

Rurality and tourism in transition: How digitalization transforms the character and landscape of the tourist economy in rural Morocco

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Abstract

The character of rural Morocco is changing due to increasing tourism and social media usage. This paper outlines the different consequences of ICT usage among people working in the tourism sector as part of the transitional economy in a remote area. In this region, tourism has grown into one major income sources for a few valley inhabitants – mostly men with a school education, digital and language skills, and who are financially stable. As this transitional economy evolves alongside digitalization and ICT usage and therefore a change of the region's rural character, it leads to challenges and concerns for the local population. This ethnographic study analyzes the interdependence of increasing tourism through digitalization and the notion of rurality as a resource from a sociotechnical perspective.

Keywords: Tourism, Transitional Economy, Morocco, Digitalization, Ethnography

1. Introduction

The High Atlas Mountains in Morocco form some of the most rural and remote parts of the country. By conventional measures, rural areas also experience the highest levels of poverty, with this being particular acute in the more mountainous regions (Dadush & Saoudi, 2019). In response to this, the Kingdom of Morocco has initiated a number of rural development projects in recent years, designed to stimulate growth, alleviate poverty and improve local standards of living, literacy and levels of education (World Bank Group, 2018). Rurality (sometimes termed, alternatively, 'the rural' (Clope, 2006)) has been defined in a number of ways over the years. Typically, it is positioned in distinction to 'the urban' in terms of economic and technological provision. Various conceptual shifts (Hardy et al., 2019; Heley & Jones, 2012) suggest that "there is no ubiquitous rural" (Gallent & Gkartzios, 2019, p. 17). This means attention is increasingly paid to the perceived economic and technological gap between the rural and the urban, and how best to bridge it.

In conjunction with this, tourism – as a feature of transitional economy – has evolved as one of the biggest sources of income, in both urban and rural regions of

Morocco. The Moroccan state thus began to systematically open up and promote tourist locations from the 1970s onwards (Almeida-García, 2018; Kagermeier et al., 2019). Today, Morocco has become a popular tourist destination. In 2015, more than 10 million tourists visited the country, more than 50% of them Europeans and for 2019, the tourism sector is stated to contribute to about 6,5% of the gross national product (IFM, 2019). A large number of development initiatives in rural regions around the world have been centered upon tourism (Sharpley & Telfer, 2015) and, in many places, income from tourism is considered a critical component of the local economy (Almeida-García, 2018). Modern tourism is massively premised upon the use of ICT (Information and Communication Technology) to promote, facilitate and coordinate tourism in remote rural communities (Bethapudi & others, 2015; Hall et al., 2005; Peña & Jamilena, 2009; Safaaa et al., 2017).

In our research, largely relying on Participatory Action Research (PAR) (McIntyre, 2007), in a rural region in Morocco, we found that the current developments of tourism as part of a transitional economy are riddled with contradictions that would seem to defy any simple understanding of the relationship between tourism and development. In particular, we find that many of these contradictions are bound up with how members of rural communities understand what might or might not constitute a resource, be that for development or conservation. This, we find, is further accentuated by the role being played by ICT as part of touristic services offered by a few people from that region. To be more precise, previous literature has tended to focus on either travelers' perspectives and practices (Munar et al., 2013) or has investigated larger scale social media marketing by hotels and travel agencies (McCabe, 2014; Minazzi, 2015). Our study zooms in on a few tourist guides in rural and remote Morocco and their ICT appropriation to promote their tourist services. While a handful of local inhabitants make a reasonable income through that, the overall impact on both the local population and the rural character of the region is questionable. Rurality is contested through increasing digitalization and the arrival of people travelling to the region to experience 'authentic' rural Moroccan life. In view of these apparent contradictions, we argue that ICT-based interventions in contexts

like this one need to be much more nuanced in how they conceptualize and promote or contest development, with the primary arbiters of the role they play in this regard needing to be the local people themselves. Our research questions can be summed up as: What contribution does a bottom-up, ethnographic, approach make to our understanding of an economy in transition? How is digital transformation mediated by ‘rurality’ to what extent does it, in turn, mediate it?

2. State of the Art

2.1 Tourism in Transitional Economies

Transitional economies tend to be more market oriented and hence therefore entrepreneurial endeavors associated with tourism is one of the bigger sectors in different developing countries (Skokic & Morrison, 2011; Zapalska & Brozik, 2007). Transitions in economy are also often related to development, to start or enhance regional or national economies. In the development literature, tourism has been seen to offer potential in a number of ways: as a 'vehicle of progress and modernization' (Roche, 1992); as a means of tackling socioeconomic problems in isolated rural areas (Cavaco, 1995); of contributing to the local or national economy e.g. as a source of foreign exchange earnings (Oppermann et al., 1997); and as a source of local income and employment (Dieke, 1993).

However, even in the realms of economics and tourism studies, the use of tourism to promote development in relatively impoverished rural areas has not been seen as unalloyed route to progress (Hashimoto & others, 2002).

Keane (1992) suggested that rural development needed to go beyond agriculture and food consumption and that it should include other considerations, such as environmental preservation and enhancement, as well as addressing specific local issues. Rural tourism, in this view, had business potential in rural regions, encouraging “situations where tourism development takes place in an integrated and coordinated manner at the local level.” (Keane, 1992) Information Systems has shown increasing interest in rural development through digitalization projects (Chea et al., 2009; Gurstein, 2001; Hoque et al., 2022) and online entrepreneurship (Koo & Easley, 2022; Lloyd & Vengrouskie, 2019).

2.2 ICT in rural Tourism and Hospitality

Theories of innovation in the tourism sector have tended to focus on providing services (Gallouj & Djellal, 2010), (Carvalho & Costa, 2011; Hjalager, 2010). In recent years, ICT has transformed the tourism

and hospitality industry and continues to do so (Gretzel & Koo, 2021; Gretzel & Stankov, 2021; Mambetova et al., 2020; Sigala et al., 2012; Suyunchaliyeva et al., 2020; Wan & Nakayama, 2022), mediated to a degree by features of rural economies (Crabtree et al., 2015). Digital tools and digital platforms are, for instance, a default when planning a tourist route (e.g., online reservations and payments, mobile applications) (Mambetova et al., 2020). Even earlier (1950s to the 1970s), computer systems played a major role in supporting the internal functions of operators in transport, hotel, and catering sectors and today the travel and tourism industry is one of the most significant users of ICT. More radical ‘disruptors’, such as Uber & Airbnb, are linked to technological innovation. Indeed, ‘disruptive digital innovations’, as they are termed (see e.g. (Högberg & Willermark, 2022) necessitate an understanding of how ‘strategy as practice’ is mediated by continuous change.

Tourism is an information-oriented business, and information can be obtained using several channels such as television, word of mouth, the Internet and nowadays social media (Högberg, 2017; Ruiz-Correa et al., 2019; Suyunchaliyeva et al., 2020). Writers such as Pesonen (2020) have argued that digital transformation is critical to such development, but also that economic, political, environmental and social factors are also hugely important. Digitalization, then, plays a major role in enacting change but also in responding to it (Pesonen, 2020). ICT provides access to information and meets the need for more sophisticated products: “Tourists are now more independent and can self-organize their own holidays” (Carvalho & Costa, 2011). Mobile apps such as destination guides, apps from online travel agencies, and attraction guides exist for tourists, changing the way in which communication happens between travel agencies and their customers (Wang et al., 2012). The role of social networks (such as Facebook and Instagram) has transformed platforms into interactional media (Suyunchaliyeva et al., 2020). Further, tourists are also sharing their experiences using online platforms and these perspectives and ratings have become more ‘trustable’ than traditional marketing messages (Litvin et al., 2008). Cuomo et al. (2021) argue that resources like this constitute ‘big social data’ and are a valuable resource for mapping the tourist experience and subsequent co-design.

The above literature, valuable though it is, emphasizes the role of new technology in transforming the tourist experience. Less has been written about the perspective of local providers, especially in transitional contexts. We offer, then, insights into how ‘bottom up’ processes have driven change and reflect on their consequences.

2.3 Rurality as a Resource

In economics, resources are typically considered to be 'means (or factors) of production' (Banaji, 1977). The economic understanding of resources is of relevance here because much of the discourse around rural development and growth has its origins in economics.

Resource-related discussions in the literature on rural development and tourism have tended to center, though not exclusively, upon natural resources. Natural resources are typically categorized as subjects of labor and are subject to divergent schemes of classification that can be broadly conceived of as involving their origins, their recovery rate if exploited and their potential for development. Various other conceptions of resources sometimes come into play. One important conceptual development is that of 'territorial capital', which is sometimes invoked to describe and analyze the range of factors that influence effective change (see e.g., (Camagni, 2017; Fratesi & Perucca, 2018)). Tóth (2017) points out that,

"today the prosperity of territories does not depend solely on material resources, but also on intangible components. Nowadays, a variety of economic, social, environmental and institutional factors, including knowledge, creativity, innovativeness, capacity building, entrepreneurship, human interactions, cooperation and collaboration, social capital etc., are viewed as important intervening local variables and catalysts [...]"

The concept, then, is inherently socio-technical. Importantly for our argument here, the rural itself can be articulated as a central resource for determining how territorial capital may be deployed in local contexts. Understandings here focus upon how it might serve as a source of natural beauty (Briedenhann & Wickens, 2004), as a repository of culture (MacDonald & Jolliffe, 2003), and as a spatiotemporal container of tradition (Mili, 2012). Even more abstractly, it is often represented as a place where visitors might escape the pressures of the modern world (Figueiredo et al., 2013). These representations play an important part in arguments about how tourism might serve as a source of development in rural communities. Keane (1992) has suggested that "the strength of rural tourism lies in the special product that it has to offer - a product that is essentially the result of the natural and human environment that one can find in the countryside." Weiermair (2006) emphasizes the tourist experience, manifested in products which incorporate multimedia content, personal stories and virtual communities (Gretzel & Fesenmaier, 2002). At the same time, others have pointed to the exploitative nature of these arrangements (Burns, 2008), with many of the principal returns upon investment in

tourism in the Global South continuing to be reaped by companies based in the developed world (Britton, 1982).

3. Methodology & Research Setting

In pursuing our interest in the challenges of transition from the bottom up, we are engaged in long-term ethnographic work in the Atlas Mountains and is the basis for this paper. This descriptive and analytic work forms an important component of our wider objective, which is to support digital transformation. In pursuit of our wider goals, we adopt a Participatory Action Research (PAR) methodology (McIntyre, 2007). PAR has become increasingly popular for use in scientific studies of information systems since the end of the 1990s, because the produced results are "grounded in practical action, aimed at solving an immediate problem situation while carefully informing theory." (R. L. Baskerville, 1999) Baskerville and Wood-Harper (1998) asked over two decades ago for an open discussion about the various approaches of action research in Information Systems (IS) and embrace "the diverse forms of research that involve purposeful researcher interventions within the uncontrolled social arena of the investigated phenomena." (R. Baskerville & Wood-Harper, 1998)

The specific village in the High Atlas that this paper is based on is well known for climbing and hiking experiences. As part of our research, we partnered up with a local NGO, one that is well-known and highly respected in the valley, and which is committed to sustainably. Their work includes public health, water supply management, community education, cultural preservation and supporting women's initiatives (Aal et al., 2018; Rüller et al., 2021).

In this valley, actual tourism started around 1985. Before that there was no comparable hiking, trekking or other tourism. In the beginning, basically all tourists had come from France. Later, individual travelers from other European countries, especially Spain, Germany, and the Netherlands, were added. More international and especially American tourists have only started coming since a US non-governmental organization (NGO) had become active in the valley.

3.1 Data Collection & Analytical Approach

Our ongoing research endeavor, begun in 2016, focuses on three aspects of socio-informatic development: observing the creation and expansion of multiple forms of publics, (political) participation on a national and transnational scale and technology appropriation for such purposes. The findings we present in this paper are extracted from the ongoing in-depth fieldwork and mu-

tual reflections we have been engaging in, primarily deriving from our investigations into the character of media usage and technology appropriation and its relationship to political and economic endeavors – specifically the tourism sector. Our group consists of researchers from media anthropology, information systems, human computer interaction, and socio-informatics, and our focuses and perspectives are naturally determined to differ. However, constant exchange and reflections have proven valuable for everyone involved.

Over the past five years, the research team visited the valley yearly, several authors spent many weeks living in the valley and conducting workshops. The data collection of the ethnographic fieldwork is mostly taken down in field notes, consisting of conversations, informal interviews, and observations, that are all mutually reflected upon.

Beginning of 2021, we conducted five additional interviews with certified tourist guides and actors working in the touristic sector coming from the respective valley but working in the valley itself and outside in other regions. Due to the travel concerns related to the COVID-19 pandemic, travelling was not feasible and the Internet connectivity in the valley is not suitable for a stable connection to use Zoom or Skype. Through the instant messaging tool WhatsApp, we could carry out semi-structured asynchronous interviews by sending out precise but open interview questions. We chose this method, as it did not rely on a stable internet connection, and it allowed our research partners to first translate, if necessary, before sending their responses. Five interviewees sent us voice messages or text messages, which were then analyzed (see next chapter): Omar¹ (29 years, living in Marrakesh, works as certified tourist guide), Mohammad (29 years, lives in Azilal close to the valley, works with the local American NGO as project manager and as certified tourist guide), Nabil (35 years, lives in the valley, works with the local American NGO as project manager and as certified tourist guide), Mustafa (54, lives in the valley, works as a tourist guide and owns a guesthouse) and Ali (above 60 years old, lives in the valley, guesthouse owner and former tourist guide).

The findings, notes and documentation were subsequently analyzed using qualitative content analysis. Here we followed Mayring (2000), who promotes qualitative content analysis ‘as an approach of empirical, methodological controlled analysis of texts within their context of communication, following content analytical rules and step by step models, without rash quantification’. Our analytical procedures were: 1) we read carefully through the collected data to gain a sense for the overall picture with a focus on rurality and digitaliza-

tion; 2) we identified thematic topics and common features in the data (e. g. tourism; rurality; challenges; ICT usage and practices); 3) we collaborated in an iterative discussion to generate a rich description of the influence of digitalization on the tourism sector and therefore the synergy between rurality, digitalization and tourism. The qualitative content analysis of the data yielded three main themes that drive the organization of the findings below.

4. Findings

4.1 Rurality and its changing Character in the High Atlas

The rural character of the High Atlas manifests in different aspects of economy, social life, and landscape. The majority of the ‘rural’ population in Morocco is of Amazigh origin, as are most of the poorer population, although Imazighen exist in all areas of Morocco.

In these hills, the abundance of water enabled small-scale farmers to grow and care for herds of goats and sheep that provide milk and meat. Even though today’s economy is more capitalist, culture still provides significance to the extended family home, and when it is helpful, it is prevalent for people to lend a hand (Dana & Dana, 2008, p. 216). The mountain range’s landscape is often referred to as distinctive. Snow-covered mountain peaks, lots of trees and caves, wide and open fields, and serpentine roads are characteristic for the region. The valley which is subject of our research also has a river, which is essential to economic life. While many people rely on agro-pastoralism for self-sufficiency, it is also one of the few surplus income sources. Recently, cooperatives have formed to sell locally farmed products, e.g., spices or honey.

However, people in the valley have come to realize that the rural character of this region is changing, both with respect to . improvements regarding infrastructure as well as the challenges that come with tourism. The fact that the number of visitors is constantly increasing means that the amount of garbage, for instance, increases accordingly:

There are people who don't respect nature, foreign and local tourists. This is the big problem facing us and it requires a radical solution. (Mustafa, tourist guide and guesthouse owner)

Many households in the primary villages now have access to running (hot) water and electricity. Water management is done by a local NGO as part of their

¹ All names are pseudonymized.

community development work. They have also established a garbage oven in the region, to get rid of the valley's waste. With the establishment of a stable electricity network, satellite television has spread amongst the villages. The main road to and from the valley was paved and more and more cars are owned by inhabitants of the valley. On Mondays, salespeople from other regions come with their cars to the valley to offer their products and services, such as spices, meat, vegetables, and electronics on the local market (the so-called 'souk').

A major telecommunications company has built a mobile phone mast that now provides LTE network throughout the valley. A new school was built and opened in 2016, providing primary and secondary school education. As a result, more and more people from remote parts of the valley have decided to settle in the main villages so their children can get a proper school education. This leads, for some, to a change of practices and values.

These practices that locals are trying to preserve you know generation after generation [...] nowadays these practices are affected either by the media [...] and are affected also by more people that are educated. [...] also those practices are affected by the tourism so like the valley is a touristic destination for Moroccans and for foreigners so we have many new practices brought to the to the valley. (Nabil, tourist guide)

4.2 The Development of Tourism and the Shaping of the Rural as a Resource for Tourism

Tourism in the region can be broadly divided into three overlapping: First, there is tourism that is in some ways connected to a sportive activity or mountaineering adventure, such as climbing and hiking/trekking. Most of the people who run a guesthouse also promote hiking trips through the Atlas Mountains beforehand and take their guesthouses as a base for those tours. Guesthouses and the associated guides provide climbing gear, information and maps about the available climbing spots or accompany visitors on climbing tours:

Tourists come to the value of [valley] for many reasons. So first, and maybe the oldest one is climbing. [...] Yeah, also people like tourists come for trekking, [valley] is a beautiful valley as some of the highest peaks in the central Atlas Mountains. (Nabil, tourist guide)

Second, recreational or leisure travel, mainly by tourists or visitors who are enjoying the picturesque quietness of the mountainous landscapes or are passing through on their road trip through Morocco. Here we

observed several tourists passing by in their car and stopping to have lunch or dinner in one of the guest houses, some of them then also stayed overnight there:

So [valley] is a special place. And it's like, people, they usually have a unique experience when they go to the valley because it's rural, it's remote. [...] Because it's different than like a big city, you know, like they, maybe they just want to rest and get away from the crowds of the city. (Nabil, tourist guide)

Third, there is volunteering tourism – a mixture of educational work, community service and intercultural encounters (see (Garland, 2012)). While the former touristic experiences focus on famous sights, landscape and predominant tourist imaginaries about Morocco, the latter promotes the authenticity of the Amazigh everyday life in the mountains. In summary, we can find various types of tourism, but also different types of guides or tourist entrepreneurs (e.g., providing language courses in Tamazight, selling local food and vegetables).

Several of these early guides in the valley also established guesthouses in their home villages after successfully saving some starting capital over the years. This offered the option to combine several-day hiking tours across the High Atlas with both the use of own equipment or material and of accommodation in their own guesthouse. Here, our informants told us about illegal guesthouses, where tourists can stay overnight, but don't have an official certificate and are therefore considered not safe (e.g., belongings get stolen). There are also unofficial tourist guides, who can be rented for trips, but while many of them know the High Atlas region very well, they are not qualified as tourist guides, who also learn to handle emergency situations (e.g., an accident in the mountains or other medical issues).

Although nowadays tourists to the High Atlas come from all over the globe, many from North America, Europe, and even urban parts of Morocco, not many tourists arrive in the Mountains by chance. When they visit the High Atlas, they often do so as part of a touristic program or guided travel group:

People leave the city for the rural to find quiet and enjoy outdoor activities. This is the group we are trying to reach. The locals have retained their traditional lifestyle, they are honest and offer a product that appeals to people. When city people visit the rural, they rediscover something they have lost in the city. (Mustafa, tourist guide and guesthouse owner)

One rather recent and quite lucrative way of getting tourists to come and stay in parts of the High Atlas is to encourage this kind of intercultural exchange, often in-

clude volunteering or community service. For those programs, accommodation in the existing guesthouses in the valley is typically used. For the specific form of volunteering tourism in the region it is essential to team up with a CBO or local association active in humanitarian or developmental projects, and an international NGO or sending organization.

For the two main NGOs with which we have observed in our research, we can even attest to a kind of organizational double structure: Besides the non-profit branch of the organization, which is involved in all kinds of local development projects, there is a profit-oriented tourism branch, which cross-finances the non-profit work.

4.3 ICT in the region's Tourism

ICT, especially social media, plays an increasingly important role in the High Atlas. All the official tourist guides we know aim at establishing a strong social media presence, predominately Facebook and Instagram, to present their current activities, more information about themselves and details about places they know and offer trips to:

Actually, all actors in tourism in the valley have invested in technology- in laptops, computers, etc. to promote their products. Notably it's people who are active in tourism. This is the only way to reach a maximum of people, to attract foreigners and Moroccans. But it's also a means of promotions, a way of showing what we offer. Notably when one talks about rural one tries to use multimedia resources to show touristic offers: how one can do hiking, rafting, kayaking, climbing. [...] In addition, we show people that they can practice these sports in peace and quiet, while eating healthy organic food without chemical substances. (Mustafa, tourist guide and guesthouse owner)

In addition, these channels are used to maintain contacts with previous clients and tourists. In doing so, the goal lies in motivating them to spread the word of their great (authentic) tourism experience among their own friends, which can pay off for the guide in that he eventually might win new clients – from the former client's friend and family network. As such social media practices can be relevant for a guide to further improve personal income opportunities, many have at least one account on each social media platform which they use for professional and personal content. The tourist guides working with the American NGO have been required to use certain tools and how often to post on social media, while independent ones are experimenting on their own. Also, a considerable number of booking requests are

nowadays made via Facebook, less using the known digital platforms (such as booking.com or Airbnb). Here being present means also posting high quality pictures of beautiful destinations and promoting ones' work, which can be also misused by non-official tourist guides:

So in our work and tourism industry we have a lot of Internet and social media to promote our work and our programs and also to promote the region which is good [but] social media these days has a bad impact on our work for example like anyone can advertise or can create like trips and attract people so non licensed guides, non-licensed travel agencies online they just need to have like a website and a Facebook page to promote their work. (Nabil, tourist guide)

One can't do without social media and internet in public relations for our product. It is indispensable in reaching out to a vast number of people. I personally share on Facebook and Instagram. (Mustafa, tourist guide and guesthouse owner)

While the rural character of the valley is a unique selling point, it is also a place which is hard to reach and hard for tourists to grasp. Therefore, if the owners of the guesthouses simply waited for tourists to appear at their doorstep, it would not provide a regular income, given the fact that there is strong competition throughout the area. Here, they actively try to increase one's own scope and visibility. They are eager to attract potential visitors or clients:

As I said before the valleys like very remote. It's a very unique experience. [...] people who are selling you know like trips to the valley they usually like to use the natural characteristics of the valley for example. We have a river runs all the way around, we have like mountains, we have also like the remoteness of the valley is unique. [...] We are also organizing our activities you know like because people usually come to enjoy the nature, you know they have seen photos or videos in internet before even they come to the valley, [...] (Nabil, tourist guide)

5. Discussion: The Rural as both a Resource and an Adaptation

Our research questions firstly had to do with the contribution of a 'bottom-up', ethnographic approach to our understanding of an economy in transition. We have provided a nuanced account of the practices of tour guides as they navigate their relationships with tourists and the meanings they attach to their work. Secondly,

we argue that the concept of rurality is an important conceptual component in an understanding of territorial capital in this context. Rurality is not something that can be precisely defined but can be understood precisely in relation to the various meanings attached to it by local inhabitants. Conceptually, it entails recognition of how geographical features, cultural identity, local community structures, tradition, know-how and skill interweave to influence transition. We have shown, in this regard, how local practices, bound up in these matters, mediate and are mediated by digital transformation. The transitional nature of tourist development, however, means that certain issues need to be addressed, not least if the tourist economy is to be scaled up. Mueller (2018) has recently introduced the notion of 'transitions' to describe and analyze the changes generated by tourism, arguing that they, "require comprehensive adaptation to new economic, social, political, cultural or environmental circumstances that are outcomes of transitions". Above, then, we have contributed to this perspective by describing the particular transitional tensions and challenges from a 'bottom up' perspective, showing how actors engaged in the tourist enterprise are adapting to change. Where Keane (1992) argues that rural tourism provides potential business opportunities in rural regions, especially when there are few other sources of employment, we suggest that relatively little has been done to examine these adaptations from the ground up, especially with respect to local management of human, material and communication resources.

In the absence of other industries, tourism is a significant alternative for the picturesque rural areas of the High Atlas. In other words, this carefully maintained tourist imaginary of an 'original' or 'authentic' place posits rural features as a resource. But at the same time, "to compete for tourists, a location must become a destination. To compete with each other, destinations must be distinguishable, which is why the tourism industry requires the production of difference" (Kirshenblatt-Gimblett, 1998, p. 152).

With the advent of tourists, new forms of tourism activities were established in the valley and the organization of these became more professional. More pertinently, from our point of view, much of this was achieved at a local level. NGOs were founded by tourist guides with the goal to improve the local situation and teach tourists more about the background of the Imazighen culture. Keane (1992) suggested that rural communities might create local initiatives, which he called rural tourism. This roughly is what has happened. Here the different NGOs are implicated in advertising program and activities.

Rurality is often perceived precisely as state of "not being there yet" and a need for improvement is sometimes postulated (Aal et al., 2018; Balestrini et al.,

2014). While the display of ostensibly 'authentic rurality' might seem positive for touristic entrepreneurs, there is a stark contrast to the aspirations and desires of the people living in the valley. Some of this has to do with the absence of any close regulation. 'Official' and unofficial practices exist alongside each other. Equally, potential benefits do not fall equally. As Hassane Monkachi (1996) has shown for the High Atlas: Families that are successfully engaging in tourism are the ones that were better off to begin with.

Hence, rurality counts as resource – as it is a building block of how local tourist entrepreneurs can make a living, but at the same time it might entail more technologically mediated practices of producing "difference" (Hjalager, 2014). At exactly the same time, processes of adaptation are underway.

The Internet and the rise of social media, in particular, changed and shaped the way the different forms of tourism in the region are being advertised and played out. In contrast to the modernization processes in the tourism and hospitality industry (Gretzel & Stankov, 2021; Mambetova et al., 2020; Suyunchaliyeva et al., 2020), the valley's guides have built their own brand by relying on word of mouth (Crofts, 1999) from satisfied and returning customers. There is a longstanding history of technology and tourism with a shift from "functionality and usability [...] to a means for online communication and persuasion [...]" as described by Xiang (2018). While this may be true for the Global North, rural Moroccan tour guides are only just developing these skills, with variable facility. They are currently in the process of discovering the individual media and understanding their weaknesses and strengths. But, as stated by the people working in tourism, the use of social media has changed their way of working and the number of tourists they could reach, and with more tourists coming to the valley, several infrastructural (e.g., new guest houses) but also economic (e.g., new job opportunities, sale of handcrafted) developments could be observed and the combination of ICT and tourism serves as a 'vehicle of progress and modernization' (Roche, 1992).

Innovations developed by the valleys' guides clearly added value (Ray, 2000) to the local infrastructures and thereby created new activities and experiences for tourists and other groups such as volunteers. All of these activities are documented with the smartphone and shared using social media (predominantly Instagram and Facebook) (Suyunchaliyeva et al., 2020), where it is also important to create a strong presence and provide information about the place (Carvalho & Costa, 2011). This in turn also influences the expectations of the customers (Narangajavana et al., 2017). As yet, no additional platform resources are used. Other than the standard social media, no customer - facing or dedicated resources exist (Mambetova et al., 2020). At present, their

own ICT appropriation has proven adequate. Whether it remains so as tourism scales up, is unlikely. As we have seen, competition from various sources has already created a certain pressure. Here, the theory of innovation, addressing incremental and/or rapid/disruptive innovations, is not fully developed for the tourism sector and therefore not appropriate (Carvalho & Costa, 2011). Here, one can also argue that this often goes along with ‘not knowing how to do better’, even when digital platforms and other tools for tourism are available (Mambetova et al., 2020). This was also the case for the older tourist guides, which just started recently to use new ICT and in particular social media to reach new customers, while the younger tourist guides are documenting each activity and are active on all relevant platforms daily. In addition, the majority of research focuses on tourists, hotels and travel agencies and less on tourist guides and especially from the Global South (McCabe, 2014; Minazzi, 2015; Munar et al., 2013), here further research is needed to extend existing theories.

6. Conclusion & Outlook

This paper contributes to the body of Information Systems research by zooming in on the role of ICT in rural tourism as part of a transitional economy. One of the important features of our emphasis is the extent to which, to be able to compete in the global market, people working in tourism are having to acquire ICT literacy. While many previous studies focused on rurality as a deficit or an issue, our research highlights rurality as a resource which can be embraced and appreciated, while also, in this case through increasing ICT usage, being consumed and exploited. Tourist guides build new concepts and ideas based on previous activities and use the rural elements as a resource, including the people living there (e.g., climbing and hiking at first, building a guest house and offering over-night stays next, afterwards including the local population in social and cultural activities). As for the role of ICT in this context, local tour guides have just begun to explore the extent to which it can be used to expand current activities. social media plays a crucial role in advertising the specific activities available in the valley and managing relations with former, current, and future customers. Our study comes with a few limitations. For one, the sample is small, it relies on a handful of tourist guides among a larger group of people working in tourism. Second, the perspectives we have in our study are solely male. Considering that we focus on professional tourist guides, who are all male, this comes as a trade off. However, integrating perspectives from women in the hospitality industry in this region, is our plan for upcoming studies.

Further, the interviews had to be conducted asynchronously, due to internet connection issues, which prohibited us from having a real-time conversation.

Future research might indicate further the distinctive nature of tourism practices linked to ICT usage and appropriation especially in rural areas, where tourism is developing, as compared to the Global North (Mambetova et al., 2020; Suyunchaliyeva et al., 2020).

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