

The **KENYA INSTITUTE** for **PUBLIC**  
**POLICY RESEARCH** and **ANALYSIS**

# Exploring the Future of Short-Term Rentals in Kenya: A Scenario Planning Approach

Kirimi Elijah Thurania and Naomi Mukami

DP/323/2024

THE KENYA INSTITUTE FOR PUBLIC POLICY  
RESEARCH AND ANALYSIS (KIPPRA)

YOUNG PROFESSIONALS (YPS) TRAINING  
PROGRAMME

# **Exploring the Future of Short-Term Rentals in Kenya: A Scenario Planning Approach**

*Kirimi Elijah Thurania and Naomi Mukami*

*Kenya Institute for Public Policy  
Research and Analysis*

*KIPPRA Discussion Paper No. 323  
2024*

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Published 2024

© Kenya Institute for Public Policy Research and Analysis

Bishops Garden Towers, Bishops Road

PO Box 56445-00200 Nairobi, Kenya

tel: +254 20 2719933/4; fax: +254 20 2719951

email: [admin@kippra.or.ke](mailto:admin@kippra.or.ke)

website: <http://www.kippra.org>

ISBN 978 9914 738 62 9

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KIPPRA acknowledges generous training on futures foresight methodology by EDHEC Business School, France; and the UNESCO Futures Literacy Laboratory Chair at Dedan Kimathi University of Technology (DeKUT), Kenya. The course on "Building Strategic Foresight Capabilities" by EDHEC Business School was beneficial for building capacity of Young Professionals on futures foresight.



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## Abstract

*With the rapid expansion of the sharing economy and the emergency of short-term rentals, there is a pressing need to examine the future trajectory of short-term rentals in Kenya. This study aims to assess the future of short-term rentals commonly understood by Kenyans as Airbnb. The specific objectives were to identify the drivers of change, opportunities, challenges from plausible future scenarios and outline policy implications. The study employed a scenario planning approach methodology. The key findings of the study identified the key drivers of short-term rentals as taxes, e-commerce technologies, accommodation costs, policies and regulations, consumer preference, and age. Out of these, e-commerce technologies and taxes were identified as major driving forces. The two driving forces formed four plausible future scenarios from which opportunities and challenges were identified. The four main opportunities for short-term rentals identified are investment opportunities, government revenue, tapping of the global market, and employment opportunities. The critical challenges in the plausible future of short-term rentals (STRs) were found to be cyber security attacks, insecurity, competition from numerous listings on online platforms, and financial burdens to STRs investors due to high operation costs. The study proposes the following policy recommendations. First, the government could consider investing in digital infrastructure that supports the integration of STR e-commerce systems with the tax framework to streamline tax processes, enhance compliance, and reduce administrative burdens. Second, create a specific tax regulation framework that integrates STRs with the booking platforms to streamline tax reporting and collection, and ensure compliance. Third, facilitate the creation of an enabling environment with a consistent regulatory framework and tax incentives to encourage investment in the STR market. Fourth, address cybersecurity challenges by developing stringent regulations that protect the STR platforms. Fifth, promote fair competition and protect consumers from misleading advertisements on STRs listings by enforcing compliance of competition Authority Act of 2016 that initiate investigations into consumer violations and impose administrative remedies. Lastly, set up regulation for STRs registration with clear security requirement that STRS should put in place before being registered.*

## **Abbreviations and Acronyms**

STR	Short-Term Rentals
AirBNB	Air Bed and Breakfast
NGFCF	National Gross Fixed Capital Formation
SDGs	Sustainable Development Goals
SIDS	Small Island Developing States
LDCs	Least Developed Countries
UNWTO	United Nations World Tourism Organization
UNGCNS	United Nations Global Compact Network Spain
AU	African Union
ATSF	African Tourism Strategic Framework
TRA	Tourism Regulatory Authority (TRA)

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## 1. Introduction

Short-term rentals (STR) refer to any accommodation unit rented for a short period, typically less than 30 days, but the maximum length can vary depending on various factors. STRs are divided into different categories; vacation homes which are stand-alone properties such as houses, cottages, villas, which are located in popular tourist destinations or serviced apartments representing fully furnished units in urban or tourist hotspots that cater for the travelers who seeks city experience; bed and breakfasts (B&Bs), which are small owner-run establishments providing limited rooms and breakfast, which are normally found in rural or scenic areas, offering a calm and private atmosphere; and homestays which are accommodation establishments that allow guests to stay in a host's home, offering private or shared spaces and opportunities to engage with the hosts and experience local culture (Furukawa and Onuki, 2022; Short Term Rentals, 2023). In Kenya, Airbnb is synonymously known as any short-term serviced rental that offers temporary accommodation.

The idea of short-term rentals traces its origins back to ancient times when travelers would stay in private homes, inns, or pubs along trade routes and in major cities. This practice persisted through centuries, evolving with the development of hospitality services. The modern concept of short-term rentals, as we know it, gained momentum with the advent of the Internet in the late 20th century, which facilitated online listings and bookings. The idea was revolutionized in August 2008 by university graduates Joe Gebbia, Brian Chesky, and Nathan Blecharczyk. The concept originated from Brian and Joe in 2007 when they had a cash shortage and they could not pay their rental fees. They decided to transform their living room into a bedroom to make money by providing the mattress with a homemade breakfast during a San Francisco conference in 2007 (Guttentag, 2013). Following this, they created a commission-based web platform Airbed and Breakfast (Airbnb) that offered short-term bedrooms and breakfast where customers could book rooms in the hotel in the accommodation market. The evolution of STRs from traditional hotels has brought a significant shift in the hospitality industry, creating a disruptive model that has brought changes on how people travel and get accommodation (Volgger et al., 2019). Today STRs such as the Airbnb sector forms one of the largest home-sharing platforms in the world, operating in over 220 countries (Ding, 2023).

Globally, the popularity of Airbnb has increased by 42.1 per cent from 251.12 million listings in 2020 to 356.85 million listings in 2021. The number further increased to 393.7-million-night stay in 2022, which represented 31 per cent compared with the prior year (Airbnb Statistics, 2024). Other major players include Vacation Rentals by Owner (Vrbo), majorly in Europe and North America, which has over 2 million listings, Booking.com with over 6.6 million accommodation units and Tujia in China, with a listing of around 1.4 million properties. The popularity of STRs has been attributed to low cost, wide range of rental options such as private rooms, hotel rooms, shared room that offers cost saving options for travelers who opt for shared accommodation. Besides, group travelers can save money in shared accommodation as compared to traditional hotels. As study by Ding et al. (2023)



reveals that, on average, Airbnb rental shared by six people is 33 per cent cheaper than booking three hotel rooms. In addition, most of STRs such as Airbnb offer fully equipped kitchen, which enables the guest to enjoy home-made food and save money on meals. Further, the pursuit for local experience is a motivating factor where the guests live like locals in properties managed and designed by the residents. Social interaction also provides another motivation for the guest where they have the chance to interact with the host, other guests and the neighbours' creating memories and unforgettable experiences and social benefits.

The tourism sector in Kenya plays a key role in the economy through diverse contributions. It accounts for 10.4 per cent of the Gross Domestic Product (GDP). The sector employs 5.5 per cent of the formal workforce and contributes to 4.2 per cent of the National Gross Fixed Capital Formation (NGFCF). Besides, the impact of the sector influences others sectors indirectly through multiplier effects that enhance growth of hotel industry, trade, agriculture, construction, manufacturing, and transportation (Ministry of Tourism Wildlife and Heritage, 2023). The rise of STRs has been an important turning point in the social economic arena. It has been fueled by a shift in how consumers are accessing products from the traditional emphasis on ownership to temporary access or sharing of products. It is more predominant as the world evolves from an information-based model to a networked economy. The rise and boom of STRs such as Airbnb are linked to technological innovations, principally those associated with the Internet bookings. Additionally, STRs can benefit from their ability to match consumers and their needs. They are also able to leverage on the removal of advertisement and marketing costs (Lorde and Joseph, 2019).

With the rapid expansion of the sharing economy and the emergency of STRs, there arises a pressing need to examine the future trajectory and the multifaceted aspects surrounding STRs in Kenya. This is because the emergence of STRS and the sharing economy presents opportunities and challenges for these sectors. The research study focuses on the drivers of change within the STRs sector. This seeks to provide insights for policy makers and industry stakeholders to navigate future dynamics and enhance sustainable growth in the hospitality industry. The study explored the future of short-term rentals through a scenario-planning approach. The specific objectives of the study sought to identify the drivers of change for the adoption of STRs and determine opportunities and challenges in the plausible future of STRs.

The rest of the paper comprises the following: section 2: presents situational analysis, section 3: a literature review; which delves into pertinent theories and empirical research on STRs, section 4: methodology; offering insight into research design, section 5: provides analysis of findings, and section 6: conclusion; summarizing key takeaways and policy recommendations, respectively.

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## **2. Situational Analysis**

### **2.1 Global Context**

Short-term rentals are growing significantly with an example of Airbnb, having over 5 million hosts globally, offering more than 7.7 million active listings with their presence in over 100,000 cities worldwide. Besides, Airbnb serves a vast community of over 150 million users who have collectively booked over 1.5 billion stays with six guests checking into an Airbnb listing every second. The average nightly cost of an Airbnb stay in North America is US\$ 163, with guests typically staying for an average of four nights per booking. Booking through the Airbnb app takes an average of 11 minutes and 31 seconds. Hosts earn an average annual income of US\$ 13,800, contributing to Airbnb's substantial valuation of approximately US\$ 113 billion. Currently, Airbnb holds an estimated market share of over 20 per cent in the vacation rental industry Woodward (2024). Globally, there has been a significant rise in demand for Airbnb accommodations. In 2021, Europe had the highest listing with 4,840,487 while Africa had the least listing with 367,091. Additionally, the USA was noted to be the country with the highest number of listings with 2.25 active listings in 2021 followed by France and China with 1.2 and 1.15 million, respectively. The 25 to 34 age group had the highest number of guests at 36 per cent followed by the 35 to 44 at 23 per cent and over 65 age group with the least number of guests at 5 per cent (Woodward, 2024).

### **2.2 Regional Context**

Airbnb listings on the African continent surged from 62,000 to 100,000 in 2017, marking a significant increase compared to the 6,000 listings recorded in 2013. The growth also saw a significant increase in the number of annual guests across Africa from 5,000 in 2012 to 1.2 million in 2017. African hosts earned US\$ 139 million from the service in 2017 (Mitchell, 2018). In analysis, South Africa stood out as a major player in the field, hosting a significant portion of Airbnb listings. Since 2010, South Africa's Airbnb listing has seen a growth of 143 per cent, with 651,000 guests welcomed in 2017. By 2018, there were over 43,000 active listings in South Africa, with hosts typically earning US\$ 1,900 annually from the service. Cape Town emerges as the most popular destination, owing to its scenic landscapes. While South Africa leads the Airbnb market in Africa, Morocco, and Kenya follow as the second and third largest hubs with 5,900 and 2,100 active listings, respectively. Besides, Nigeria had 730 listings with new markets emerging in countries such as Rwanda, Senegal, Zimbabwe, and Swaziland, indicating further potential for growth in the region. Female hosts outnumbered their male counterparts across the continent (Mitchell, 2018).

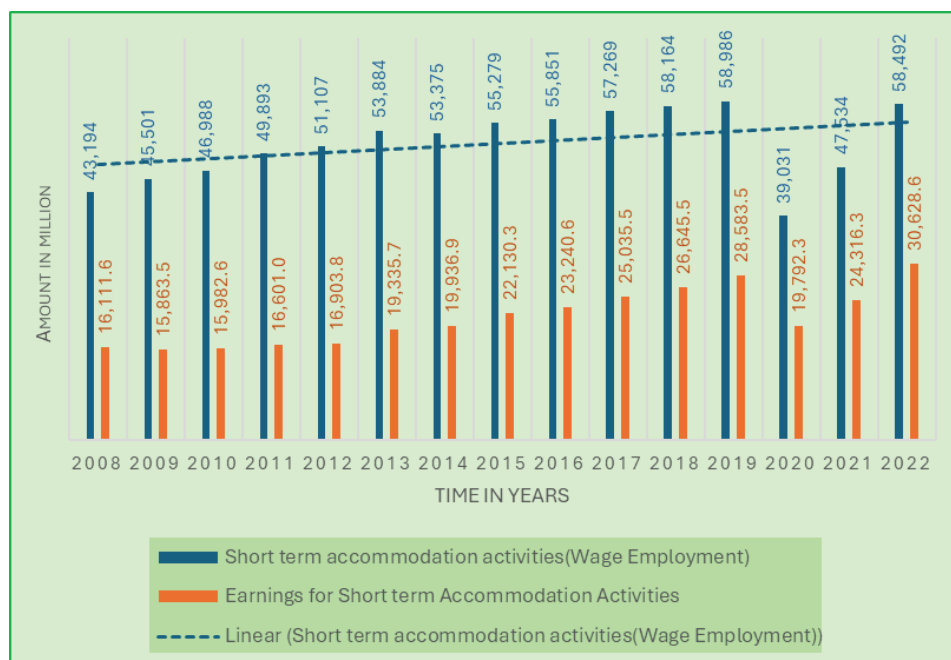
### **2.3 Local Context**

In Kenya, STRs such as Airbnb became increasingly popular, establishing itself as the market leader in the homestay sector with investors specializing in Short-

term serviced accommodations and homestays (Short Term Rentals, 2023). Till 2015, the country was host to roughly 1,400 Airbnb's. Interestingly, 50 per cent of these facilities are in Nairobi. As of 2018, the number of listings had increased to 6,500. This marked an approximately 121 per cent annual growth rate, which was 40 per cent higher than the global growth rate during the same time. Before the COVID-19 pandemic, the number of Airbnb listings in Kenya was estimated to be around 7,500. However, the pandemic effects significantly reduced the number of listings to around 5,554 in 2020, which marked a 35 per cent decline. The post-COVID era led to economic recovery that impacted the hospitality sector. Airbnb listings doubled from 5,554 to 10,902 in 2023 (Kenya Geographic, 2023). This surge underscores the growing interest in STRS as a source of income and as an accommodation option.

Airbnb listings comprise different property types ranging from small, medium, and large accommodation facilities. In Kenya, smaller intimate spaces are the most preferred with 46 per cent of the total listings being one-bedroom facilities. This is followed by 2-bedrooms making up 29 per cent of the total listings (Kenya Geographic, 2023). Studios make up 7 per cent of the total listings, indicating that a majority of users in Kenya prefer intimate spaces. While the Airbnb listing in Nairobi is rapidly growing, the occupancy rates are below the global average of 56.4 per cent. As of 2023, Nairobi and Mombasa occupancy rates were lower than the global average of 56.4 per cent at 31.0 per cent and 47.0 per cent, respectively (Kenya Geographic, 2023). Additionally, the average monthly revenue per listing is around US\$ 298 (Ksh 42,972), which is not always a guarantee due to the competitive nature of the industry and the relatively low daily rates and occupancy rates. Besides, the locational preferences of Airbnb consumers have significantly impacted their geographical position, with most avoiding busy cities and towns. As such, popular Airbnb joints in Kenya are now easier to find in remote places characterized by serene and quiet conditions. This preference is demonstrated by the high 50 per cent occupancy rates for listings found in remote places such as Kajiado, Kilifi, and Ngong. This has seen most landlords with properties in remote locations convert their houses to Airbnb to tap into the changing consumer patterns. As a result, the STRs activities have been increasing as shown in Figure 2.1.

**Figure 2.1: Trend of short-term rentals accommodation in Kenya**



Source: KNBS (Various), Statistical Abstract 2008-2022

The trend pattern for STRs in Kenya resembles the global trajectory marked by rapid growth from 2008 to 2019. The 2023 Statistical Abstract shows that this sector has experienced steady growth that resembles the global STRs trajectory pattern. Ten years after Airbnb’s indulging in the accommodation industry in 2008, has resulted in 86 per cent increase in earnings for short-term accommodation activities in the country. The amount spent on STRs wages also increased by 34 per cent showing that the sector was undergoing significant growth fueled by the introduction and growth of Airbnb’s (KNBS, 2023). It is also worth noting that before 2008, when Airbnb was introduced, the short-term accommodation activities growth rate was lower compared to restaurants and mobile food service activities.

Therefore, the quick turnaround experienced after 2008 is an indication that the entry of Airbnb within STRs was instrumental to the rapid significant growth experienced. Another interesting observation involving the wage expenditure and revenues made by the short-term accommodation activities was the significant drop experienced between 2019 and 2020. This was the COVID-19 pandemic era, which significantly hampered the revenue-generating capabilities of the hotel and accommodation sectors. Therefore, as the revenues generated in the conventional hotels dropped, a similar effect was experienced in Kenya’s short-term accommodation activities. This is demonstrated by the significant earning drop of approximately 31 per cent (KNBS, 2023). Things, however, changed in the post-pandemic era as businesses vigorously underwent growth to resume

their initial position after the COVID-19. This is why a distinct growth curve can be noted after 2020 with earnings and wage expenditures within the short-term accommodation activities sector significantly increasing.

## **2.4 Policy Framework**

Tourism can influence the achievement of all the Sustainable Development Goals either directly or indirectly. Globally, it has been identified as a target in SDG 8 on inclusive and sustainable economic development, which targets 8.9 calls for the establishment of policies that enhance sustainable tourism to support local culture and products. Additionally, SDG 12 on sustainable consumption and production aims to devise and establish tools to monitor sustainable development impacts for sustainable development tourism on top of creating employment, and fostering local culture and products. Moreover, Goal 14 on life below water target 14.7 aims at growing the economic gains of Small Island Developing States (SIDS) and Least Developed Countries (LDCs) through sustainable use of marine resources, and sustainable management of fisheries, aquaculture, and tourism (United Nations World Tourism Organization and United Nations Global Compact Network Spain, 2016).

At the regional level, the African Union (AU) Agenda 2063 recognizes the immense potential for the tourism industry. It aims to make Africa the preferred destination for tourism and emphasizes the essential need for the development of a framework for tourism in the continent. Additionally, the African Tourism Strategic Framework (ATSF) 2019-2028 seeks to offer a strategic blueprint for the establishment of a competitive, sustainable, and integrated tourism sector in Africa (African Union, 2019).

Within the national level, there exists a policy framework for the tourism sector. Primarily, the sector is guided by the Constitution of Kenya, the Tourism Acts, and Kenya Gazette Notices. The National Government has established tourism policy and development while the County Governments are allowed to draft regulations on local tourism (Constitution of Kenya, 2010). The Tourism Act No. 28 of 2011 provides for the development, management, marketing, and regulation of sustainable tourism and tourism-related activities. The Act under section 4 also provided for the establishment of the Tourism Regulatory Authority (TRA) a corporation mandated to regulate the tourism sector in Kenya (The Tourism Act, 2011). The Tourism Act of 2011 was amended to create the Tourism Regulatory Authority Act of 2014 with a regulatory framework that controls the activities of STRs. It is worth noting that there is no specific Act of Parliament that provides a framework to operationalize the registration, security, licensing, and control of STRs. Section 7(1) (c) of the 2014 Act gives the provision to regulate tourism-related activities and services, including cottages and private residences engaged in guest house services with no specific act that provides a framework for operationalizing the activities of STRs. Moreover, the Hotels and Restaurants Act (Cap. 494) provided for the establishment of regulations for licensing hotels, and hotel managers.

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### **3. Literature Review**

#### **3.1 Theoretical Literature**

The rise of STRs like Airbnb and its influence on existing tourism establishments can be explained using Marxist theory, which stresses the connection between technology and social change. The theory centres on how change in the means of production relates to transformations in class relations, especially regarding ownership and participation in specific sectors. This provides a structure to understand the interaction between owners and non-owners and the resulting implications of these interactions. According to Marxists, technological changes have influenced how the way work is done, dictating which classes can dominate an industry and potentially excluding other groups. The theory illustrates how innovation can usher in new participants, undermining the existing power systems, and empowering groups some groups while weakening others. It is within changes in class dynamics that STRs like Airbnb and other technological innovations become evident in shaping the tourism industry (Karl Marx, 1847).

Schumpeter (1976) supported the application of Marxist theory in the destruction of productive systems instead of preserving them, offering insights into how certain industries grow and endure. He deviated from concentrating on price competition among firms to the concept of ‘creative destruction.’ The activities revolve around the establishment of new commodities, technologies, supply sources, and organizational structures giving competition a key advantage in cost and quality. Thus, the emergence of STRs can be explained using Schumpeterian ‘creative destruction’ in that the STRs establishment enhances a new technological frame that promotes the capabilities of small and formerly sidelined hospitality service providers to thrive and link with consumers. This essentially disrupts the traditional tourism sector and hospitality industry (Schumpeter, 1976).

The innovative change brought about by Airbnb in the hotel and tourism industry can also be explained using the ‘disruptive innovation’ theory conceptualized by Clayton Christensen in 1997. The theory presents a process whereby a new commodity reforms a market, disrupting the already existing firms. The growth of new products is slow in the beginning but offers diverse benefits such as low cost, convenience, or ease, thus appealing to the lower-end market or establishing a new market altogether. Established firms, on the other hand, ignore the lower-end market and focus on the most profitable markets in their efforts to enhance their products. Over time, disruptive products advance and become more attractive to more consumers. This shift aligns with the growth of STRS like Airbnb in Kenya (Christensen, 1997)

#### **3.2 Empirical Literature Review**

##### **3.2.1 Future of STRs (Airbnb)**

The authors of “The Future of Hotels: The Lifestyle Hub. A Design-thinking Approach for Developing Future Hospitality Concepts” used a design-thinking approach to introduce design thinking as a novel approach to developing future

scenarios, contrasting it with traditional scenario forecasting methods. They envisioned a hotel where spaces, technologies, and services could be customized to meet individual needs and aspirations, reflecting a shift towards highly agile and personalized hospitality experiences (Lub et al., 2016). In their paper “Debate: quantifying Airbnb's Disruptive Impact on Ten Key Hotel Markets”, the study employs a panel data fixed effect regression model to examine the effects of Airbnb supply on key hotel performance metrics such as room revenues, average daily rates, and occupancy rates in ten major US hotel markets for the period between July 2008 and June 2017. The study found that the rise in Airbnb listings has a detrimental effect on all three performance metrics in the hotel industry (Dogru et al., 2019).

Through a systematic literature review, Modey and Gomez (2018) documented the Past, Present, and Future of Sales, Marketing, Branding, and Revenue Management of Airbnb. They found that in the past, there was a 100 per cent increase in Airbnb supply between 2008 and 2017. The study noted growing regulation and enforcement battles and an evolving experience economy. In future, the study postulated that hotels must adopt a sales, marketing, and revenue management approach that is both strategic and tactical, such as fulfilling the brand promise (Mody and Gomez, 2018). In their work “Impacts of Peer-to-Peer Accommodation Use on Travel Patterns”, Tussyadiah and Juho (2016) used two online surveys targeting travellers from the United States and Finland through a principal components analysis with varimax rotation to explore reasons why travellers were shifting to the use peer-to-peer accommodation. They found out that Social Appeal and Economic Appeal drive the use of peer-to-peer accommodation (Tussyadiah and Pesonen, 2016).

Nieuwland and van Melik (2020a) conducted a study to investigate key challenges that cities face when dealing with STR platforms and the rationale behind different regulatory approaches. The study findings envisioned a future where the conventional lodging industry will keep pressuring policy makers to regulate STRs due to unfair pricing, and insecurity. Additionally, they noted that hotels are changing their strategies due to the competition from Airbnb and responding to current tourism trends. Oskam and Boswijk (2016) conducted a comprehensive study on the future of Airbnb, employing a combined literature review, scenario workshops, and a Delphi panel methodology. The study analyzed the nature of Airbnb as a networked hospitality business and examined its potential development over the next five years. The paper also explored the impact of STRs on tourism, hotels, and city destinations. Their findings established that Airbnb is a disruptive innovation that traditional hospitality must adapt to if in case they want to survive. The study also emphasizes that there is a need for regulatory policies to address Airbnb's problems. For instance, the study noted that bans and government-led restrictions could stifle innovation, which has been the primary driver of Airbnb's growth and acceptance in multiple markets across the globe. However, more receptive policies could lead to sustainable tourism growth (Oskam and Boswijk, 2016). Besides, Hati et al. (2021) conducted a thorough review of academic research on peer-to-peer (P2P) accommodation sharing. Their study identified knowledge gaps for future research directions. The findings suggest that



most existing research on Airbnb has been concentrated in Europe, the USA, and Canada. Also, some coverage has been done in Asian countries such as China, Singapore, South Korea, and India. However, there is need for more studies in South America, Africa, and other developing nations such as Kenya to understand consumer and host behaviour in diverse cultural settings. Futuristically, the researchers indicated a positive outlook on how Airbnb's will be perceived in developing markets that are yet to be exploited. Furthermore, the positive effects of the venture in developed regions means that developing markets will fully embrace it with expectations of improving their economies (Hati et al., 2021).

In a different study titled "Airbnb and the sharing economy" Hall et al., (2022) explored the crucial role that peer-to-peer (P2P) accommodation providers play in the modern economy ecosystem founded on tourism. The researchers agree that this model has undergone significant growth fueled by the changing consumption patterns among modern consumers. However, the study noted the numerous Airbnb impacts on socio-cultural, economic, and environmental aspects within the tourism and hospitality sectors. The study pointed out that the extent of the positivity or negativity of these impacts will be the determining factor on whether Airbnb will continue to infiltrate markets or fail to maintain its growth rate. The study found that the influence will be more instrumental on the increased competition with traditional business models such as hotels, motels, and B&Bs, hence dictating Airbnb's future survival or failure. However, its influence on tourist flows and spatial dynamics will continue to be experienced for the foreseeable future (Hall et al., 2022).

Adamiak (2022) conducted a study that focused on the size, structure, distribution, dynamics, and usage patterns that Airbnb accommodation offers in 167 countries. The web researcher scrapped Airbnb's website in 2018 and 2019. The result of this process was a dataset of 5.7 million listings, including 3.6 million active listings that were rented out (reviewed) during the previous year. After categorizing the listings, the study established that Airbnb is predominantly used to rent out entire apartments by multi-hosts, and the number of Airbnb listings in countries correlates with their level of economic development and the size of inbound tourism. Further, the study found out that one-third of Airbnb supply is in large cities, while one-third is near seacoasts. The study also noted that Airbnb's popularity is growing most rapidly in new markets. Besides, the STRs remain stable or even decrease in primary urban destinations of some European countries. With these findings, the study predicts the continued adoption of Airbnbs in developing countries that are also embracing their tourism potential (Adamiak, 2022). This points to the existing potential that Airbnb still holds despite the over-saturation of its usage and presence in regions that first facilitated its entry into the accommodation service market.



### **3.2.2 Drivers of change for the future of short-term rentals using PESTELS analysis**

#### **Political drivers**

These factors cover the extent and how a government involves itself in the running of the economy. They range from government policies, regulations, and laws. These dynamics influence organizations and their business operations necessitating adaptation strategies to the existing ones and anticipating legislative changes (Sheffield Hallam University, 2023). Janovec (2023) noted that traditional tax law institutions may struggle to keep pace with the rapidly evolving technological world. The guiding principle for tax regulation should be fair by ensuring STRs like Airbnb are taxed like any other commercial business. However, such rules are not equally applied to accommodation providers. Initially, the study found the conventional hotel industry did not consider STRs like Airbnb as a threat, perceiving they served distinct markets with different business models. However, as Airbnb's success exceeded many hotels, perception changed. Out of these, the American Hotel and Lodging Association (AH and LA) started opposing Airbnb and lobbying for equal treatment regarding taxes and regulations. They also started sponsoring research to highlight the negative economic impacts posed by Airbnb. The present phase of the conflict involves hotels incorporating home-sharing-like features to compete effectively with STRs like Airbnb and adopting platform-based business models similar to Airbnb's for their advantage (Mody and Gomez, 2018).

Additionally, even though neighbourhoods can profit from increased attention and income, short-term rentals (STRs) can also produce negative externalities such as gentrification in situations where housing units are turned into vacation rentals. The change of areas from low to high value often displaces residents by rising rents and living costs. Most cities are therefore focusing on the shortage of affordable housing this factor drives the behaviour of STRs owners ultimately informing how they charge for accommodation, which directly impacts the future of Airbnb (Nieuwland and van Melik, 2020a; Fu, Zhu, and Pan, 2023). From a local perspective, political drivers are rapidly becoming influential in how STRs like Airbnb will fair within the Kenyan economic ecosystem. Recent incidences where deaths have occurred within Airbnb premises have generated significant uproar from the public, raising concerns over their surge and unregulated operations. As a result, Anyango (2024) reports that numerous proposals and petitions have been lodged by several members of parliament looking to set up a structure that will dictate how STRs like Airbnb's are operated in the country. Before these events, STRs like Airbnb were unregulated and lacked a proper legal structure that determined who was qualified to start and run one with no clear registration framework. Therefore, these new developments are expected to significantly influence the future of STRs in the country. The emerging political drivers are likely to introduce STRs regulations with clear security standards, STRs accommodation tax, cyber security, and online booking requirements.

## **Economic drivers**

These factors influence how organizations conduct businesses and how profitable they can become. They are categorized into macroeconomic and microeconomic factors. Macroeconomic factors manage demand within the economy, with the government employing tools such as interest rate control, taxation policy, and government expenditure to control economic activities. Microeconomic factors on the other hand focus on consumer spending behaviours and patterns (Sheffield Hallam University, 2023). The micro and macro factors have so far dictated the growth of STRs like Airbnb across multiple economic ecosystems. STRs like Airbnb have for the longest time been the cheaper option for travellers looking for short-term accommodation. In Kenya, the same factor has been the primary driver of its adoption and appeal among consumers. With the fair prices, travellers go for these options thus foregoing the traditional hotel approach presently considered costly. Furthermore, the STRs' popularity and preference among consumers are further improved by the fact that the facility users are allowed to prepare their own meals within the facility without restriction. This is unlike conventional hotels where the prices are also influenced by the fact that meals will be provided by the hosts (Sherwood, 2019). Therefore, the sharing of resources has resulted in cheaper STRs making them the most preferred accommodation option for travellers in Kenya.

STRs like the Airbnb option are also appealing due to their “sharing economy” feature. This option allows individuals to book a room and share among themselves. The impact this feature has is that it reduces the cost of using this accommodation option. More people are therefore willing to go for this option, considering it means less expenditure on accommodation. However, Hati et al. (2021) report that this option brings with it other challenges for hosts who report significant losses from damages brought about by unruly behaviours most common in cases where many guests choose to utilize the “sharing economy feature.” The reporter also notes that most investors are, however, willing to ignore these challenges due to the minimum economic demands needed to start and run the business. Investors consider STRs an appropriate and economical business option with proper returns due to the reduced operational costs triggered by less strict regulatory demands such as registration permits and taxes. Various changes are, however, eliminating these advantages with conventional hotels significantly cutting their costs to level the competition field. Additionally, emerging regulatory prerequisites for STRs in Kenya are destined to increase their operational costs, which will be factored into the consumer pockets (Njore, 2024). As such, STRs' prices are likely to increase further steeping the competition field with conventional hotels. Furthermore, the Kenya Revenue Authority has begun to implement a digital service tax that was introduced by the government that mandates all online businesses to pay 16 per cent VAT on any earnings they receive (KRA, 2021). This move is expected to increase the costs of acquiring STRs listed on Airbnb websites, hence leveling the playing field for all actors in the accommodation sector who have been complaining that STRs like Airbnb's lack of taxation gives it a competitive edge in the industry. (Mugabi, 2020)

## **Sociological drivers**

Sociological drivers are also referred to as socio-cultural factors that encompass shared beliefs and attitudes of the population. These factors influence how we understand customers and what drives them and include population growth, age distribution, health consciousness, attitudes and so on (Sheffield Hallam University, 2023). Understanding what consumers want is a great battle between hotels and STRs. There are larger societal trends that are shifting and reshaping consumer preferences, with implications for STRs like Airbnb and hotel dynamics. In the US, the shifts are propelled by a move towards “new luxury” driven by a widening wealth gap. Consumers prioritize unique and authentic experiences for self-actualization. Additionally, there is increased mobility to previously marginalized groups like Black people on top of increased travellers from countries such as India and China. Brand loyalty is also changing from enduring relationships to instant gratification and personalized experiences. In a post-consumeristic society, the focus is changing from “access-based consumption” highlighting wellness over materialism (Mody and Gomez, 2018). Additionally, social factors would likely influence consumers' decision to book STRs accommodation as today's consumers increasingly depend on collective reviews and recommendations posted on social networking sites (Lee, Erdogan and Hong, 2021).

Demographic factors have a significant influence on the tourism industry through their decision-making processes (Wallace, 2020; Robinson and Schänzel, 2019). Gambini (2023) notes that the Generation Z cohort makes up a significant constituent of the worldwide population and has the power to influence market demand. Most individuals who seek accommodation in STRs like Airbnb are young people (Polisetty and Kurian, 2021; Airbnb Users by Age US/Europe 2017 | Statista, 2023). Millennials and adults in Gen Z stand out for their strong engagement with climate change concerns as reflected by their social media content (Tyson, Kennedy and Funk, 2021). For the tourism sector to remain effective and provide services and experiences tailored for young travelers, there is a need to understand the Generation Z cohort. Travelling offers Gen Z opportunities to explore different cultures, develop skills, and connect globally. It allows them to break free from routine and expand their horizons. Gen Z's travel preferences portray their desire for unique experiences and convenience. Additionally, they often make last-minute decisions based on word-of-mouth recommendations as they seek budget-friendly options. This has challenged the traditional travel industry norms such as accommodation and the use of the sharing economy.

In Kenya, sociological drivers have been instrumental in increasing STRs like Airbnb preference and popularity among consumers. Culturally, the Kenyan consumption pattern is undergoing a significant shift that prioritizes populist ideals. This sociological shift directs consumption towards popular entities that are considered technologically sound and disruptive. Consumers are thus willing to use STRs like Airbnb's, which they consider to be a disruptive innovation that challenges the existing status quo that was previously held by conventional accommodation options such as hotels (Guttentag, 2013). Most Kenyan consumers agree that hotels are elitists that have consistently subjected consumers to steep

pricing models due to a lack of competition. Therefore, their acceptance of STRs is a rebellious move seeking to strip the economic powers that have for long been held by hotels. This view is further pushed into the consumption domain due to the current population characteristics of the Kenyan consumer. Most consumers of STRs like Airbnb fall under the millennial category who are generally characterized as young Generation Z (Robinson and Schanzel, 2019). Most of these consumers have grown with rebellious ideals that constantly seek to challenge the existing status quo (Guttentag, 2013). They are further described as anti-elitist meaning that their consumption habits will always align with businesses viewed to be disruptive and anti-elitist. As such, STRs' ideals and operational structures qualify it as a status quo challenger making it an attractive option for consumers falling under this age bracket.

Another sociological driver dictating the popularity and preference of STRs like Airbnbs among consumers is its ability to guarantee "cultural immersiveness" (Wong et al., 2022). The flexibility associated with the option means users can experience the places they visit without fear of lacking accommodation. STRs are extensively distributed across various parts of the country, unlike conventional hotels that are often restricted to specific geographical locations. This means that visitors can move from place to place to enhance their experience while guaranteed that they will have access to an accommodation option whenever they require it. The assurance of this flexibility will continue to enhance STRs preference among consumers.

However, other sociological drivers are predicted to curb STRs like Airbnb's preference and popularity in Kenya. The country is characterized by its reserved cultural ideals. This is fuelled by the popularity of conservative religious principles that currently view STRs like Airbnb as an immoral option for travellers. Most negative incidents revolving STRs and their users relate to promiscuous behaviours such as prostitution and escort services. These observations are negatively viewed by society, meaning this continuity is likely to harm STRs business in Kenya (Lee et al., 2015). Relating the business with certain unpopular social behaviours will make it an unpopular option for Kenyan users avoiding the negative perception triggered by religious and conservative views majorly revered in the country.

### **Technological drivers**

These factors affect the way we conduct business including the production of goods and services and communicating with the target audience (Sheffield Hallam University, 2023). Technology through the rise of connectivity and the Internet of Things (IoT) has blurred the thin line between work, leisure, and work, with the rise of spaces that serve multiple functions as residences, hotels, coworking spaces, community hubs, and food/beverage destination (Mody and Gomez, 2018). Technological perspective entails the speed and adoption of technological innovations that is growing exponentially affecting all sectors, including the hospitality industry and tourism sector (Tussyadiah and Pesonen, 2016; Toader, Negruşa, Bode and Rus, 2022). These continuous innovations follow the law

of Moore, which postulates that processing power doubles every two years and have a considerable impact on the way we organize our society, our economy, our transport system, our health care, security systems, tourism, and education. This influences all aspects of our lives in the way we communicate, the way we do business, and the way we live. With technological advancement, innovations are evident in the fields of 3D printing, robotics, solar energy, biotech, life sciences, the hotel industry, and tourism. Rifkin (2014) noted we are in the middle of the fourth industrial revolution, and we are moving into the time frame of the Internet of Things, where technology is the key driver of change in all sectors.

Consequently, STRs are supported by digital innovation through apps and websites. The Guest user books STRs such as Airbnb through websites and makes reviews on the experiences on the digital platform. Like any other business, STRs and preferences in Kenya have been fueled by the fact that it is founded on technology. STRs like Airbnb are a technological innovation that uses Internet technologies to create content on websites, list their short-term rentals online, and make booking of accommodation easier (Lorde and Joseph, 2019b). More than 60 per cent of Airbnb users in Kenya are a middle-income demographic. A majority (80%) of this category are educated and technology-savvy (Polisetty and Kurian, 2021). This means that the more STRs incorporate technology in its operation the more Kenyans will be willing to use it for their accommodation needs. Furthermore, STRs investors have made significant investments to use social media platforms to market their businesses (Mugabi, 2020). This has significantly increased its awareness and it is expected to continue doing so for the foreseeable future. Increased awareness on platforms such as Facebook, Instagram and Twitter will further solidify the popularity and preference of STRs like Airbnb among consumers across the country (Polisetty and Kurian, 2021)

## **Environmental drivers**

The sharing economy, exemplified by platforms like Airbnb, has a multifaceted impact on the environment. These environmental drivers revolve around sustainable development. They are influenced by the scarcity of raw materials, and pollution targets among others (Sheffield Hallam University, 2023). Through sharing of economy, STRs enable more efficient use of existing resources by allowing individuals to use spare capacity in their homes, whether it is an extra room or an entire property (Merino-Saum et al., 2023). This can reduce the need for new construction, potentially lowering the environmental impact of building materials, energy use, and land development. Environmentally sustainable activities of sharing practices, such as Airbnb, as opposed to traditional exchange activities are recommended (Midgett et al., 2017; Wallace, 2020).

In Kenya, the exclusion of STRs like Airbnb in the Public Health Act had created an easier operational field for the facilities while hotels were required to meet the outlined objectives. This has been an unfair operational requirement that further positioned STRS for success by minimizing the financial needs of enforcing the environmental and safety guidelines. Due to lobbying done by conventional

hotels, eventually, STRs like Airbnb might experience a regulatory framework that will guide their actions toward sustainable environmental practices.

### **Legal drivers**

They include health and safety, equal treatment, marketing standards, consumer rights and laws, product labelling, and product safety. To operate effectively, businesses need to understand what is and what is not legal (Sheffield Hallam University, 2023). The emergency of STRs has faced both political and legal issues in cities such as Barcelona, New Orleans, and New York for non-compliance with rental, housing, and tourism regulations.

Some of the popular legal proposals fronted to regulate the sector in developing economies include the Operationalization Act and the Occupiers Liability Act. The Operationalization Act will require STRs like Airbnb owners to seek permits and registrations that legalize their operations within the country (Nieuwland and van Melik, 2020b). The other proposed legal framework is the Occupiers' Liability Act, which ensures the host must see that his visitor is reasonably safe on the premises. Therefore, if anyone is harmed or loses their life due to the state of the premises or lack of host responsibility by the owner, the hosts will be legally held liable for the harm or death. These legalities are expected to increase the complexity and cost of STRs operations in the country, hence reducing the business appeal to potential investors (Polisetty and Kurian, 2021). These legalities form key drivers in future meant to create a pathway that the government can use to monitor STRs and enforce other tax proposals (Mugabi, 2020; Nieuwland and van Melik, 2020b; Polisetty and Kurian, 2021).

### **3.3 Identified Research Gaps**

Based on the reviewed literature, even though there were studies on STRs, research on STRs like Airbnb in developing markets such as Kenya were limited. Additionally, studies focusing on the specific impacts, challenges, and the future likely to face STRs were limited. Little attention has been given to the regulatory environment and its impact on STRs growth and operations in developing countries such as Kenya. There exists a need for studies that examine the potential for STRs like Airbnb to promote sustainable tourism practices and support community development in developing countries such as Kenya. Few researchers applied the scenario planning approach. The study aimed to close these gaps.

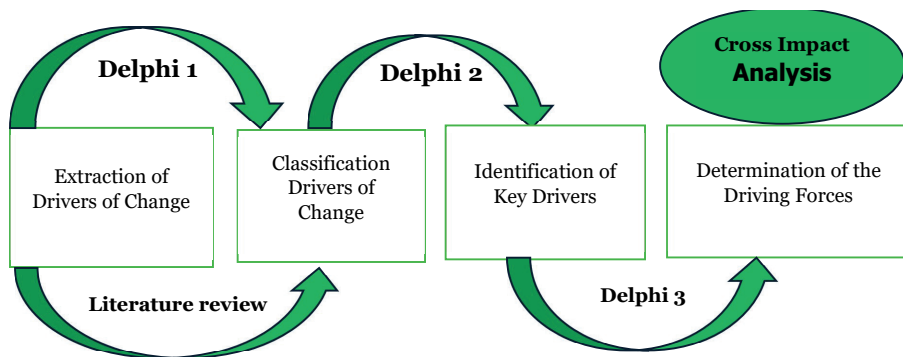
## 4. Methodology

The study used qualitative research design to gather, analyze, and interpret data. The study used foresight methodology, combining both primary data and secondary data. The primary data was collected from stakeholders using open-ended discussions. The discussions provided drivers of change, which were confirmed through a literature review. Additionally, primary data was captured using a structured questionnaire (Appendix 001 and 002) to solicit stakeholders' opinions concerning the drivers of change likely to influence the future of STRs and how the drivers interact with each other in influencing the future of STRs.

The study used purposive and snowball sampling techniques. The first step involved mapping eight categories of STR stakeholders i.e. STRs owners, STR users, Tenants or neighbours where STRs operate, 2-star and 3-star hotel owners/managers, tour and travel agents, local tourists, landlords, researchers, and policy analysts. This was followed by snowballing where the initially identified respondent led to the identification of the other nine respondents in each category resulting in a sample of 72 respondents.

The Delphi technique was used to identify the drivers of change. The Delphi technique is a structured method used for forecasting or decision-making in situations where there is uncertainty and a need to gain consensus among a group of experts or stakeholders. The study employed a three-round Delphi process as shown in Figure 4.1. Open discussions in Delphi one and a literature review were used to identify twelve drivers of change that were classified using the PESTEL analysis. Delphi round two was used to identify six key drivers of change from twelve that highly influence the future of STRs. The Delphi round three was used to find out how the six key drivers interacted with each other to influence the future of STRs. Out of 72 respondents, 53 respondents responded to the Delphi round three questionnaire and the finding was used to determine driving forces using cross-impact analysis and Micmac tool.

**Figure 4.1: Methodology framework**

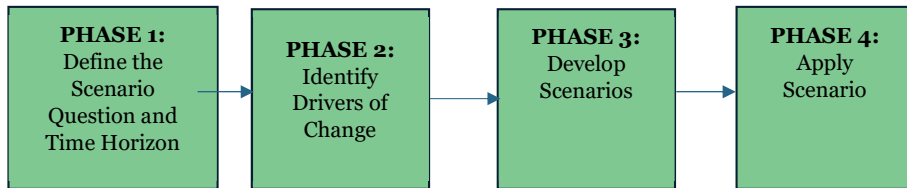


*Source: Ghasemian et al. (2020)*



The study employed a scenario planning approach to identify the plausible futures, opportunities, and challenges of STRs. According to Neil MacDonald (2017), scenarios are a valuable tool for navigating uncertainty by exploring “what if” cases rather than attempting to predict a single outcome. The following steps were taken in scenario development as shown in Figure 4.2.

**Figure 4.2: Scenario development process**



### **Phase 1: Define the scenario question and time horizon**

This included specifying the purpose of the analysis. In this case, what political, economic, social, technological, environmental, and legal changes will be confronting the accommodation industry in Kenya over the next five years, and how well-adapted the stakeholders respond to these changes? Scenarios are normally created to cover a period twice as long as the planning horizon, so for a five-year plan, scenarios would span ten years (MacDonald, 2017).

### **Phase 2: Identifying drivers of change**

Drivers of change are the primary forces that initiate and sustain a trend. They can be broad factors such as technological advancements, cultural shifts, or economic changes. Drivers can also be trends themselves, nested within larger driving forces, and they often underpin multiple trends simultaneously. A driver of change has four elements: evidence, relevance, consequence, and action. For example, in a situation where the driver is exceeding the speed limit, the evidence could be the actual speed, and then the relevance could be the magnitude of the speed, which is too much. Third, the consequences, which might be a fine charged for the offense, and fourth; the action, which could be slowing down.

The key drivers of change identified in the Delphi two process were subjected to cross-impact and Micmac analysis to examine the potential interactions and interdependencies between them. A matrix was constructed where the six key drivers of change were listed along the rows and columns. Stakeholders were used to assess the likelihood and impact of each driver influencing or being influenced by other drivers using a numerical scale of [1] weak influence, [2] Moderate influence, and [3] strong influence as shown in Table 5.2.



### **Phase 3: Development of scenarios**

Championed by Global Business Network, a two-by-two grid as shown in Figure 5.2 was used to construct a grid of four boxes using the driving forces, i.e. e-commerce technology and taxes. Using the two driving forces (drivers with the highest impact and least dependency), scenarios were then developed to show plausible trajectories in the future of STRs.

### **Phase 4: Applying the scenarios.**

Opportunities and challenges that are rampant with the development of STRs under plausible scenarios in Kenya were established. The identified opportunities and challenges helped in coming up with policy interventions for shaping the accommodation industry.

## 5. Drivers of Change, Plausible Scenario, Opportunities and Challenges

### 5.1 Drivers of Change

From the literature review and Delphi round one, 12 drivers of change were identified and classified into political, economic, sociological, technological, environmental, and legal as shown in Table 5.1.

**Table 5.1: Drivers of change using the PESTEL framework**

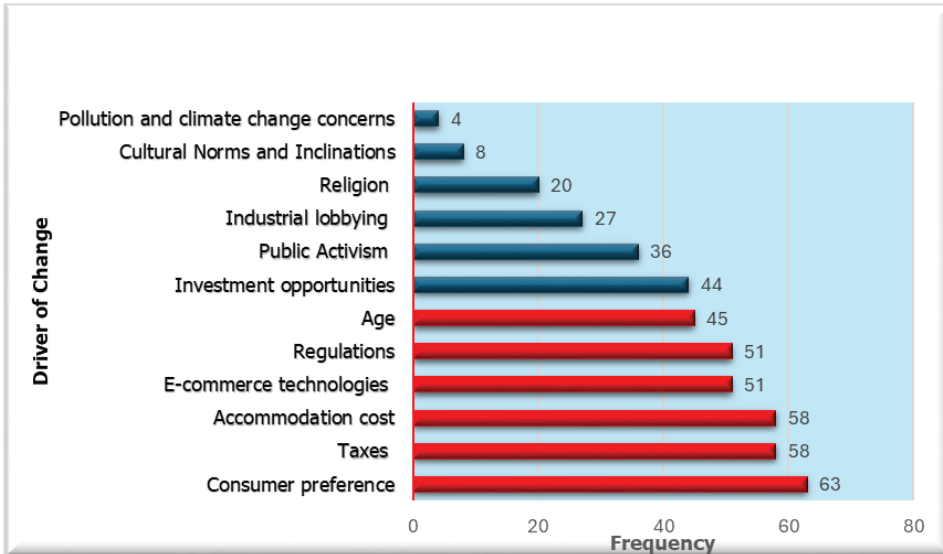
Pestel analysis	Main Drivers from Literature Review	Author
Political	Taxes, for example, accommodation tax	Mody and Gomez, 2018; Nieuwland and van Melik, 2020; Mody and Gomez, 2018; Mugabi, 2020; Codagnone and Martens, 2016; Zervas, Proserpio and Byers, 2017
	Industrial lobbying	Mody and Gomez, 2018; Nieuwland and van Melik, 2020; Anyango, 2024; Fu, Zhu and Pan, 2023
	Public Activism	Nieuwland and van Melik, 2020
Economic	The accommodation cost	Harrison Hu, Marilyn Zhu, Siddhartha Misra, 2023; Mody and Gomez, 2018; Toader, Negruşa, Bode and Rus, 2022; Guttentag, 2013; Hati and Balqiah, Hananto and Yuliati, 2021; Njore, 2024
	Investment opportunities where homeowners have free rooms for short-term rentals that can be used to earn extra income	Polisetty and Kurian, 2021; Herman et al., 1990
	Consumer preference, e.g. group bookings	Mody and Gomez, 2018; Mody, Suess and Lehto, 2017; Mohlmann, 2015; Tussyadiah 2015
Social	Cultural Norms and inclinations	Guttentag, 2013; Wong, Lin and Lin and Xiong, 2022; Lee, Hyun, Ryu, Lee, W, Rhee and Suh, 2015; Lee, Erdogan and Hong, 2021; Wallace, 2020

	Religion where individuals consider renting STRs like Airbnb because it allows them to honor their dietary restrictions.	Brand and Rocchi (2011)
	Age-Millennials and Generation Z Influence	Tussyadiah and Pesonen, 2016; Polisetty and Kurian, 2021; Lub et al., 2016; Gambini, 2023; Robinson and Schänzel, 2019; Polisetty and Kurian, 2021; Tyson, Kennedy and Funk, 2021
Technological	e-commerce technologies that allow online booking, and price comparison	Harrison Hu, Marilyn Zhu, Siddhartha Misra, 2023; Polisetty and Kurian, 2021; Mody and Gomez, 2018; Tussyadiah and Pesonen, 2016; Toader, Negrușă, Bode, and Rus, 2022; Rifkin, 2014); Lorde and Joseph, 2019b; Polisetty and Kurian, 2021; Mugabi, 2020
Environmental	Pollution and climate change concerns	Tyson, Kennedy and Funk, 2021); Merino-Saum, Ribera Jemio, Hansmann and Binder, 2023; Wallace, 2020; Midgett, Bendickson, Muldoon, Solomon, 2017
Legal	Policies and Regulations controlling the operation of STRs.	Mody and Gomez, 2018; Lub et al., 2016; Mugabi, 2020; Nieuwland and van Melik, 2020b; Polisetty and Kurian, 2021; Codagnone and Martens, (2016)

## 5.2 Key Drivers of Change

The twelve drivers of change identified from the literature review were subjected to Delphi round two questionnaires. Respondents were asked to identify six key drivers that have the highest impact. The results show that out of 54 respondents, the 6 key drivers identified were consumer preference, taxes, STRs accommodation cost, e-commerce, regulation, and age chosen by 63,58,58,51,51 and 45 respondents, respectively. According to the respondents, pollution and climate change concerns, cultural norms and inclinations, and religion had the least impact on the future of STRs chosen by 4, 8, and 20, respectively.

**Figure 5.1: Frequency distribution of key drivers of change**



The ranking enabled the study to identify the six key drivers depending on the order of priority according to the stakeholder analysis. The six drivers that were identified are consumer preferences, taxes, accommodation costs, e-commerce technologies, regulations, and age. Consumer preferences are critical in shaping STR's future as they dictate the demand for specific types of accommodations and services. As consumer tastes evolve towards more personalized and unique travel experiences, STRs must continuously innovate to meet these desires, offering diverse and localized listings that cater the consumer needs such as luxury stays, group sharing, self-catering, and affordable prices. By closely monitoring and adapting to these preferences, STR can enhance customer satisfaction, loyalty, and market relevance, thereby sustaining its competitive edge in the hospitality industry.

Taxes and accommodation costs significantly impact STR's operational efficiency and pricing strategies. Varying tax regulations can create complexities and financial burdens, influencing the STR's profitability and pricing structure. High accommodation costs can deter potential customers, pushing STR to find a balance between competitive pricing and maintaining quality. Moreover, e-commerce technologies play a crucial role by enabling efficient transactions, enhancing user experience, and providing valuable data insights that help optimize operations and tailor services to consumer preferences. In addition, regulations ensure fair competition and enhance security and safety standards.

Lastly, the age demographics of users affect STR's marketing strategies and service offerings, with younger generations preferring digital services, and affordable options, while older users might prioritize comfort and traditional hospitality. Understanding and navigating these drivers are essential for STR's sustained growth and adaptation in an ever-changing market landscape.

### 5.3 Interaction of the Key Drivers of Change

After the identification of six key drivers of change for STRs, a cross-impact analysis was done to evaluate how the drivers are interacting with each other to influence the future of STRs (Serdar Asan and Asan, 2007). The results are shown in Table 5.2

**Table 5.2: Driver of change cross impact analysis matrix**

Drivers of Change	D1	D2	D3	D4	D5	D6	Total [Influence]
D1- Accommodation cost		2	2	2	1	1	8
D2-Consumer preferences	2		2	2	3	2	11
D3-E-commerce technologies	2	2		1	3	1	9
D4-Taxes	2	2	2		2	1	9
D5- Government Regulations	1	2	1	2		2	8
D6-Age	1	1	1	1	1		5
Total							
[Dependency]	8	10	7	8	10	7	

KEY: [1] weak influence, [2] Moderate influence, [3] strong influence [D1-D6] Scores of direct Influence (SDI)

#### Total Influence Score

The cross-impact matrix analysis Table 5.2 shows the total influence and total dependency score of drivers of change.

The last column shows the total influence score, which is the extent to which a key driver influences all the other drivers. Consumer preference has the highest influence on all other drivers with 11 scores, followed by e-commerce technology and taxes with a score of nine. Accommodation cost and government regulation had a score influence of eight, and age had the least influence of five scores.

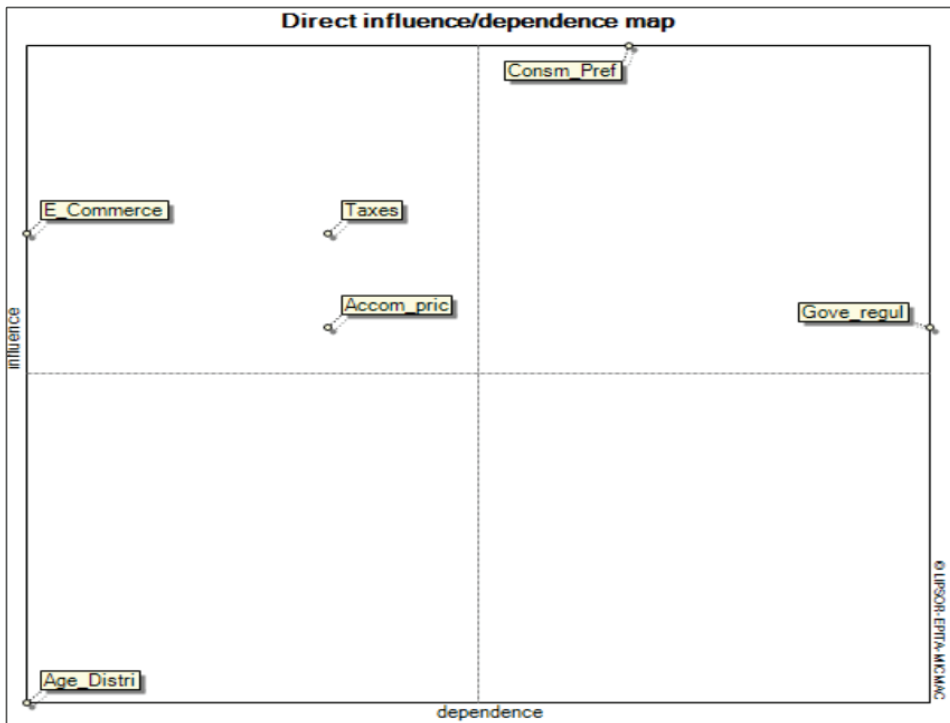
#### Total dependency score

The last row shows the total dependency score, which is the extent to which one key driver depended on all the other drivers. Government regulations and consumer preference had the highest dependency score of ten. Taxes and accommodation costs followed with a score dependency of eight. E-commerce technologies and age were last with a dependency score of seven.

## Driving Forces

The scores of direct influences were used to analyze the interaction and identify driving forces using the Micmac tool. The results are shown in Figures 5.2 and 5.3. The driving forces are the influential factors with strong impacts on others and they are weakly affected by other factors. Driving forces can influence the future of STRs individually or through interaction with other factors (Pillkahn, 2008).

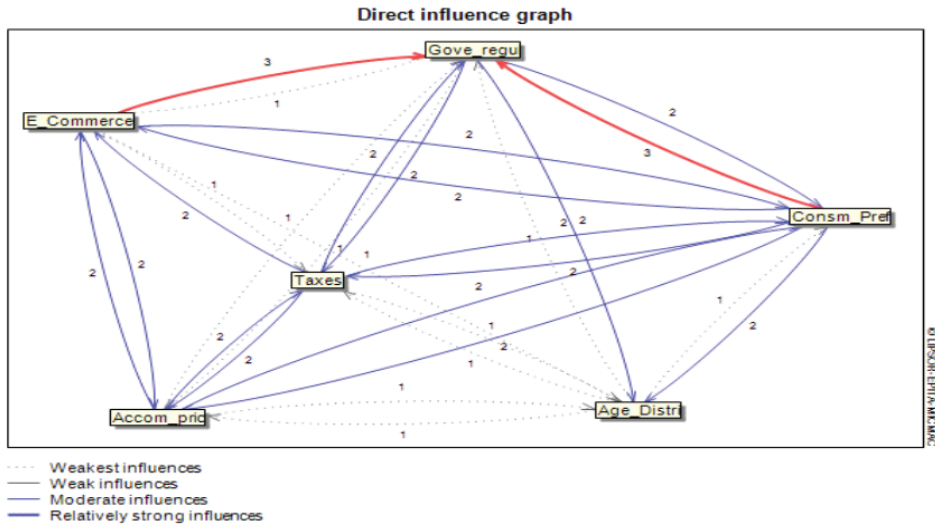
**Figure 5.2: Potential influence graph**



Source: Author (compilation, 2024)

Figure 5.3 shows how the drivers interact and influence each other from the weakest influence to the strongest influence. For example, e-commerce technologies and consumer preferences strongly influence government regulations. Taxes relatively strongly influence government regulations. Additionally, e-commerce technologies and accommodation costs relatively strongly influence consumer preferences.

**Figure 5.3: Potential influence/dependency map**



Source: Author compilation (2024)

The Micmac analysis generated four quadrants illustrated in Figure 5.3. The horizontal axis indicates the degree of dependency, and the vertical axis shows the extent of influence. The difference between these drivers lies in their influence and dependency, where the level of influence and dependency determine driver mapping (Alipour et al., 2017). The distribution of factors within one of the four quadrants of the influence map gives the driver impact, based on varying levels of factor influence and dependency.

Factors in Quadrant I: These are called relay factors, which are consumer preferences and government regulations. Relay factors are both highly influential and highly dependent on other factors, thus representing unstable and emergent outcomes in the future of STRs. These factors play an important role in the future of STRs if the driving forces they depend on have a significant change. For example, if accommodation taxes, which is a driving factor are introduced, regulation which is a relay factor would be implemented, thus highly influencing the future of STRs. Among the key factors of Quadrant I, consumer preference is the strongest relay factor due to the highest influence and low dependency.

The factors within Quadrant II: These are called driving forces or influent factors, i.e. e-commerce, tax, and accommodation cost. These driving factors strongly drive the system's behaviour but are not controlled by it. The most important driving force is the factor that has the highest influence and the least dependency, which is located in the upper left corner of the matrix, which is e-commerce technologies, followed by taxes and accommodation price. Among different driving factors, only e-technology technology is the strongest driving force because it has a high influence with no dependency. The key factors influencing the future of STRs based on the academic literature, cross-impact, and Micmac analysis present e-technologies, taxes, and accommodation cost as the driving forces of STRs according to the foresight analysis (Ghasemian et al., 2020).

Factors within Quadrant III: These are called autonomous factors represented by Age. Age is an autonomous driver since it has little influence or dependence on other factors and thus exerts negligible influence on the future of STRs.

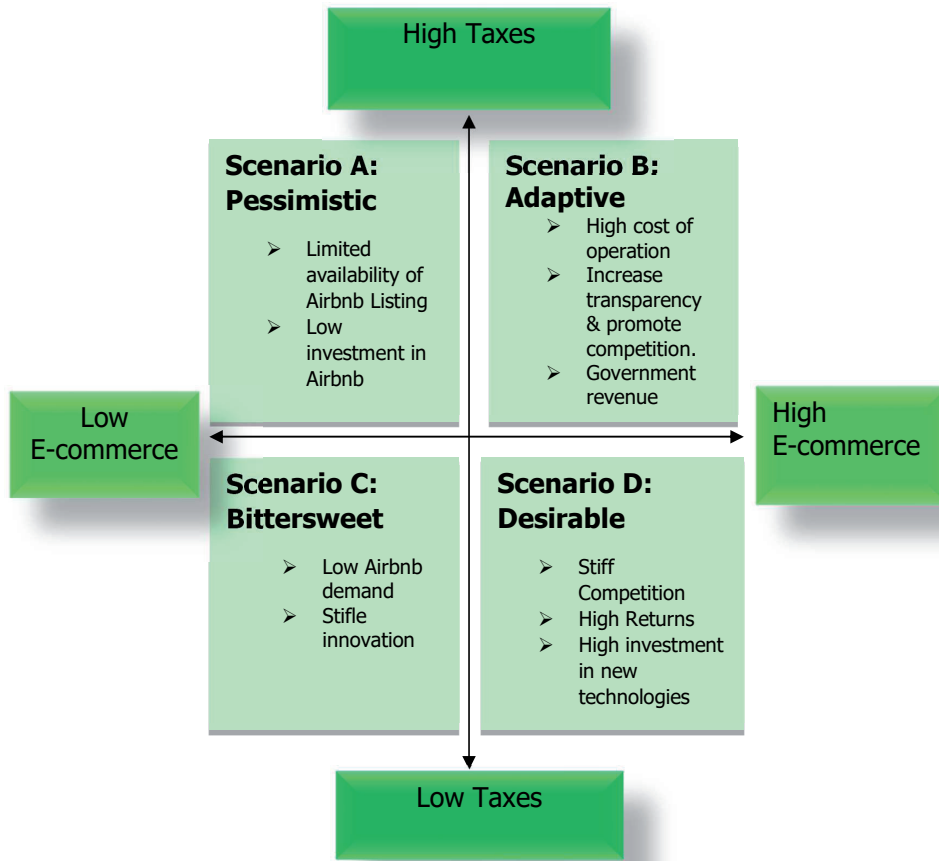
Factors in Quadrant IV are known as result factors. The result factors have low influence, and their dependence is highly sensitive to the evolution of influence and relay factors. According to the results, the study did not identify any result factor.

#### **5.4 Plausible Scenario**

The scenarios formed should meet scenario quality criteria; i.e. plausibility; the selected scenarios must be capable of happening. Internal Consistency: the elements of the scenario need to be combined to ensure that there are no internal contradictions. Differentiation: they should be structurally different and not simple variations on the same theme. Decision-making utility: each scenario should contribute specific insights into the future that help to address the question of interest. Finally, should be Challenging: the scenarios should challenge the key stakeholders' conventional wisdom about the future of STRs like Airbnb (Bradfield et al., 2005; Kosow Hannah and Gassner, 2007).



Figure 5.4: Scenarios matrix-based e-commerce and taxation



From cross-impact analysis, the two driving factors identified for further exploration were e-commerce and taxes. The combination of these two factors' projection creates the starting point for scenario building. The x-axis represents E-commerce; we ask ourselves how different changes in technology are likely to influence the future of STRs. Similarly, we ask ourselves, how changes in taxes represented in the y-axis are likely to influence the future of STRs. The scenario matrix represents four plausible scenarios that are pessimistic, adaptive, bittersweet, and desirable. All the four scenarios meet the scenario quality criteria.

### 5.5 Opportunities and Challenges

The future opportunities and challenges emanated from plausible scenarios that were developed from driving forces, which are e-commerce technologies and taxes.

Scenario A: Pessimistic: represents a world of low e-commerce and high taxation. Based on plausibility scenario criteria, this world is possible since the government can introduce taxes on STRs and there can be low e-commerce technologies. This scenario presents the following opportunities and challenges.

### **Opportunities in scenario A**

- (i) Short-term rentals may consider forming collaborations with local businesses, such as restaurants and tour operators. Additionally, they may invest in traditional marketing channels such as print advertising and radio to reach more customers.
- (ii) Hosts may improve guest experience through personalized services, tailored guest experiences, and unique in-room amenities to meet guests' needs. This can increase competitive advantage and encourage repeat business in a low-tech environment.
- (iii) Promoting local tourism by offering special deals for regional travellers. This can boost occupancy rates, drive domestic tourism, and reduce the impact of high taxes on pricing.
- (iv) Short-term rentals might consider implementing efficient cost management practices, including energy-saving initiatives and waste reduction programmes. This can help manage operating expenses and offset the financial burden of high taxation.
- (v) Short-term rentals can generate substantial revenue for the government through taxation due to the consistent demand and premium pricing associated with these accommodations.

### **Challenges in scenario A**

- (i) limited online visibility and reach due to underdeveloped digital platforms. This might hinder short-term rental's ability to attract a broad customer base.
- (ii) High taxation increases short-term accommodation costs. This is likely to reduce profit margins and potentially lead to higher consumer prices. This in turn can reduce competitiveness.
- (iii) The low e-commerce technology will result in limited information and inefficiencies in booking, thus poor guest experience.
- (iv) The need for more traditional marketing and sales approaches requires more time and resources, further straining businesses' capacity to innovate and grow amidst high taxes.
- (v) The financial constraints might result in the loss of jobs in the sector.

Scenario B: Adaptive: represents a future of high taxation and high e-commerce technology. The future is plausible if the government introduces taxes and there is adoption of high e-commerce technology in the Fourth Industrial Revolution. This scenario presents the following opportunities and challenges:

### **Opportunities in scenario B**

- (i) Short-term rentals can explore additional revenue streams beyond accommodation, such as offering curated experiences, and partnerships with local businesses. This will leverage the high e-commerce technology to market and sell and reduce the impact of high taxation.
- (ii) With advanced e-commerce technology, short-term rentals can implement dynamic pricing processes that consider demand fluctuations, market segmentation, price differentiation, competitor pricing, and taxation factors to optimize rates and maximize revenue despite high taxation.
- (iii) Short-term rentals can personalize services and guest experiences to specific demographics by using advanced data analytics and customer segmentation tools offered by high e-commerce technology. This may increase customer satisfaction and loyalty.
- (iv) Short-term rentals can target international travellers by leveraging on high e-commerce technology. This facilitates global market reach, tapping into a broader customer base thus easing the impact of high taxation.
- (v) The increased investment will result in high government revenue.

### **Challenges in scenario B**

- (i) High taxation imposes additional financial burdens on short-term rentals, leading to higher operational costs, which can minimize profit margins despite the efficiency of e-commerce technology.
- (ii) Despite leveraging on e-commerce technology for dynamic pricing, short-term rentals may face pressure to keep rates competitive, impacting revenue generation.
- (iii) While high e-commerce technology enables efficient customer acquisition, retaining customers in the face of high taxation requires ongoing investment in guest satisfaction and loyalty programmes. This is because guests may seek alternatives to save costs despite the convenience of online booking platforms.

Scenario C: Bittersweet: represents a world of low e-commerce technologies and low taxation. The scenario is plausible in a situation where despite the presence of technology, there is no infrastructure to support it, and the government might have maintained low taxation in the accommodation industry. This scenario presents the following opportunities and challenges:

### **Opportunities in scenario C**

- (i) With low taxation, short-term rentals can offer more competitive pricing attracting budget-conscious travelers and increasing demand.
- (ii) Short-term rentals can form partnerships with local businesses, such as restaurants and tour operators, to offer package deals, enhancing the overall guest experience and attracting more customers.
- (iii) In a low-tech environment, short-term rentals can excel by providing personalized services, tailored experiences, and unique amenities, creating a niche market and encouraging guest loyalty.

### **Challenges in scenario C**

- (i) Low e-commerce technology restricts the ability of short-term rentals to reach a broader audience, potentially limiting their customer base and revenue opportunities.
- (ii) Without robust e-commerce platforms, managing bookings and reservations becomes more challenging, leading to inefficiencies and potential blunders in guest management.
- (iii) In an era where online booking and instant confirmation are the norm, the absence of advanced e-commerce technology may lead to dissatisfaction among guests who expect seamless and convenient booking processes.

Scenario D: Desirable: represents a world of low taxation and high e-commerce. This future is plausible if there are low taxes and in the wave of the fourth industrial revolution accommodation sector adopts high e-commerce technology. This scenario presents the following opportunities and challenges.

### **Opportunities in scenario D**

- (i) With high e-commerce technology, short-term rentals can easily tap into global markets through online platforms, attracting guests from various parts of the world and diversifying their customer base.
- (ii) Advanced e-commerce technology enables efficient management of bookings, payments, and guest communications, allowing short-term rental hosts to streamline their operations and enhance overall efficiency.
- (iii) High-tech solutions provide access to vast amounts of data on guest preferences, booking patterns, and market trends. Short-term rentals can leverage on this data to make informed decisions and tailor their offerings to meet customer needs effectively.
- (iv) With access to high e-technology, short-term rentals can offer innovative guest experiences, such as smart home features, virtual tours, and

personalized recommendations. This may enhance guest satisfaction, setting themselves apart from competitors.

- (v) With high e-technologies and low taxes, short-term rentals will attract more investors in the sector creating more employment opportunities.
- (vi) Low taxes will lower operation costs, generating more revenue for the investors.

### **Challenges in scenario D**

- (i) In a scenario of high e-commerce technology and low taxation, short-term rentals may face intense competition from numerous listings on online platforms, making it challenging to stand out and attract bookings.
- (ii) With increased reliance on digital platforms for bookings and transactions, short-term rentals are exposed to cybersecurity risks such as data breaches and fraud. Strong security measures are required to safeguard guest information and financial transactions.
- (iii) Maintaining high-tech solutions comes with significant costs and the risk of technological undesirability. Short-term rentals may face challenges in keeping up with the latest advancements and managing the associated expenses.
- (iv) The widespread adoption of e-commerce technology and low taxation may lead to market saturation in certain areas, with an oversupply of short-term rental listings. This can result in downward pressure on prices and occupancy rates, posing challenges for hosts in maintaining profitability.

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## **6. Conclusion and Policy Recommendations**

### **6.1 Conclusion**

The study sought to explore the future of STRs using a scenario-planning approach. The literature review identified twelve drivers of change in the future of STRs which are taxes, e-commerce technologies, industrial lobbying, public activism, accommodation cost, investment opportunities, consumer preference, cultural norms and inclinations, pollution and climate change concerns, policies and regulations, religion, and age. The stakeholders and experts identified six Key drivers of change; that is, taxes, e-commerce technologies, accommodation cost, policies and regulations, consumer preference, and age.

The cross-impact and Micmac analysis identified two driving forces; that is e-commerce technologies and taxes. These drivers have the highest influence and least dependency, thus forming the critical drivers that will likely influence the future of STRs. E-commerce technologies and taxes are critical drivers in the future of STRs because they shape the STR's operational efficiency, regulatory compliance, and competitive edge. Advanced e-commerce technologies enhance user experience, streamline bookings, and provide data for better market insights and personalized services. On the other hand, tax regulations influence STRs', financial strategies and operational costs. This necessitates strong compliance mechanisms to avoid legal issues and optimize profitability. As global and local markets evolve, these factors will determine STR's ability to innovate, expand, and maintain its position in the rental industry today and in the future (Ghasemian et al., 2020)

The study employed the driving forces to create plausible future scenarios; i.e. pessimistic (a world of e-commerce and low taxation), adaptive (a world of high taxation and high e-commerce), bittersweet (a world of low e-commerce and low taxation), and desirable (a world of low taxation and high e-commerce) from which opportunities and challenges were identified. The main opportunities identified are investment opportunities, government revenue, tapping of the global market, and employment opportunities. The critical challenges in the plausible future identified are cyber security attacks, market saturation with an oversupply of STRs listings, competition from numerous listings on online platforms, and financial burdens to STRs investors due to high operation costs.

### **6.2 Policy Recommendations**

The study findings formed the basis for policy recommendations to the key stakeholders. Below are the recommendations based on each plausible future:

- (i) Governments to consider investing in digital infrastructure that integrates with STR's e-commerce technology systems to streamline tax reporting and collection, ensuring compliance and minimizing administrative burdens for hosts and the platform. This practical, joint approach will help ease tax uncertainties and advance a stable, predictable business environment.

- (ii) The government to consider developing an STRS tax regulation framework for tax collection, administration, and compliance since there is no specific tax regulation for STRs, especially the one leveraging on online listings like Airbnb platform, Facebook, Instagram and TikTok for marketing. This is possible through digital service tax.
- (iii) To capitalize on the identified future opportunities, the government to focus on creating an enabling environment that encourages investment in the STR market, facilitates global market access, and promotes job creation. This is possible through establishing a clear and consistent regulatory framework and providing tax incentives for both local and foreign investors.
- (iv) To mitigate against the cyber security challenge, the government to work with STR's booking platforms to establish stringent cybersecurity regulations and offer incentives for cyber security measures, ensuring the protection of user data and platform integrity.
- (v) To address unfair competition, governments through the Competition Authority to promote and safeguard competition and protect producers in the accommodation industry. Additionally, consumers can be protected from unfair and misleading market advertisements on STRs listings across all platforms by enforcing compliance with the Competition Authority Act of 2016 initiating investigations into consumer violations and imposing administrative remedies.
- (vi) To manage financial burdens from high operational costs due to taxes, the government may explore tax relief or incentive programmes that encourage innovation and growth within the short-term rental market.

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## Appendix

### Appendix 1: Questionnaire (001)

Dear Respondent,

We are conducting a study to Explore the Future of Short-Term Rentals (Airbnb) in Kenya. The emergence of short-term rentals like Airbnb presents opportunities and challenges today and in the future. The research study focuses on determining Key drivers that have the greatest impact on the future of STRs.

Kindly spare a few minutes to fill out the questionnaire. Your responses will be kept confidential. Thank you for your participation.

Best regards,

Kirimi Elijah and Naomi Mukami

1. (a) Stakeholder category?

- i. STRs Owner
- ii. STRs user
- iii. Tenant/Neighbour near STRs
- iv. 2-Star and 3-Star Hotel Owner/Manager
- v. Tour and Travel Agent
- vi. Local Tourist
- vii. Landlords
- viii. State Department for Tourism
- ix. Researchers and Policy Makers/Analyst

(b) Identify () SIX drivers that are MOST likely to have the GREATEST impact on the future of Airbnb among the twelve listed:

- | Drivers of change   | YES | NO |
|---|-----|----|
| 1. Taxes e.g. (accommodation tax)                                       |     |    |
| 2. Industrial lobbying from hotels demanding equal treatment with STRs. |     |    |
| 3. Public Activism complaining about the existence of STRs              |     |    |
| 4. The accommodation cost   |     |    |
| 5. Investment opportunities   |     |    |
| 6. Consumer preferences e.g. group booking                              |     |    |
| 7. Cultural Norms and inclinations                                      |     |    |
| 8. Religion, e.g. dietary restrictions or prayer needs.                 |     |    |

9. Age
10. E-commerce technologies that allow online booking, and price comparison.
11. Pollution where contamination of air, water, and soil by pollutants from STRs can harm human health.
12. Regulations controlling the operation of STRs.

### **Appendix 1: Questionnaire (002)**

Dear Respondent,

We came to you in the first round with twelve drivers of change likely to impact the future of Short-term Rentals Like Airbnb. Most experts and stakeholders settled on six (6) drivers of change. We are conducting the final analysis to see how the six drivers interact with each other to influence the future of short-term rentals.

Kindly spare a few minutes to fill out the questionnaire. Your responses will be kept confidential. Thank you for your participation.

Best regards,

Kirimi Elijah and Naomi Mukami

Q1: How does the cost of accommodation influence the following drivers of change:

No effect=0, Low=1, Moderate=2, and High=3

	Drivers of change	No effect	Low	Moderate	High
1.	Consumer preferences e.g. group booking				
2.	E-commerce technologies that allow online booking, and price comparison.				
3.	Taxes subject to STRs like Airbnb e.g. (accommodation tax)				
4.	Regulations controlling the operation of STRs.				
5.	Age				

Q2: How do Consumer preferences e.g. group booking, affect the future of STRs through the following drivers of change:

No effect=0, Low=1, Moderate=2, and High=3

	Drivers of change	No effect	Low	Moderate	High
1.	The cost of accommodation offers an economical alternative compared to traditional hotels				
2.	E-commerce technologies that allow online booking, and price comparison.				
3.	Taxes subject to STRs e.g. (accommodation tax)				

4. Regulations controlling the operation of STRs.

5. Age

Q.3: How do e-commerce technologies that allow online booking, and price comparison affect the future of STRs through the following drivers of change:

No effect=0, Low=1, Moderate=2, and High=3

	Drivers of change	No effect	Low	Moderate	High
1.	The cost of accommodation				
2.	Consumer preferences e.g. group booking				
3.	Taxes subject to STRs e.g. (accommodation tax)				
4.	Regulations controlling the operation of STRs.				
5.	Age				

Q4: How do Taxes e.g. (accommodation tax) affect the future of STRs through the following drivers of change the following.

No effect=0, Low=1, Moderate=2, and High=3

	Drivers of change	No effect	Low	Moderate	High
1.	The cost of accommodation				
2.	Consumer preferences egg Group booking				
3.	E-commerce technologies that allow online booking, and price comparison.				
4.	Regulations controlling the operation of STRs.				
5.	Age				

Q5: How do regulations controlling the operation of STRs affect the future of STRs like Airbnb through the following drivers of change:

No effect=0, Low=1, Moderate=2, and High=3

	Drivers of change	No effect	Low	Moderate	High
1.	The cost of accommodation				
2.	Consumer preferences where for some reasons like group booking, consumers prefer.				
3.	E-commerce technologies that allow online booking, and price comparison.				
4.	Taxes e.g. (accommodation tax)				
5.	Age				

Q6: How does age affect the future of Short-term Rental through the following drivers of change:



No effect=0, Low=1, Moderate=2, and High=3

	Drivers of change	No effect	Low	Moderate	High
1.	The cost of STRs accommodation				
2.	Consumer preferences e.g. group booking				
3.	E-commerce technologies that allow online booking, and price comparison.				
4.	Taxes e.g. (accommodation tax)				
5.	Regulations controlling the operation of short-term Rentals.				

**ISBN 978 9914 738 62 9**

**Kenya Institute for Public Policy Research and Analysis  
Bishops Garden Towers, Bishops Road  
PO Box 56445, Nairobi, Kenya  
tel: +254 20 2719933/4, 2714714/5, 2721654, 2721110  
fax: +254 20 2719951  
email: [admin@kippra.or.ke](mailto:admin@kippra.or.ke)  
website: <http://www.kippra.org>**