability for Rwandan actors to reach customers in a convenient way.

The Rwandan tourism sector is defined by the presence of certain firms, hotels, lodges and guides who are part of established networks of well-known and trusted firms. These firms tend to achieve high-quality service requirements through recruiting trained staff from the region and even internationally. They are the firms that are able to reach out and get finance when they are growing. They are also the ones who are part of the associations that drive decisions in the sector.

It is thus difficult for new firms to penetrate networks stretching out from Rwanda in well-established relations. Whilst changing connectivity offers enticing possibilities for firms to break into these relations, the static nature of customers and the skills of actors make sufficient growth to challenge these larger established firms difficult.
9. WHO BENEFITS?

The discussion in the previous section has reviewed how connectivity has (and has not) changed value chains and production networks. This overarching standpoint forms the basis of an analysis of who benefits from this growing connectivity. This section is split into four constituent elements that have emerged around changing connectivity: visibility, communication, services, and knowledge. We examine these elements to detail who benefits from elements of connectivity.

9a. Visibility online

Online visibility and associated communications offer the potential for Rwandan firms to more directly reach customers, support recommendations and market their goods. This has happened to some extent. A few tour firms have been able to use web resources (websites, social networks), some larger hotels have integrated services and attracted customers. Online visibility can support improved awareness and small increases in customers. Certainly, for smaller firms attempting to enter tourism and survive, such tactics should not be scoffed at. Visibility online supports a more vibrant set of firms in tourism, and further assistance in developing online skills can push a more diverse tourism sector for customers and make the sector more viable for entrepreneurs.

However, evidence from our research does not suggest changing connectivity has transformed the majority of Rwandan tourism firms. Beyond connectivity there are a number of factors that still limit the ability of firms to reach customers directly. Some of these factors are low capacities around skills in best exploiting online resources, issues around finance and time to interact with customers. Other limitations are more fundamental, concerning trust and customers preferring to book with firms in the same country, and in how the terrain and logistics of Rwanda mean that activities fail to sit within online services.

Those wider elements of capacities, power and networks make it difficult for Rwandan firms to improve their position across the board without an active set of policies and learning. Typically it is the outbound firms and online OTAs who are taking the best advantage of online visibility, and it is those firms that have access to customers who will have the power to bundle tourism services and ultimately, dictate value.

Online visibility of Rwandan natural resources, sites and culture is present, but the benefit is negligible. It was already easy for tourists to make a case for Rwanda when it came to its core Gorilla trekking activities. These rare animals are constantly featured in media throughout the world, and Rwanda’s logistics. Yet, there are risks that firms may link to disintermediate Rwandan firms in the future. Some intermediaries are already being marginalised insofar as outgoing firms book hotels directly online. In the future, it is likely that more firms, particularly those who engage in more generic activities, may become disintermediated.

9c. Use of online services

Rwandan hotels, resources and tour operators have been slow to provide or integrate into the growing number of services that are providing in the tourism sector. For instance, simple hotel availability information and natural park permit booking is nearly always done manually. Adoption and successful cases of use of online services in tourism such as online travel agents and feedback sites was also slow.

This low use and adoption of services does not appear to come from a lack of connectivity. Most tourist resources and services have some sort of internet provision. Yet there are other barriers around the skills/cost required to use services and the seeming line knowledge about how to integrate within the country. In particular, there are pre-requisites for service integration around the need for coherent management and information systems that are often not present in Rwanda.

On balance, online services are likely to have brought some benefits, but the benefits have mainly been to large international chains (for example, one hotel in Kigali that is frequented by business customers who can now book directly). In terms of Rwanda’s ambition to diversify tourism, a lack of adoption highlights further risks. With competitive providers of tourism, a lack of online services in Rwanda could push OPNs of tourism to be underplayed in Rwanda as against competitors. Where it is complex to find hotel availability, book permits and transfer money then tourists may simply look to another country.

9e. Effects on the most disadvantaged

In highlighting the socio-economic effects of tourism, we have found little effect from internet use amongst the most disadvantaged. This is not to say tourism, more widely, is not having effects. As outlined by various studies in Rwanda, low-income communities can be involved in tourism within community tourism, in national parks as guides, producing handicrafts; as recipients of community funds from national parks, and in jobs provision in hotels (Ashley 2007, SNN 2011, Spairo et al. 2010). Yet, we found no evidence of significant impact from changing connectivity.

Indirectly, it may be that the growth of community tourism is driven by the ability to sell niche tourism online. Some hotels and sights also reported that they might now advertise vacant job positions online, making this information more transparent. These observations though are highly anecdotal and cannot be seen as significant benefits for the poorest coming from changing connectivity.

9d. Using online resources for knowledge building

We found evidence of knowledge building using online resources. This was found in a diversity of actors – guides developing their knowledge of wildlife, tour operators building their knowledge of local resources and tour building, hotel managers building their skills in hotel management. For these individuals, access to connectivity can be beneficial. The success stories of the tourism sector often come from individuals who through using such resources often go on to be promoted or start their own successful enterprises.

Skills and knowledge development is often ad-hoc, by those with time and access to try and improve themselves. Typically more formal training has been done through offline activities such as workshops.

In sum, connectivity brings potential benefits for knowledge building, but only to a self-selecting group. The potential growth and breadth of such groups might be expanded through, through better availability of online knowledge resources. Producing material tailored to the Rwandan tourism sector, and supplementing offline training with online resources could enhance the benefits from knowledge building online.
10. CONCLUSIONS

10a. Effects of broadband connectivity in the tourism sector

To conclude, we return to the research questions outlined in Section 2. Here we summarise findings drawn on empirical work in the tourism sector.

Connectivity

Previous work has identified the potentials of connectivity to make significant differences in the tourism sector – how customers behave, how firms co-ordinate activities, how firms market tourism activities. This literature has mainly focussed on developed country contexts, thus this work on Rwanda drew extensively on empirical analysis to examine these discussions in the Rwandan context. Our research examining tourism and the effects of connectivity provides us with much evidence that contrasts to wider reported literature.

In terms of online resources supporting inputs (that is resources and tourism sites) online visibility allows these resources and sites to be presented more globally. The lack of quality and diversity in these resources limits expansion beyond simple online information provision, and indeed there seems little advantage for Rwanda over its neighbours. Skills and knowledge development that can enhance the presentation of such resources is mainly done offline in Rwanda. In contrast to the literature which has suggested that online knowledge provision and learning can improve service in Rwanda, online knowledge development was found only occasionally, and only undertaken by more motivated actors in the sector.

Business functioning has been improved through the availability of online connectivity, where the logistics of organisations becomes easier to handle. Online connectivity makes it easier for Rwandan firms, improving trust. Yet at the same time, simpler logistics connectivity, where the logistic of organisations becomes easier to handle, have not led to transformation of activity in Rwanda. In contrast to the literature which has suggested that online knowledge provision and learning can improve service in Rwanda, online knowledge development was found only occasionally, and only undertaken by more motivated actors in the sector.

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Rwandan firms have often looked to push towards distribution of tour resources and direct marketing to customers. However, in contrast to the literature which suggested that this would transform value chains, the success so far of Rwandan firms has been limited. Firstly, using the diverse range of websites, social media sites and other resources available takes time and skill and often leads to only minimal adoption. Secondly, online tourism services which might allow Rwandan firms to better reach to customers have also had limited success. In particular, services such as OTAs and feedback sites often do not fit to the types of common tour activities in Rwanda and thus their use has not taken off.

In terms of online resources supporting inputs (that is resources and tourism sites) online visibility allows these resources and sites to be presented more globally. The lack of quality and diversity in these resources limits expansion beyond simple online information provision, and indeed there seems little advantage for Rwanda over its neighbours. Skills and knowledge development that can enhance the presentation of such resources is mainly done offline in Rwanda. In contrast to the literature which has suggested that online knowledge provision and learning can improve service in Rwanda, online knowledge development was found only occasionally, and only undertaken by more motivated actors in the sector.

In sum, changing connectivity in tourism, for all the talk of large changes, has surprisingly little transformative impact. In Rwanda, firms realise the importance of the internet in communication, and adoption is high. Yet, the types of activity undertaken and the value chains have not changed.

Socio-economic outcomes

The impacts of changing connectivity on socio-economic outcomes appears minimal. In terms of positive outcomes, changing connectivity provides some support for new firms in the tourism sector. It provides a channel for guides, small tour operators and travel agents to market and then link to niche customers. These processes can be important in the survival of firms and thus the situation of its owners and employees.

However, there appears to be little evidence of Rwandan firms creating or capturing value in the value chain. Simpler communication tends to marginalise some Rwanda tour operators. Online services have brought tangible benefits mainly to large international firms who have the ability to well integrate with these global services.

More generally, statistics suggest that while Rwandan tourism has been growing, this growth can mainly be attributed to factors not linked to online visibility of destinations (e.g. improved perceptions of safety, direct flights, offline PR marketing). The predominant story in Rwanda than is of some new activities and efficiencies, but little socio-economic change from changing connectivity.

Summary

Many firms in tourism have adopted and are actively using digital connectivity. But, digital connectivity alone has not led to transformation of activity. Rather, one can see a set of wider barriers that prevent the transformative effects of connectivity being realised. Barriers can relate to skills in integrating available technologies into businesses. Online resources and services were also found to be poorly fitting to the needs of the Rwandan sector and this can limit visibility. Finally, well-established firms and relationships into outgoing firms lead to a static tourism sector which is difficult to transform. Now that better connectivity is available, the goal should be to tackle these secondary barriers to effective use of connectivity to drive improved benefits.

10b. Policy implications

The critiques made in this work, combined with examples of innovative activity observed, point to ways in which these secondary barriers to uses of connectivity might be reduced. These are discussed below:

Online destination management

Destination management is still important. It provides visibility and information for tourists who are often not clear about where they want to go, and what they want to do. In the case of Rwanda, new diversifications of activity were particularly found not to be visible on the internet. Destination management sites should include extensive information on such elements – the newly assigned natural resources, cultural tours and activities that are possible. This can provide an informational basis for customers as well as highlighting new opportunities for highly entrepreneurial tour operators.

Destination management is about more than one single website. It is about how the cultural and diverse information of a destination reaches customers. This information is as likely to come from ‘pushes’ in social networks and other online applications as it does from ‘pulls’ of customers Google searching for information. As the case of ‘Koolu Umu’ (the gentle naming ceremony) shows, it is possible that appropriate approaches can work in a country like Rwanda. The challenge is in examining how existing activities might be best pushed in this way.

Online knowledge

Ad-hoc learning online by entrepreneurial actors suggests the potential for making knowledge more accessible to those involved in the sector. In Uganda, for example, the tourism sector has partnered with local application developers to build tourism resources that could add knowledge building. It is not out of the question that such initiatives could happen in Rwanda.

Whilst it has not been used much in Rwanda, some production of online learning resources, around simple activities like customer services and basic management could also be valuable to a sector. Such resources would be particularly useful in jobs where staff turnover is frequent and attending workshops is less viable. Online approaches on their own will not overcome all barriers in the sector, but as yet online learning has barely even been explored in Rwanda.

Support internal systems and management development

Coherent internal information systems and skilled management are the fulcrum of more dynamic firms in the tourism sector. They also improve the likelihood of firms using online resources and services.

Thus, adoption of online tourism resources and services are likely to be driven by improving managerial training in tourism, something that already occurring in the sector, through government support. Other activities beyond managerial training could also push systems use. For instance, promoting well-known groups through hotel and tour associations, and visits to places of best practice might inspire improvement for these firms.

Online services

In our work in the sector, we often observed that one or two firms were using a particular online tools or services well. Thus, sharing of best practices of use of online services, and provision of frequently updated lists of online resources for the tourism sector could be invaluable. This might particularly be led by well-established tourism associations who can support improved diffusion of knowledge in the sector.

However, there are cases where online services are simply poorly fitting with the activities and contexts of the local setting of Rwanda. With poor fit of online services, it is worth associations and policy makers exploring the growth in specifically focussed African online tourism services that are emerging. Tools such as Safari Now (lsnysic Safari scheduling service), Nights Bridge (online systems for small hotels) and WETU (itinerary sharing service) all seem better tailored for the needs of Rwandan firms (but all have zero presence in the country). Such services or others could be welcomed and adopted in Rwanda.

Youth with new social media

Social media use in Rwanda can seem overly time consuming or complex for firms in the tourism sector. Yet, social media is an increasingly important online resource in how customers find, share and decide on tourism experiences.

There is a tendency for tourism firms to contract social media activity to consultants, for which they are often overcharged and where they lose direct interaction with these vital resources. As shown, successful cases using social media depend on interest, time, trial and error, and keeping up with the newest developments. With these demands in mind, it would be prudent for hotels and tour operators to consider hiring younger staff to undertake social media roles. As has been done successfully in a few firms, employing a tech-savvy young staff member as a social media co-ordinator can often be relatively low cost, and allow firms to build social media benefits and skills in-house over time.

Branding and niche approaches online

One key weakness for Rwandan firms is that going online is often a matter of reaching ‘more of the same’ customers. Firms who strategise and then push to reach specific demographics or segments of customer were generally found to be more successful. Further, here there seems to be more potential for direct customer interaction online, particularly in finding niches.

Where firms strategically push into niche areas (e.g. bird watching, community tourism, and regional customers) can be highly successful. Online activities is a crucial element of such approaches – in looking for niches and ensuring that niches reach a critical mass of customers.

Similarly, for growing Rwanda firms, expansion may not necessarily come through offering extra itineraries and gaining more customers of the same type. Cross-branding for different demographics (for instance, by language) by budget) can allow different types of growth, and online activities are central. Given the low awareness of such approaches it is crucial that these ideas are also linked into training and skills development.

Continue to support internet access within hotels

RDB has taken some positive steps to push internet access in hotels and support problems when they have occurred. This support has been useful for improving customer service, as well as contributing to ‘pushing’ the Rwandan brand through social networks. Attention must be paid by policy makers to ensure that hotels keep up with the needs of customers and bandwidth intensive online resources.
11. Bibliography


12. APPENDICES

12a. Glossary of terms

DMO: Destination Management Organisation - Organisations which provide resources for tourist destinations.
GDS: Global Distribution Systems – Flight and hotel booking systems generally used by travel agents.
GP: Global Production Networks – Framework used in this work.
GVC: Global Value Chains – Framework used in this work.
ITO: Inbound Tour Operator.
OTA: Online Travel Agent.
OTO: Outbound Tour Operator.
RDB: Rwandan Development Board – Rwandan policy maker for tourism.
SNV: Pro-Poor Perspectives in the Tourism Sector in Rwanda.

12b. Sample interview questions for tourism managers

Italic questions indicate follow ups which were used as prompts to expand on the topics discussed:

1. Before starting, I want to just ask, broadly speaking, do you think that fibre-optic internet has had a big or small impact on the way your business operates? In what ways?

2. What types of internet access do you have? What company? why this operates? In what ways?

3. What do you mainly use the Internet for?

4. Are you disappointed by the internet in any way?

5. How did you come into this job? Did you have an advantage over foreign firms in Kenya/Rwanda?

6. How many people work for your company? How did they get there?

7. How many of your employees are men? Women?

8. Roughly how many customers do you receive annually?

9. How many years ago did you start working in the field? Do you think this has changed over time? Do you feel that faster Internet changes any of this?

10. what kinds of services do you provide? Do you provide all these services or do you have an advantage over foreign firms in Kenya/Rwanda?

11. What happens if you go over your capacity to handle tourists? Or what happens if you get an unusual request or a request that you cannot provide on your own?

12. If you use the services of other drivers/accommodation/tour guides: How do you search for these people? Do you use the internet to search for them? Do any of them have their own websites? Are you worried about them cutting you out?

13. What about the services you do not supply, like food or arts/crafts? Do you take your customers to the same restaurants/casinos and arts shops? How do you think the internet is changing how these groups (food and crafts people) engage with customers?

14. Do you provide your services only in Kenya/Rwanda or in other countries?

15. Do you think local firms have an advantage over foreign firms? For example, do you have an advantage over foreign firms in Kenya/Rwanda?

16. Does your company specifically changed any of the work that it is engaging in in recent years? If so, can you describe why? Are these changes connected to a faster internet connection?

17. Where do you get your clients from? % from middlemen, travel agents or other companies, % from your own website, % from directly via email or telephone, % from other

18. Do you have any permanent contracts or relationships with other companies?

19. How do you search for new partners or other companies to work with? Who makes contact with who? Do you search for other companies? Or do you wait for them to make contact with you?

20. What has been the most successful way of forming new partnerships? What has been the most challenging? Do you have examples of either?

21. How do you use the internet to contact new people/companies? Has faster internet allowed you to do this more effectively?

22. How important is reputation? How do you determine whether you can trust a company?

23. How do you use the internet to gauge whether someone is trustworthy? Do you have any permanent contracts or relationships with other companies?

24. Have you experienced problems with cybercrime or people trying to be dishonest on the Internet? How have you dealt with this?

25. How do you use the internet to gauge whether someone is trustworthy? How do you use the internet to gauge whether someone is trustworthy? Do you have any permanent contracts or relationships with other companies?

26. Do you change your margins/profit margins depending on: whether the customer comes directly to you or via a middleman? Whether they came from different countries? For any other reasons?

27. How do you use the internet to target different groups of tourists or do you just use a blanket approach?

28. How important are recommendations from other companies? What about recommendations and reviews directly from other tourists?
29. How do you ask for feedback from your clients or from other companies? Have you had any experience with online feedback/live feedback on the internet?

30a. Do you feel that there is enough online information available for tourists to learn about activities and destinations in Kenya/Rwanda? Where do you think they are primarily getting their information from, and is this changing?

30b. Do you feel that there is an increasing number of Kenyans/Rwandans creating content about Kenya/Rwanda (e.g. reviews on TripAdvisor, videos on YouTube) and does this affect your business in any way?

31. Is there any advertising or marketing that you are trying to do, but it isn’t working as well as you had imagined?

32. If they have a website: did you do it within the company or did you bring someone in? Who are you predominantly trying to target with your website?

33. Do you have more than one website? WHY do you have more than one website? Are you targeting different kinds of people?

34. Do you use social media? Who are you trying to target? Do you feel like you know how to use it effectively? Do they say Facebook, do they use ads on Facebook? Do they contact people on Facebook or do they just have a page? Has it driven all helpful?

35. Do you use TripAdvisor? Who are you trying to target? Do you know how to use it effectively? Do you feel that it expresses you or makes you vulnerable in any way?

36. Do you know anything about search engine ranking or optimisation?

37. How else do you make your company more visible online?

38. How did you learn about websites/social media/TripAdvisor/search engine optimisation? Where do you go to look for new information or better understanding about these things?

39. How important is experimentation and ‘playing around’ with websites and using websites? Do you feel comfortable trying out new things online, like modifying your websites, using search engine optimisation tools, using social media? Does having a faster connection make a difference in how much you experiment?

40. Can you give examples of how you might have changed the way you learn about new things online because of faster internet?

41. Do you still visit trade shows or make physical visits/phone in person to visit new clients/locations/hotels? Does the internet reduce the importance of these visits or are they still important?

42. What percentage of your customers are from Kenya/Rwanda and what percentage are from abroad? What were the percentages three years ago? Of those that come from abroad, what were the top three countries three years ago? More specifically what % of your clients come from each place?

43. Are there any specific countries that you would like to target in the future? Does faster connectivity have a role in this? What kinds of tourists/companies would you ideally like to target in the future? Do you have any strategies to make this happen? Does changing connectivity have a role in any of these strategies?

44. How do you normally research or gather new information about tourism and new destinations? (e.g. face-to-face meetings, trade shows, online)?

45. Can you indicate how much of the information that you use in your day-to-day operations you obtain from websites and how much you obtain through emails and personal conversations?

46. How do you search for new employees? How important has word of mouth been for you to find the right calibre of employees? How has the internet changed the way you search for employees?

47. Do you feel that the education system is doing a good job at preparing graduates for work? Do you feel that universities are getting better or worse over time? Are there any specific skills that are particularly lacking among Kenyan/Rwandan job seekers? Does this present you with winning contracts? Do you have any relationships with universities or training colleges in terms of recruitment and internships?

48. Does the faster connection change how you perceive geographic barriers?

49. Do far away customers or clients feel less far away? Or is this not the issue? Do you see more opportunities from far away? Does it mean you are able to pull opportunities into your location?

50. Are there any other way that ICTs have enabled your firm to do things differently?

51. How do your tourists pay you for your services? How do other companies pay you for your services? How do you pay others for their services to you?

52. Does having faster connection change the ease of using digital payments?

53. Are there any remaining barriers to communication that you face either in terms of internet access, access to software/hardware or any other technological access?

54. How involved are you in professional associations or government initiatives?

55. Has government policy influenced the direction of your business? What criticisms do you have of their policies with regards to your sector?

56. What are the threats to your business in relation to the changing internet infrastructure?

57. Are there any ways that your competitors are using the internet better than you?

58. What is holding you back?

59. Studies have shown that it is important for companies in other African countries to have government backing or strong social networks. Do you think that this is true in the tourism sector in Kenya/Rwanda? Do you think your competitors benefit in any way from these kinds of networks?

60. You said at the beginning that you felt that the faster speed made a big/small impact. Given everything you have said in the interview, do you still feel the same?

61. Did you expect us to ask you anything that we didn’t?