Voice Search – A New Customer Experience for Swiss Tourism

For tourism, voice search is a promising tool, which has a considerable impact on tourist experience. Voice search might, for example, simplify the booking process of flights and hotels, but also change the local search for tourist information. Against this backdrop, our study analyses the current state of voice search in Swiss Tourism so that providers can benefit from those new opportunities. We conducted interviews with seven experts in Swiss Tourism Marketing. They agree that voice search offers a significant opportunity as a new and diverse channel in tourism. Moreover, this technology provides new marketing measures and a more efficient use of resources. However, possible threats to this innovation are data protection regulation and providers' lack of skills and financial resources. Furthermore, the diversity of Swiss dialects pushes voice search to its limits. Finally, our study confirms that tourism destinations should cooperate to implement voice search within their touristic region. Therefore, we provide recommendations for measures in tourism marketing. In conclusion, voice search is still of minor importance for tourist marketing in Switzerland as is evident in the given low use of resources. Following this initial investigation of voice search in Swiss Tourism, we recommended conducting further qualitative interviews on tourist experience of voice search in different tourist destinations.

Keywords: *Tourist experience, tourism marketing, voice search, Swiss destination marketing, destination management*

Introduction

Since innovations like Big Data and Machine Learning have already caused lasting changes in the interaction between companies and consumers (Shankar et al., 2010), interconnection and automation enable autonomous decision-making of technical systems under the term "Internet of Things". This "fourth industrial revolution" (Tussyadiah, 2020) has new, in part hardly foreseeable consequences for marketing and especially for customer experience management. In order to contribute to the understanding of this profound disruption, this study deals with voice assistants as part of the Internet of Things and their influence on marketing (Pagani et al., 2019). These systems enable new services, such as voice search, which allow new customer experiences. "Voice search is the technology that enables users to access information using spoken queries" (Li et al., 2009, p. 769). Using the example of the innovation diffusion of these services in Swiss tourism, this study shows how companies react to this contemporary disruption.

Natural language processing and voice recognition processes are increasingly sophisticated, as they can rely on more advanced computing power and algorithms (Hirschberg & Manning, 2015; Hoy, 2018). For example, voice assistants can now not only play music, order products from an online shop, or make phone calls (Saad et al., 2017), but also independently perform complex tasks such as making appointments with a hairdresser without being recognized as a computer system

by their human counterpart (Kreutzer & Sirrenberg, 2020). This increasingly better quality of processes makes these services valuable to consumers and accessible through products such as Apple's Siri, Google Home, or Amazon's Alexa (Kumar et al., 2020). A voice assistant is not bound to a hardware like the Echo Dot made by Amazon. An app on a smartphone or even on a notebook with low computing power is sufficient, as they only establish a connection to a powerful server via the internet on which the actual service is running.

As voice assistants support consumers in many daily tasks (Kreutzer & Sirrenberg, 2020; Lee & Choi, 2017), they are increasingly replacing smartphones with which these tasks have previously been performed using text input (Schalkwyk et al., 2010). About 70% of users in the US are more and more using voice assistants to search for something (McCaffrey et al., 2018). Therefore, the total number of users is growing steadily. Moreover, new consumer groups such as blind people (Barata et al., 2018) and children (Lovato & Piper, 2019) are using these services with rising demand, whereby children are socialized at an early age to use them. A Swiss study showed that one-third of the Swiss population is already using voice functions mainly via smartphone (Kunath et al., 2019). People use voice search mainly to retrieve information (e.g. weather data) followed by navigating and localizing (Kunath et al., 2019). As a result, revenues of USD 27.8 billion are expected from the sale of such devices (IDC, 2018). Moreover, revenues of more than USD 40 billion are expected from voice shopping using voice assistants in the US and UK by 2022 (Perez, 2018).

However, despite these impressive figures of consumption, voice marketing is relatively underdeveloped; for instance, concerning the use of certain search terms (Kreutzer & Seyed Vousoghi, 2020). Moreover, consumer and marketing research on voice assistants and their usage is still at an early stage. For example, a common theoretical framework is missing (Cecchinato & Harrison, 2017; Purington et al., 2017). This is surprising, as voice assistants provide new customer touchpoints that enable new customer experiences (Kreutzer & Seyed Vousoghi, 2020). Therefore, this study’s general purpose is to contribute to the understanding of the customer experience using voice assistants.

Studies on consumer interaction with voice assistants are still rare (Rhee & Choi, 2020; Rzepka, 2019), although there are studies on text-based chatbots (e.g. Hill et al., 2015; von der Pütten et al., 2010). Moreover, as far as customer experience is concerned, previous studies assume that all senses of the consumer are stimulated (Pagani et al., 2019). However, this must be questioned in the case of voice assistants due to restrictions such as the lack of image representation (Carmel, 2019; Mari, 2019). Thus, the individual interaction of a consumer with a voice assistant still requires considerable research (Liu et al., 2017).

In order to close these research gaps in marketing and consumer research, the investigation of voice assistants in tourism, especially in hotels, is a suitable use case (Kattara & El-Said, 2014). For example, there are first applications in hotels (Amazon, 2020; Lodging Magazine, 2016), and consumers could be observed along the entire touristic customer journeys (Esser, 2019). The potential and effects of automation of the customer interaction by voice assistants could be investigated (Ivanov & Webster, 2019a, 2019b). The creation of new customer

journeys, which leads to new customer experience, is a central object of such research (Tussyadiah, 2020). These new customer experiences are new social phenomena, which is why such studies should focus not only on technical but also on socio-cultural aspects (Russell et al., 2015) which gain relevance with the emergence of those innovations.

To begin this research program, the general investigation of hotels is a good way to start. They provide the context in which consumers interact with voice assistants during vacation. For example, by providing devices such as Amazon's Echo Dot in hotel rooms, hotels offer their guests the opportunity to continue the consumption of these services that they are accustomed to at home. By providing content such as information about the hotel or the destination (Bowen & Morosan, 2018; Hörner, 2019), hotels can also investigate how their guests respond to these offers and how they use the voice assistants. Thereby the influence of voice assistants on branding (Ho & Bodoff, 2014; Kang et al., 2016; Tam & Ho, 2005) could be studied.

Surprisingly, however, it became apparent at the beginning of this study that the provision of this innovative service by hotels is still rare, despite initial practical exceptions. Consumer acceptance of this new technology and, accordingly, innovation diffusion are intensive, as they recognize the usefulness and ease of use (Klaus & Zaichkowsky, 2020; Wirtz et al., 2016). In contrast, the resistance to innovation otherwise normally observable among consumers (Bagozzi & Lee, 1999) and especially the barriers to the adoption of smart services (Hong et al., 2020) are, in this case, present among hotel managers (Kattara & El-Said, 2014). This surprises, as the introduction of innovative products and services is particularly essential for the success of companies (Prins & Verhoef, 2007).

Therefore, as a first step of the research project, this study will examine the interplay of these very different innovation diffusions on the part of consumers and hotels. For this purpose, the responsible managers of a vacation destination and experts in tourism and marketing were interviewed, who all deal with the diffusion of innovations in hospitality. Hence, the specific purpose of this study is to investigate how touristic destinations use voice assistants as an innovation and thereby provide a customer voice experience for their member hotels' guests. This knowledge helps to understand how value is created in the tourist customer journey through consumer interaction with voice assistants and how the customer experience is hereby defined.

The remainder of this article presents the innovation diffusion theory and value co-creation. Here, value co-creation does not refer to the direct interaction between consumer and voice assistant, but to the interaction between a hotel as a provider of a voice assistant and its guests. The theory of business model innovation (BMI) serves as a theoretical lens to examine the reactions of hotels to innovation in the consumption of their guests in order to identify the foundation for voice marketing. The following sections present methods of data collection and analysis, results and implications for research on voice marketing and consumer voice experience.

Literature Review

This section discusses the innovation diffusion theory. This theory deals with processes of diffusion and adoption of ideas, process flows, and other objects and contents that are new to involved individuals and groups. Innovations have an impact on the creation of value, and as new ideas and processes, they offer new resources and approaches to the co-creation of value. For companies, these innovations accordingly imply that they must adapt to the changes in their environment by adopting their business model. By doing so they can continue to co-create value with customers and thus continue to exist (Keiningham et al., 2019). This section, therefore, discusses innovation diffusion theory in conjunction with the theory of value co-creation and the theory of business model innovation (BMI). The theoretical focus is put on the critical incident when a company rejects an innovation on the side of consumers. This new theoretical perspective provides a theoretical lens for investigating coping strategies of companies that reject innovations or at least do not want to contribute directly to those innovations' diffusion.

Multiple disciplines deal with innovation diffusion theory. For example, anthropologists and ethnologists study the cultural development of social groups (Boas, 1942) and sociologists study the spread of new technologies - like in the form of new crops in agriculture (Ryan & Gross, 1943). Moreover, marketing and consumption research deal with the adoption of new products (Arndt, 1967). The Bass Diffusion Model presented by Frank Bass (1969) describes this process using four elements: innovation, time, communication channels, and a social system (Rogers, 1983). Something is an innovation as long as it is new to an individual (ibid. 1983). Over time, this innovation is diffused into the individual's social system using communication channels, so that over time the innovation is no longer new for the members of the social system and thus loses its innovative character.

In addition to this process and its development over time, innovation diffusion theory also distinguishes the actors involved in the diffusion of innovations into innovators and imitators (Omerzel, 2016; Van den Bulte & Joshi, 2007). A popular assumption of this model and of innovation diffusion research in general is that innovators successfully select innovations (Rogers, 1983). However, this assumption ignores the fact that companies also choose unsuccessful innovations that do not help them to create value or even destroy value or that companies reject potentially successful innovations (Abrahamson, 1991). However, these reactions are the focus of this study.

The adoption and implementation of innovations are of existential importance for companies; otherwise, they will be forced out of the market by their competitors (Drucker, 2001). Companies such as Apple or Xerox, which have shifted their central value creation from the manufacture of computers and photocopiers to the provision of media and services (Ivan, 2008), have been able to respond to innovations in their markets through a business model innovation. However, this adjustment only occurred after conflicts arose in the application of their former business models and after the process of co-creation of value with

consumers deteriorated or even failed (Amit & Zott, 2001). These conflicts result from different barriers that companies have to overcome in their business model innovation (Chesbrough, 2010). Studies on these barriers show different reasons such as an unfavorable allocation of resources that do not allow for innovations (Christensen, 1997), a lack of innovation-oriented leadership (Chesbrough, 2010), a lack of understanding change in terms of sense-making (McDermott & O'Connor, 2002), or a generally strong attachment to logics of their current market, so that companies cannot question these given market logics without questioning themselves (Chesbrough & Rosenbloom, 2002; Prahalad & Bettis, 1986).

With the emergence of Service Dominant Logic in marketing (Vargo & Lusch, 2004), consumer engagement is gaining attention as part of the value creation process (Payne et al., 2008). Products and services, such as IKEA furniture or vacations, only gain value for consumers through the experience they create together with the company that is offering those products and services. In this value creation process oriented towards experiences (Holbrook & Hirschman, 1982), value is an "interactive relativistic preference experience" (Holbrook Moris, 1996), in which the experience of emotions, contexts, and symbols is emphasized (Arnould & Thompson, 2005). The process of the consumer experience is divided into different encounters, also called touchpoints between companies and consumers, at which the process of co-creation of value between companies and consumers happens (Payne et al., 2008).

On the side of consumers, this process of co-creation of value can change if they, but not the companies, adopt innovations. This changes the environment for companies, i.e. the context of co-creation of value (Brozovic, 2018). Due to cultural and technical changes, however, innovations are constantly taking place on the consumer side, which is why companies would have to react flexibly to these innovations (Hughes & Morgan, 2007). Only in this way will they be able to keep their business models aligned with customer experiences and, thus, not lose touch with their customers and their needs (Keiningham et al., 2019).

However, there are situations mentioned above in which companies reject innovations (Abrahamson, 1991). The implications of such rejections for the business model and especially for the co-creation of value and consumer experience are still theoretically and empirically under-researched. Recent contributions (Keiningham et al., 2019; Libai et al., 2009) explain the interaction between customer experience, innovation diffusion, and business model innovation. Nevertheless, the critical incident of the rejection of an innovation by the company remains unexplored. Therefore, the purpose of this study is to close this research gap. Moreover, the empirical focus on tourism consumption allows this study to contribute to the stream of research on innovation in tourism (Maggioni et al., 2014; Pikkemaat et al., 2019), which also ignored this critical incident so far.

Methodology

To understand how value is created in the touristic customer journey, we conducted qualitative interviews. The study aims to analyze the current and planned interactions with voice assistants in the tourism industry.

Research Design

If relevant information is lacking, exploratory qualitative research is particularly appropriate to fill this gap (Belk et al., 2013). Especially when research is on product innovations or marketing decisions, meaningful insights are gained through qualitative research (Belk et al., 2013; Weis & Steinmetz, 2012). Moreover, qualitative research is used to deepen the understanding of each concept being analyzed within the study (Spiggle, 1994).

The following table gives an overview of the study's research design.

Table 1. *Overview of the Research Design*

Research focus	The use and application of voice search in a Swiss tourism destination organization
Sample	Seven tourism and marketing experts from a Swiss tourism destination organization
Data collection method	Semi-structured guided interviews with experts
Data analysis method	Qualitative content analysis based on Mayring (2000; Schreier, 2014)

Expert interviews are defined by the experts themselves and not by a specific approach (e.g. narrative interview) (Arksey & Knight, 1999; Flick, 2010; Trinczek, 2009). The objective of the interviews is the systematic gathering of information, whereby the experts share their profound knowledge on the research topic (Trinczek, 2009).

Sample

In this study, we have purposely focused on one vacation destination in Switzerland. The experts in the field of digitization and marketing in tourism are composed as follows:

Table 2. *Overview Sample*

Tourism destination organizations	- 1 Destination Manager - 1 Marketing and Communication Manager
Tourism digitization agency	- 2 Founders of tourism digitization agencies
Touristic leisure provider	- 1 Online Marketing Manager - 1 Marketing and Sales Manager
Hotel industry	- 1 Hotel Director

Since the implementation of innovations are ultimately decided by top-level executives (Szelągowski, 2019), we interviewed experts in leading positions.

Moreover, we talked to two tourism digitization agencies which promote innovations and digitization in tourism destinations. The interviews were conducted in October 2019.

Data Collection Method

Expert interviews are semi-structured interviews which serve to structure the subject of the research as well as to guide the interviews (Trinczek, 2009). The following list shows a selection of topics/questions used in the guide for the expert interviews:

- Definition of the term voice search.
- Experience within the company using voice search.
- Experience involving voice search (customer experience).
- Assessment of expertise concerning voice search.
- Current activities to benefit from voice search.
- Importance of voice search in tourism/ touristic customer experience.
- Opportunities and threats of voice search for destination management/ tourism.

The interview guide provides a framework for data collection and data analysis that allows the findings and results of the different subjects to be compared (Schreier, 2012).

Data Analysis Method

Since this study is concerned with the acquisition of information, the qualitative content analysis is one of the most suitable approach for data analysis (Trinczek, 2009). The content analysis according to Mayring (2000; Schreier, 2014) allows the systematic analysis and evaluation of qualitative results. Therefore, decisive text components of the responses are selected and counted according to their frequency (Mayring, 2000; Schreier, 2014).

The interviews were transcribed and anonymized and we defined categories, coding rules and anchoring examples for the analysis of the data. The process of coding defines that the material is segmented into small units of analysis and the individual passages of text are then assigned codes or categories that assign meanings to the particular passage (Schreier, 2012). These codes or categories can often be assigned to the questions asked during the interview, respectively defined in the guide (Trinczek, 2009). In the context of this research, the deductive method was applied since the categorization can be set in advance. The data per category included the core statements.

Findings/Results

Definition of Voice Search

The experts were asked how they define and explain the term "voice search". All seven probands interviewed define voice search as a voice-based search query, whereby voice search assistants such as Siri or Cortana are used beside the voice search by Google. In other words, one expert explains that "voice search is the conversion of an analogue command into a digital one". Voice search does also simplify and accelerate the online searching process for any information needed as the typing and haptic effort is minimized.

Experiences with Voice Search

Most of the experts report that they already have made experiences with voice search in their business life. However, a big gap in the level of experience has emerged. The answers range from no experience to already tested at their touristic region. One expert says that they have no experiences with voice search, nor have they examined the premises. Another expert states that they are aware of being behind with this promising technology; however, adaptions required for the voice search technology are on top of the digitalization process. Two experts own an Echo Dot using Alexa, and they try to integrate the voice assistant into their daily life. One expert mentions that they observe use cases and studies; thus, the theoretical knowledge and understanding is present. However, they have not yet used the technology in their touristic region. Only one expert states that they have started collecting data in a structured manner with the aim of implementing a chatbot or voice search technology later on.

Expertise in the Tourism Destination

Probands, who already had experience with voice search in their work were asked about the perceived expertise and skills concerning voice search within their company. All five interviewees share the statement that their companies are in the process of developing their expertise in the field of voice search, as this knowledge has not yet been fully exploited. However, again, the level of expertise varies vastly. The answers range from no experience to again only one respondent who replies that they possess the necessary knowledge. Another expert says that they are at the very beginning and that they try to encourage the mindset for new technologies within the company. Again, another expert mentions that they try to compensate the backlog by hiring a new person with relevant skills and know-how. Yet another expert mentions the difficulty of being a small company with limited resources to compete with the big player.

Status Quo Voice Search in Tourism

In a supplementary question, we asked the experts how they assess the status of their own company in comparison to the competition. The experts agree and estimate that knowledge on voice search in the Swiss tourism industry is rather

limited. Only one expert mentions that the company has an advantage over the competition in the expertise with voice search. Two experts say that they are interested in the technology and they are looking for partners or cooperation as the resources are limited.

Efforts Made within the Organization

Most of the experts claim that currently no efforts are made concerning voice search implementation in their organization. Others try to introduce the subject and its relevance to service providers in workshops. One expert mentions that they manage data on Google My Business (e.g., reviews and opening hours) as this information are also used in voice searches. Two experts indicate that they have introduced a chat to their customers. However, only one destination offers a chat that is managed by the employees during the working hours, and only one expert implemented a voice bot in another touristic region.

Importance of Voice Search for the Tourism Industry

Most experts agree that voice search will become increasingly important in the future, especially, when it comes to queries such as "where is what". Local information is essential for tourism destinations and should, therefore, also be accessible via voice search.

Opportunities for a Tourism Destination

Two directions emerged when we asked about the opportunities in terms of voice search and destination management. On the one hand, the experts mention a change or effort in resources (employees). On the other hand, voice search is seen as another channel to get in touch with customers. The experts indicate that voice search could lead to an optimization or even a change of current job profiles. One expert also mentions that the benefits of voice search are strongly dependent on the business model, which decides whether the technology is an opportunity or a risk.

Another expert says: "I think people are even more honest when they use voice search. I have the feeling that it is easier to speak and to formulate something, and I believe that we can analyze the search behavior even better in the background with the necessary systems than we can do now." From a marketing perspective, voice search is another channel where information can be passed on to customers. Thus, it creates a new form of communication with customers. One expert further mentions that voice search is a simple and convenient way to access information, especially for older target groups. Voice search is, therefore, also an opportunity for older people. One interviewee also mentions that the recommendation for rather new technology should come from a higher-level organization. However, when the time comes, the destination should definitely be prepared to seize the opportunity.

Threats for a Tourism Destination

The analysis of the stated risks concerning voice search and tourism destinations management reveals three directions. The first one is the issue of language, followed by questions on budget, skills, and data protection. In Switzerland, there are four national languages, and in each area, people speak a different dialect. The experts consider this problem with the integration of voice search. The question arises as for which languages the content should be prepared, and whether users will get used to asking questions in standard German instead of their spoken dialect. Moreover, the experts believe that in the near future technology providers will address these language issues raised with voice search.

Furthermore, the experts mention that the budget as well as the capacity to prepare for the technology so that it is available to users in a useful way, is another threat. Thus, much time will be needed to acquire skills and to manage data. The question of data protection or privacy also poses a risk for the experts when using voice search in a destination.

One expert further states that it is difficult to decide which trend or theory to follow. Also, the dominance of Google has been mentioned, as well as the impact on search results. One expert says: "I could imagine that this could simply influence opinion formation. Two experts mention that laziness or simplicity is encouraged for the user.

Further Remarks from the Experts

At the end of the interview, many of the experts quote that a superordinate organization would have to take care of the introduction of voice assistants, and the destinations would then be data provider. "[A destination] then takes on the role of data providers and not the role of the technology manufacturers." Besides, the lack of understanding and resources to implement the digitalization of destinations have been stated predominantly. Therefore, voice search is not yet an important issue in many vacation destinations in Switzerland and it must first become more suitable for the masses and everyday use. One expert mentions: "I am firmly convinced that in the near future, i.e. in about 3-5 years, the use of voice search will always more suitable for everyday use, and as soon as it reaches the masses, new business models will be created".

Discussion and Conclusion

The study showed that voice search has arrived in customers' everyday life, and all experts could explain the term voice search. The use of voice search in the professional environment is rather low for all interviewed touristic destination experts. Especially for Swiss tourism destinations, the experts see challenges in the implementation of voice assistants. The challenges by different dialects and different languages are obstacles for the use of voice search for both users as well as providers from Switzerland. These challenges involving different dialects and languages in Switzerland could also affect the customer voice experience.

Besides, destinations often lack the resources and the necessary skills to implement and maintain such technology themselves. Therefore, the experts revealed that partners or cooperation with other tourism destinations or with the umbrella organization is necessary and the players in the touristic region should maintain the needed data for voice searches. It was also shown that certain tourism destinations are still at the very beginning of digitalization, often there might be a lack of understanding and know-how. Some organizations, therefore, hire specialists to fill this gap.

The experts recognize the increasing importance of voice search and its application areas. However, they think that it will be several years before the technology is suitable for the masses. In addition, the business models of the destinations need to be adapted. New business model innovations (BMI) are expected to appear, but no concrete adoptions have been made in the examined Swiss vacation destination. Also Keiningham (2019) states that external changes in the environment are often the driver of business model innovation (BMI), which requires also modifications in the value proposition to improve also the delivery of the offers to customers (Keiningham et al., 2019; Osterwalder & Pigneur, 2019). Thus, the value creation for customer requires more customer experience-driven thinking (Keiningham et al., 2019).

The experts also face uncertainty concerning data security and personal privacy. With the increasing use of voice bots, clear regulations are needed as there are currently no clear regulations about the data collection by Apple, Google, or Facebook (Moore & Tambini, 2018; Rühle et al., 2019). People are concerned that personal information is not secure or that personal data is being used without their knowledge when using digital assistants and voice-enabled technology (Olson & Kemery, 2019). According to Kunath et al. (2019), the user's main concern when using voice assistants is the fear of eavesdropping.

For Swiss tourism, voice search represents an interesting opportunity to market a travel destination. Also, the technology provides another channel for contacting potential guests and informing travelers about destinations. Especially questions like "how do I get there" or "where is it located" are typical questions that a tourism organization has to answer. Therefore, voice search implementation would be very well suited to improve the experience of the guests.

To conclude, the qualitative study has revealed two gaps; on the one hand, the experts are monitoring and analyzing the increase in voice search usage and the resulting rise in guest expectations, but hardly any interviewed player in the destination has yet embarked on the innovation.

On the other hand, another gap was found in the expectations and acceptance of the individual players in the tourism destination. The technical implementation, as well as the acceptance of the technology, are seen as great challenges and should, therefore, be delegated or initiated from higher up. In this case, this could be the umbrella organization.

Some limitations could be addressed in future studies. Firstly, we interviewed a small number of seven experts from a specific vacation destination in Switzerland. Future studies could extend the scope of the interviews of experts at management level. Moreover, the focus could be shifted to hoteliers, as voice

assistants are particularly suitable for use in hotels (Kattara & El-Said, 2014). Additionally, the quest's perspective should be examined. Therefore, interviews with guests regarding their expectations and acceptance of voice assistants should be conducted in the future.

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