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To cite this article: S Adeyinka-Ojo and S K Abdullah 2019 *IOP Conf. Ser.: Mater. Sci. Eng.* **495** 012006

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Disruptive Digital Innovation and Sharing Economy in Hospitality and Tourism Destination

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Abstract. The emergence of digital technology and disruptive innovation has been accepted globally by different manufacturing and service industries. As a follow up to the disruptive digital innovations, this paper is aimed to provide insights into the promise and peril of disruptive digital innovation and sharing economy, in particular as it affects the hospitality and tourism services. An extensive review of existing literature on digital technology, disruptive digital innovation, collaborative economy, smartphone technology, social media, internet and mobile applications, business-to-business (B2B), peer to peer (P2P), business-to-customer (B2C) from the perspective of hospitality, leisure, events management, travel and tourism were conducted and content analysed. Findings suggest digital technology and sharing economy provide ten disruptive innovative promises in the hospitality and tourism destinations. Similarly, study shows digital innovation and sharing economy have several destructive or perils that are specific to hospitality and tourism industry. Implications of these findings to business stakeholders in hospitality and tourism, consumers (customers, tourists, guests, travellers), and industry policy makers are discussed.

1. Introduction

Disruptive digital innovation and sharing economy in hospitality and tourism services has been a subject of academic interests recently. The emergence represents a novel and unique development. The concept of disruptive innovation provides alternative services and package of benefits that are considered smaller, simpler, cheaper and more convenient, as in [1], and in particular, driven by digital technology in satisfying the needs of consumers. The sharing economy is part of the digital innovation that creates increased large amount of choices and abundance in the society [2]. There are several sectors and sub-sectors in which a total of 165 unique sharing economy businesses operates [2].

According to, as in [3], sharing economy provides abundance (surplus) by ensuring access to underutilized tangible resources and reducing business transaction costs, thus creating an enabling environment for economic and financial exchanges through a platform logic which enables unprecedented scalability. The purpose of this research was to investigate the promise and peril of disruptive digital innovation and sharing economy in the context of hospitality and tourism offerings. Thus, this study is structured around one predominant research question that says: What are the promises and perils of disruptive digital innovation and sharing economy in hospitality and tourism destinations? This question set a road map for an extensive review of extant literature work on disruptive digital innovation and sharing economy especially in hospitality and tourism industry.

2. Literature review

2.1. Disruptive Digital Innovation

The adoption of information and communication technologies (ICTs) in traditional manufacturing and service industries has had implications as laws of scarcity are replaced by abundance and increasing returns [2]. According to, as in [4], information-related business sectors have been subject to such transitions toward abundance of physical goods and services. No doubt, Internet has caused profound



changes in several industries which include finance, trade and services, music, health, hospitality and tourism among others. The emergence of internet and mobile technologies as evolved into new services such as e-business, digital marketing, e-commerce, e-health, digital learning, virtual reality and e-tourism [5]. Currently, there is no consensus among the academic researchers and practitioners on the definition of disruptive innovation. This is because of the absence of precise guidelines of requisite characteristics defining disruptive innovation [1].

For the purpose of this study, we can infer from the literature that “disruptive innovation is defined as the application of digital technology that supports the production of goods and services that are regarded as inferior-performing, cheaper, easily accessible, timely, novel, simpler, more convenient and appeal to a particular market segment”. Reference [1] also suggest that disruptive innovations’ new value proposition should not be limited to the following attributes: cheaper, simpler, smaller, and more convenient. Disruptive innovation concept seemingly attributed to Airbnb which appears to underperform in comparison with full service hotels quality attributes like customer satisfaction, quality assurance, cleanliness and security [1], [2]. Similarly, Uber (Grab) is also viewed as a disruptive innovation [2].

2.2. *Sharing Economy*

A review of extant literature provides insights into the historical background of sharing economy. Thus, sharing economy can be traced back to ancient periods when goods, businesses, assets and financial resources are shared among close family members, friends and relatives [6]. The concept of sharing economy in its origin were believed to be not-for-profit initiatives, such as Couch surfing has grown into a big business model by taking a fraction of the sharing fee such as Uber, Grab and Airbnb [6]. Other terms used to describe sharing economy include gig economy and platform economy [7]. Reference [8] highlight different terms used to describe sharing economy, these include collaborative consumption, collaborative economy, peer to peer (P2P) sharing of accessibility for the utilization of idle products, services and economic assets by consumers.

There is no consensus amongst academic regarding the definition of ‘the sharing economy’ [9]. A cursory look from the academic and practitioners’ perspectives show there is an increasing interest in the rise of the sharing economy. In other words, the increased growth of sharing economy and its impacts on several social-economic systems have stimulated and attracted new players in many business sectors [10]. Notably, in the context of hospitality and tourism and for the purpose of this study, the definition of sharing economy suggested by [11] will be adopted in this study. “The sharing economy refers to individuals who intend to share temporarily with tourists unused or underutilized resources they own (e.g. house or car) or activities they undertake (cooking meals, or undertaking an excursions” [11].

2.3. *Sharing Economy in Hospitality and Tourism Context*

A critical review of previous literature work provides insights that sharing economy in hospitality and tourism have become as one of the economic sectors where sharing economy has recorded a tremendous growth, for example, it is a common knowledge that home owners or hosts share their homes with guests and tourists, drivers share their car with riders or commuters, and visitors [12]. Several factors have positioned sharing platform as one of the mainstream practices in hospitality and tourism industry [10]. The ultimate goals of guests, visitors or tourists alike is to have service delivery system that will enhance sustainable tourism, authentic tourism and memorable experience, and better value for their hard earn money [12], [13]. Nonetheless, literature sources indicate that global sharing economy in hospitality and tourism is dominated by two platforms. In the accommodation sector Airbnb is a leading platform and Uber is at the fore front of personal transportation or mobility sector [14]. Uber and Airbnb are often viewed as creative destruction because it seems the business model of these two sharing economy platforms punctuated an established equilibrium, as in [14], and transforming the labour market [15], [16]. According to, as in [17], “There’s an Uber for Everything Now”. Notably, extensive academic

interests have been devoted to Airbnb and Uber [18], [19]. The existing literature on the sharing economy especially in hospitality and tourism destination has been majorly focused on Airbnb and Uber [1].

2.4 *Airbnb*

The emergence of Airbnb has changed the accommodation landscape in hospitality and tourism destinations as a unique and novel development [4]. Airbnb is a platform that provide travel accommodation and a pioneer of the sharing economy from the context of hospitality and tourism. Airbnb has served over thirty million customers since 2008 when it entered into the accommodation sector of the hospitality without owning or building a single room, as in [20]. The core strength of Airbnb is its ability to develop unique value propositions for its customers. For example, Airbnb provides attributes such as home benefits, novelty and authentic travel experience to some extent to customers in comparison with the established traditional hotel [21].

The revenue valuation of Airbnb in 2014 exceeds US\$10 billion this is more than well-established hotel chains such as Hyatt hotel [22]. Airbnb business performance experienced growth in its revenue continuously as of end of first half of 2017; Airbnb valuation stood a robust sum of US\$31 billion [23]. Airbnb as a sharing disruptive peer-to-peer platform presents current and future threats to the growth and sustainability of the hotel industry that are notably characterized with fixed operating costs [20]. The effects of Airbnb in traditional hotel have been well documented in the recent literature. For example, studies have shown that Airbnb appears to have been caused decreased in the budget hotels profitability, as in [24].

2.5 *Uber*

Uber, a platform-based transportation network company was established in 2009 which is headquartered in San Francisco, California [25]. Uber is an on-demand ride service operated by Uber's mobile platform with a unique business model that are made up of Uber-drivers who deployed their own cars to fulfil or transport those customers who are in need of rides [25]. Uber is a mobile platform mobility model that works by linking registered drivers with customers (commuters), who has requested a mobility service through Uber platform. By early 2018, Uber mobility service has spread to over 630 cities across the world [25].

The prominence of sharing platform like Uber is assumed it will generate more academic interests in the future as either disruptive, creative destruction or pure destruction to the transportation industry and by extension hospitality and tourism industry. This view is echoed by, as in [25] that Uber has brought about creative destruction. Likewise, as in [26] argues that Uber is a disruptive innovation to the existing taxi (transport or mobility), industry. As a precaution, in New York City for example, the incumbents' taxi service providers have responded by adapted Uber's unique selling and value propositions to include rating systems and surveillance. Reference [27] opined that Uber appeared to have increased the consumer demand in terms of creating a better and cheaper alternative to customer desire for value for service.

3. **Methods**

For this study, the researchers researched abstracts, key words, titles for digital technology, disruptive digital innovation, collaborative economy, sharing economy, gig economy, smartphone technology, social media, internet and mobile applications, business-to-business (B2B), peer to peer (P2P), and business-to-customer (B2C) from the perspective of hospitality, leisure, travel and tourism, and events

management. In particular, we focused attention on disruptive and sharing products on “Airbnb” and “Uber”. Essentially, data collection were sourced from EBSCOHost, Science Direct and Google Scholar. These three are regarded as the largest online data bases and search engine [27].

Furthermore, Web of Science was utilized in the literature search as a major data base collection [28]. Similarly, Scopus and Proquest data bases were also used and these have been used by past studies in tourism [29]. In the selection of the literature, first the criteria used include the texts must be majorly structured within the hospitality, tourism and events management, and second is the relevance to the modern business model. The researchers reviewed these articles one by one to produce the final selection of papers based on digital technology, disruptive innovation, sharing economy, Airbnb, Uber, hospitality, tourism, events management, and new business model being the main focus of the papers. This step is consistent with [10] on the selection of extant literature for review and analysis. The journal articles were selected in the following two steps. First and foremost, the keywords digital technology, digital technologies, disruptive innovation, and digital innovation” were searched from the databases and search engine. This was followed by identifying additional keywords such as sharing economy, destructive sharing economy, “Airbnb”, and “Uber”. These keywords were applied to broaden the scope of hospitality, tourism and events management articles in the databases.

In the final selection, 160 articles focusing on hospitality, tourism and events management research were identified and content analysed. Reference [30] suggest that content analysis is suitable for handling multifaceted and large amounts of textual data in an inductive or deductive perspective. Notably, content analysis has been used in similar studies such as sharing economy [10], digital disruption and sharing economy [1].). This is followed by decision to either analyse these articles either by an inductive or deductive approach as suggested by [30]. An inductive approach will be deemed fit if there is a lack of extant knowledge to build upon. On the other hand, a deductive approach will be adopted when the structure of analysis is operationalized based on the previous theory [30]. In view of the extant scholarly works, a deductive approach was employed due to the researchers’ preference to adapt the existing concept of digital innovation, sharing economy, and digital technology to a new context especially in the hospitality, tourism and event management industry.

4. Findings and discussion

The major findings are presented in the following sections. In hospitality and tourism industry, findings show that sharing economy can be categorised into four digital disruptive innovation platforms [11] as presented in Table 1.

Table 1. Disruptive digital platforms

Four digital disruptive innovation platforms	▪ Digital accommodation ▪ Digital transportation ▪ Digital shared food economy services ▪ Digital travel planning and activities
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Source: Developed for this study

Examples of these four disruptive digital platforms in hospitality and tourism industry include the following. These are digital accommodation (Airbnb, Couch surfing, Homeaway, 9flats.com, and Stayz); digital transportation, Uber, Grab, Bla Bla Car, Getaround, and Liftshare); digital food shared economy services (Eatwith, Feastly, VizEat, Meal Sharing, Cookening, and Eat with a local.Com); and digital travel planning and activities (Vayable, tours by locals.com, VoomaGo, and trip4real) [11].

Moreover, findings suggest digital technology and sharing economy provide several disruptive innovative promises and destructive (creative destruction) perils specific to hospitality and tourism industry. These are presented in Table 2.

Table 2. Disruptive innovative promises and destructive (creative destruction) perils

Disruptive innovative promises in the hospitality and tourism industry.	▪ Meeting customer expectation ▪ Convenience and memorable experience ▪ Efficiency and productivity ▪ Cost saving ▪ Staff skills, training and development ▪ Increased market share ▪ Destination appeal and awareness ▪ Innovative product ▪ Service development ▪ Digital branding
Destructive or perils specific to hospitality and tourism industry.	▪ Increase in the number of unemployment rate due to lack of required digital employability skills [5], [31] ▪ Rising cost of operation due to frequent changes in technology ▪ Societal dystopia, ▪ Safety and security concern ▪ Loss of economic and financial revenue to the government ▪ Prolong service failure and unsatisfactory service recovery

Source: Developed for this study

Likewise, the challenges of disruptive digital innovation in the accommodation sector of hospitality and tourism industry include monitoring and disturbance issues regarding the accommodation providers in the neighbourhood that are previously known to be peaceful. Such locations have lost their serenity because more properties have been enlisted on the Airbnb.

5. Implications and conclusion

Based on the dominant of digital accommodation and digital mobility platforms especially Airbnb and Uber (and Grab) in the hospitality and tourism destinations, it is important to emphasise that the contributions of this study (refer to Table 2) to the existing knowledge is that these online platforms provide convenience to customers with unique and memorable experiences in service delivery. In addition, this study has uncovered research gaps and call for more academic interest to scientifically investigate whether the digital technology innovation is a disruptive or destructive business model in hospitality and tourism destinations.

Implications to the hospitality and tourism operators is that these dominant online platforms would reduce their revenue profile and hence they need to go back to the drawing board by creating and

sustaining superior customer-oriented services in order to trigger repeat visits, encouraging positive word-of-mouth and e-word-of-mouth by the customers. Notably, there is a need for the hospitality and tourism destinations to invest in digital technology assets that would enhance customer experience. It is also important for hospitality and tourism businesses to train their employees so that they would possess soft skills, hard skills and digital literacy required for a growing disruptive digital technology innovation and sharing economy that has changed the existing business model in the hospitality and tourism industry.

On the part of policy makers, government should enact legislations and establish relevant government agency or empower the existing government organisation that would be saddled with the responsibilities of registering buildings or properties and cars enlisted with the Airbnb, Uber and Grab online platforms for registration, monitoring and control purposes. By so doing credible data base for taxation purposes will be created. This study is structured on literature review of existing scholarly works; therefore, it is recommended that future research should be focused on empirical studies among the stakeholders in the hospitality and tourism industry to address the challenges and opportunities in the digital age. Besides that, the role of government agencies in terms of policy guidelines, implementation, and perceptions of stakeholders regarding disruptive digital innovation and sharing economy in the experience economy in general should be well defined.

In conclusion, this study has contributed to the scholarship of digital transformation and innovations in the digital era, in particular from the perspectives of digital disruptive innovation, technology advancement and sharing economy in the hospitality and tourism destinations.

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