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## Potentials of changing customer needs in a digital world – a conceptual model and recommendations for action in tourism

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**Abstract** While a few studies have already shown the potential benefits of digitization so far, there are no empirically developed approaches demonstrating the potentials of changing customer needs in a digital world in the tourism. This paper develops such a conceptual model, which is able to explore the customer needs in the tourism industry. An empirical, qualitative data collection by expert interviews forms the data basis. Grounded Theory is used to evaluate the transcribed interviews, as this method is particularly suitable for identifying new or unknown relationships. This methodology of qualitative social research serves to derive theories from previously categorized data without using concepts generated from literature. The objective of this study is to provide recommendations for touristic companies that have to face the challenges and the changing market environment through digitization. The main factors influencing the potentials of changing customer needs identified (digital services, digital marketing, data mining and online travel communities) form the conceptual model in order to present recommendations for action. The results of the study show that a personalized approach to the customer on digital communication channels represents an essential requirement in the future provision of services. In order to meet the changing needs, bilateral communication between customers and companies must be guaranteed during the entire customer journey, especially in structurally weak regions.

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## 1. Introduction

In 2015, the tourism industry recorded a consumption of 287.2 billion euros. This corresponded to about 3.9 percent of gross value added in Germany. According to the Federal Ministry of Economics and Energy, the tourism industry employed around 2.92 million people in 2015 [1, p. 8]. These figures underline the importance of the tourism industry only in Germany. In this context, tourism covers national and international travel, i.e. the traffic of tourists between their hometown and their destination. Additionally included are the temporary stay at the destination, the organization of the travel preparation as well as the post processing of the trip at the place of origin. In a broader sense, tourism describes all the customer relationships and phenomena associated with and during a journey [2, p. 1f.].

Hence, customer relationship is one of the core assets of a company within the tourism industry in order to fulfill customer needs, as customer requirements have changed dramatically through digitization in the last few years [26]. In the following, digitization is seen as a possibility to access data regardless of time and place created by the internet [3]. From an economic point of view, digitization leads to changed business models and improved business processes. The background is the availability of new information and communication technologies, especially big data, cloud computing, Internet of Things (IoT) and social software [4, p. 5].

However, recognizing customer needs is the first step. Meeting customer needs has to be the following step. In order to identify the potential of changing customer needs in the tourism industry caused by digitization, the authors have designed a qualitative study and conducted semi-structured expert interviews. Within the framework of economic and social research, a distinction is made between qualitative and quantitative studies. The quantitative study offers many advantages, such as the maintenance of a comparable database. Equalities and differences can be worked out based on this data. In addition, less time is required for the evaluation [5, p. 147]. Despite the above-mentioned advantages, a qualitative study in the form of expert interviews is more suitable for exploratory data analysis. The expert interview is described in the qualitative social research as a data collection method. The presentation of the current state of research based on a secondary analysis is consequently not the primary objective of this study.

The research builds on the work of Härting et al. [27] showing that there are changes and potentials due to digitization in the tourism industry in general. The authors hypothesize that as digitalization progresses, not only business processes within the company change, but also customer needs that have to be taken into account in the digital transformation of a company. The objective of this study is to show the potentials of changing customer needs in a digital world in tourism from managers' perspective. Therefore, the authors developed a conceptual model and present recommendations for action for the tourism industry in order not only to gain a deeper insight into customer needs, but also to provide more customer-oriented services.

The present work is structured as follows: after the introduction, the second chapter demonstrates the research design, data collection and analysis. The third chapter presents the research results including a conceptual model about the potentials of changing customer needs in tourism with recommendations for action. In the last chapter, a summary of the findings, an outlook for further investigations as well as implications for research and practice are given.

## 2. Research design and data collection and analysis

The following section describes the research methodology to answer the research question: "What are the potentials of changing customer needs through digitization in tourism?" In this context, subchapter 2.1 deals with the design of the study, while chapter 2.2 provides insights into the data collection.

### 2.1 Research design

Regarding the research design, the authors chose the methodology of Grounded Theory (GT) according to Glaser [8]. GT is a classical evaluation method aimed at generating theories. The explanation as a classical method is therefore based on the fact that it is a "conceptually condensed, methodologically founded and consistent collection of proposals" [6, p. 2]. In order to develop a theory inductively with GT based on the collected data, one has to run through several procedures (i.e. iterations). Hence, the characteristic of GT is the constant change of data collection and analysis as well as the subsequent theory development. This methodology aims to generate new theories and

models beyond the description of the data. The GT is often applied in qualitative social research, since the procedure described above allows the greatest possible openness towards the subject area to be researched [7, p. 35ff]. It has to be noted that a substantive literature review is not made in advance, as this is not part of GT [8, p. 51],[12]. That is why it is even essential to treat the research question with complete impartiality. Moreover, the GT assumes that an intensive examination of literature leads to distorted results [12]. It is a very time-consuming procedure, which requires a high degree of self-structuring of the researchers. The aim of the evaluation is to develop concrete recommendations for action with respect to the potentials of changing customer needs through digitization in tourism supported by the statements of the interviewed experts. [7, p. 35ff].

## 2.2 Data collection

The qualitative study is based on semi-structured interviews. This is the collection of opinions, assessments and a statement on the research topic from an expert's point of view. The aim is to derive the relevant practical experience and recommendations for action for the “digital future” [9, p. 15f.]. In this selected form of interview, questions are to be formulated in advance in the form of an interview guideline. These guidelines only determine the course of the conversation in a certain way. The sequence is not mandatory [10, p. 134f.]. The questions are deliberately formulated openly in order not to analyse with rigid observation patterns [11, p. 23]. First, suitable contact persons were sought who would meet the following requirements. Every expert to be interviewed must currently be employed in a leading position. In addition, the interviewee must have sufficient work experience. The focus within the tourism industry should be on IT, (travel) management and/or digitization. The participants in our study have worked in this field of research for an average of over 13 years. This ensures that the experts have in-depth expertise regarding general issues about strategic management, marketing and digitization aspects in the tourism industry. The experts were personally contacted by phone, e-mail and through business networks. As all personal data must be treated confidentially, a pseudonym has been created for all interview partners. The job position of the interviewees with given pseudonyms can be seen in Table 1.

Table 1. Pseudonyms and job positions of the experts.

<b>Pseudonym</b>	<b>Job position</b>
Anna	Managing Director
Sina	Head of Marketing Department
Paul	Professor
Marie	Head of Marketing and Design
Werner	Managing Director
Sarah	Senior Consultant
Miriam	Managing Director
Hans	Professor
Dieter	Speaker
Max	Head of Digital Management

With respect to the theoretical sampling, the authors applied the iterative approach according to Glaser and Strauss [8] in order to address as many tourism experts as possible from different hierarchy levels (sales professionals, managers, CEOs, etc.) and departments. This has ensured that we have a sufficiently good overview of the various aspects of the topic. Hence, it can be deduced that the data obtained from the interviews contain a great deal of information. In total, ten interviews were conducted with five male and five female experts. The companies and educational institutions are located in Germany and operate exclusively in the European market. The analysis of the number of employees shows that an interview partner works in a company with more than 50 employees. Whereas six experts are employed in companies with fewer than 50 employees. Three of the interviewees did not comment on this. In addition, three interview partners announced the sales figures, whereas seven experts did not disclose any details. Detailed information are given in Figure 1 (a) and (b).

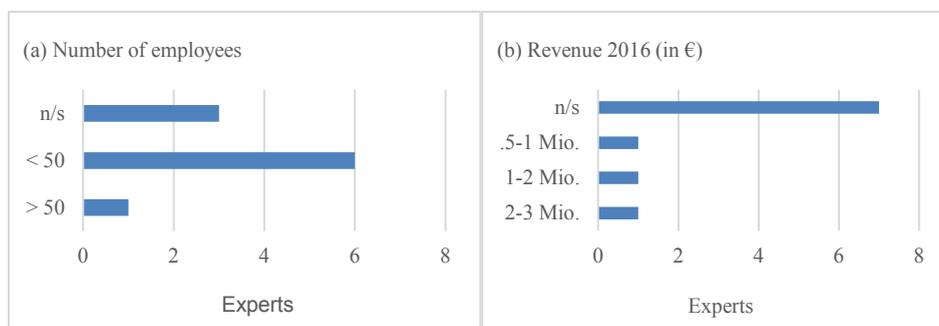


Fig. 1. Number of Experts relating to (a) Number of employees and (b) Revenue 2016 (in €).

The semi-structured interviews lasted on average 28 minutes and were conducted between December 2017 and January 2018. The questionnaire was not sent to the experts in advance. The interviews were structured as follows: First, there was a short introduction. Subsequently, personal and company-related questions were asked. This was followed by the key questions concerning the research area. The offer to send the completed study was the final step. The interviews were recorded digitally and then transcribed on 84 pages in total.

### 2.3 Data Analysis

After transcribing the semi-structured interviews, data analysis followed using the coding method of Strauss and Corbin [12]. This procedure is divided into open, axial and selective coding [12, p. 32]. Within the open coding, the answers of the experts are compared with respect to commonalities. This led to an initial categorisation [12, p. 101]. Similar expert statements received a uniform marking. Using the axial coding method, the authors subcategorized and linked related categories with the same property level and dimension [12]. By doing so, the authors associated mid-level categories to high-level categories. Because of obtaining several customized high-level categories in the data during this procedure, the authors moved to the approach by Glaser [12]. Therefore, the authors introduced a core category that is the category with the most coherencies to all other categories [12, p. 116]. The core category is “the potentials of changing customer needs in tourism”. In the last step (selective coding), the authors eliminated all concepts that are not or weakly related to the core category [8] and found six main constructs (see Table 2).

Table 2. Constructs and items of the conceptual model.

Construct	Item
Potentials of changing customer needs	Digital provision of information
	Digital, individual booking process
Digital services	Digital interaction within the Customer Journey
Digital marketing	Target group-specific marketing through social media, "Influencer" and "Blogger"
	Personalized customer approach through digital marketing
Data Mining	Personalized offers through comprehensive analysis of customer data
	Improvement of service quality
Online Travel Communities	Trusted Information Channel
	Influencing customer behaviour
	Possibility to improve the tourist services offered by analysing the customer evaluations
	(Internet-) Ratings
Structurally weak	Additional digital services

regions	Digital reporting on information trips
	Digital communication with customers

Corresponding answers form the basis for the subsequent generation of the hypotheses. This led to the derivation of the conceptual model consisting of four factors (digital services, digital marketing, data mining and online travel communities) influencing the potentials of changing customer needs and one moderating effect (structurally weak region). The "potentials of changing customer needs in the tourism industry" is thus the dependant variable and core category. Subsequent selective coding serves to eliminate categories that are not or only weakly related to this core category. All influencing factors are described in more detail in Chapter 3. In the following, recommendations for action are presented on how these potentials of changing customer needs can be used in tourism.

### 3. Recommendations for action to exploit the potentials of digitization in the tourism industry

After data analysis using Grounded Theory, the authors found four different influencing factors that have a positive influence on the potentials of changing customer needs in the tourism industry and one moderating effect (structurally weak regions). As a result, the conceptual model consists of six constructs (Fig. 2).

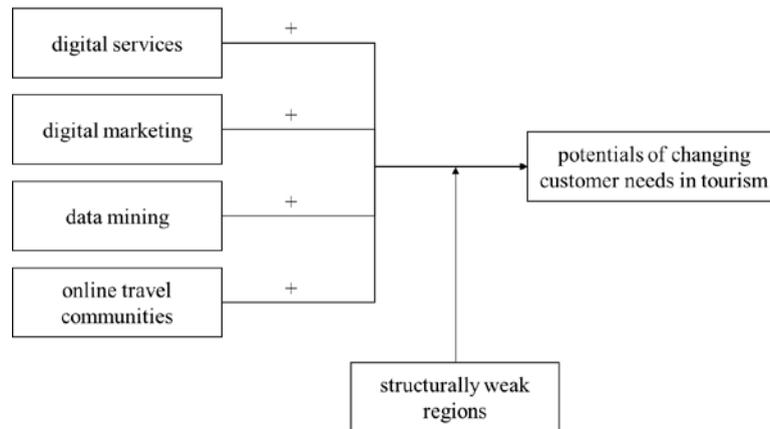


Fig. 2. Conceptual model.

The identified influencing factors and various recommendations for action are all based on the expert statements within the qualitative research. To explain the conceptual model each construct, which is supported by selected statements (translated from German to English), will be considered in detail.

#### 3.1 Potentials of changing customer needs

Customers in the tourism industry are moving further and further away from classic offers. They increasingly decide to travel using digital information and prefer communication via the Internet [13, p. 7],[14]. The needs of customers within the tourism industry have changed significantly. Customers increasingly demand the bundling of information and the digital provision of information. Hence, digital communication is already a central element today. All ten experts confirmed the need for digital information provision. This encourages Anna as follows: *"...[...] an absolute trend topic is that guests want to book online."* She also adds that *"...[...] Guests simply use other possibilities as they come at information. The journey, the entire customer journey can be accompanied by digital programs, networks and possibilities"*.

The strong communication of tourist content on the internet is thus changing the consumption of tourist services. Through the presentation in the social web, the offers of providers become transparent [13, p. 7ff],[14]. Expert Hans

explains that „[...] both the transparent offers, [...] change access to tourism products and consumption of tourism products from the customer's point of view.“ He hereby confirms that adjustments must be accomplished on the provider side in order to take account of the changes in digitization.

Max noted a transformation of the previous communication channels. He stated that the customers' information is not procured exclusively via the company's website. The provision of information and product presentation have become easier for all providers thanks to a wide range of options. The experts Paul and Sarah emphasized that the information is available at short notice and on time. In addition, they should be fast, digital and easy to find. Expert Sina adds that it is important, „[...] to be able to access all the information on the move.“ This was confirmed by Anna's statement that she even finds the information within the worldwide web to be an inspiration. However, she noted that this was not yet the case a few years ago.

The survey of experts brought a further aspect of the digital change in demand to the fore. Customers demand a digital and individual booking process. A central booking process is of great importance for the future. Customers want to book their travel online and buy tickets online. On the provider side, a major advantage is that all information can be displayed on the Internet. In addition, suppliers have the possibility to visualize their products on the Internet. In this way, the emotions of the customers can be aroused for a possible experience [15],[16]. Paul emphasized that individualized and flexible services are moving into the foreground. Customers „[...] don't go to a travel agency anymore, but just make a few more clicks“. (Anna)

She also said that all information should be available in the shortest possible time in order to put the trip together on the internet. The expert Sina expects here still further changes in the purchase completion.

In order to remain viable in the future, providers must adapt their services to the market [13, p. 11],[14]. Expert Sarah confirmed this theoretical statement through her practical experience. It is the conviction, if suppliers do not make their journey available and bookable online, they have no chance „[...] in people's minds [to stay]“. *The surveyed expert Anna signals that „[...] a digital sales concept or a digital sales strategy also offers companies enormous added value in the area of online booking“.*

The surveys showed that tourism providers must guarantee digital information provision and offer digital and individual booking processing. Only if suppliers take account of customer wishes can they remain competitive in the market.

### 3.2 Digital Services

The search for tourist information is not limited to the phase before the journey, but also plays a decisive role in the actual travel phase and the time after the journey [17, p. 153],[18]. The more contact and information possibilities are made available by the tourism provider, the more precisely the individual needs of customers can be satisfied throughout the entire travel process [19, p. 413]. The digital provision of information, inclusive filter options, offers every customer the possibility to find exactly what he is looking for individually on the Internet. *"I can find out the information relevant to me at every stage of the customer journey."* (Sarah)

According to Anna, it is crucial for a positive travel experience that the providers do not end the interaction with the customer after the travel booking: *"And then it continues on site. You can get information with apps and ideas and suggestions [...]."*

Six of the experts surveyed also believe that customers' travel behavior can be influenced by targeted interaction. In order to achieve this, it is important to know and respond to the individual needs of the respective customer when providing information. *"Of course, it is already possible to address people who, for example, have an affinity for city trips via Facebook campaigns or other targeted campaigns."* (Sina)

Hans is also of the opinion that the individual travel behavior of the customer can be influenced by targeted digital interaction: *"The more precisely I know the profiles of the customers, the more precisely I can also tailor customer-specific trips."* These offers are, in his opinion, marked with *"[...] a much higher probability of occurrence than would be the case with a proposal list that is not based on customer data."*

However, the experts also agree that there is still considerable room for improvements in the services provided during the trip. Two experts addressed the topic of digital guest folders as a means of providing hotel and environmental information on site. This means that all relevant data on possible activities can be collected for the customer. *"So the guest has gathered all the information at once, which will definitely influence the behavior."* (Marie)

In summary, the service can be improved through a digital interaction with the customer during the entire travel process. The possibilities of addressing customers individually and influencing travel behavior are far from exhausted. They will improve significantly with a further development of digitization technologies.

### 3.3 Digital marketing

Eight experts stated that digital media offer added value in the implementation of marketing strategies. Through their use within the tourism industry, potential customers can be better reached. *"We simply want to reach the industry by doing a lot of research and then being active on the appropriate channels."* (Marie)

Within the study, the social media channels Facebook, Twitter and Instagram deserve special mention. This coincides with a survey from 2017, which found out that the four main platforms for companies are Facebook (62%), LinkedIn (16%), Twitter (9%) and Instagram (7%) [20]. Three of the experts surveyed also recommended working with "bloggers" and "influencers". Three experts mentioned the personalized customer approach made possible by digital media. According to Hinterholzer and Jooss, the integration of the customer is a logical and inevitable consequence of Web 2.0 in order to continue satisfying the needs [19, p. 133]. Hans recommends, *"[...] that data is used by the customer to present offers, i.e. to personalize offers."* Seven out of ten experts also see a connection between the digital media and booking behavior. Anna's opinion on this: *"[...] if we do not put our products on the digital market, [...] Landlords lose these bookings. You're untraceable."* Anna and Max argued critically to this statement. In their view, there are currently no exact measurement options for this. It is therefore not possible to establish an exact connection between the use of digital media and actual booking behavior.

In summary, providers should use social media, influencers and bloggers. This means that target group-specific marketing can be used to reduce wastage. Furthermore, personalized addressing through digital media is recommended in order to win potential customers.

### 3.4 Data Mining

According to the magazine *Technology Review*, data mining is one of the ten technologies that will significantly change the world in the future [21, p. xi]. However, the experts surveyed agree that small and medium-sized enterprises in the tourism industry do not use data mining or do so too little. The basis is available in the form of enormous amounts of stored data in every tourism enterprise [22, p.73],[23]. Four of the experts pointed out, that the evaluation of historical data offers the possibility to create personalized offers for their customers. This in turn has a positive effect on the number of postings. *"You know what the customer is doing and what he is interested in. Such topics can then increase the likelihood of booking"* (Marie).

Furthermore, three experts believe that products and services can be improved through data mining: *"[...] the clicks of customers are again the basis for an improvement or further development of the products."* (Hans)

However, data mining has so far only been used in large tourism companies due to the high resources required. Sarah could imagine herself as an alternative to integrating data mining in every company, *"[...] to provide a technical system that systematically analyses data"*. To this end, however, she adds that this *"[...] can actually only do one federal state level as a service for the subordinate levels"*. Regardless of how data mining can be established in the tourism industry in the future, the need for analysis results will continue to increase. In order to remain competitive, tourism providers should therefore analyze the collected customer data. The results are to be used for an individual consultation and personalized offer preparation. Services and products can be adapted more to the changing needs of customers.

### 3.5 Online Travel Communities

As Amersdorffer described in his book in 2010, more and more travelers are using and trusting social media. They rely mainly on the recommendations of other travelers to guide their own journey [24, p. 55],[14]. Four out of ten experts also confirmed this development. They see the online travel communities as an immediate way to transmit trustworthy information to the customer. *"[...] the communities are now simply indispensable, because everyone compares and evaluates. The big advantage is that it has a certain credibility when the holidaymaker evaluates"*

(Marie). Sarah also confirms that: "[...] being able to trust information is more relevant [...]." In addition, the expert statements determine an influence on customer behavior. In this area, five out of ten interview partners made clear that online travel communities can have a positive impact on the tourism industry by using the potentials of changing customer needs.

For example, the expert Sarah substantiated these advantages through a "[...] Family blog, where I can know for sure, they think exactly like me and if this family goes there and was satisfied, then I have to try it out sometime". She added that online travel communities are particularly important in the inspiration phase in order to get ideas for the next destination. Analyses of customer ratings from online travel communities create opportunities to improve the range of tourism services. Thus, companies have the possibility to react to criticism of their customers in order to adapt their existing offer [24, p. 55],[14]. "[...] If they are able to evaluate this in a structured way, then this naturally gives them a wonderful picture of the customer's perception. About satisfaction and what is missing etc. [...]." (Werner)

On the other hand, there are also risks that were also identified in the survey. Four of the ten experts see the impact of negative ratings on online travel communities as a risk for the tourism industry. The most frequently mentioned risks are negative, purchased and fake ratings in the portals. "It gets difficult when they're fake ratings." (Marie)

Finally, it should be noted that tourism providers should correctly evaluate the content of existing customer information from the online travel communities in order to improve their range of services. In addition, they should monitor the online ratings within the communities and refer to criticism in order to benefit from the potentials of changing customer needs.

### 3.6 Structurally weak room

Until now, the travel agency was the central sales channel in the value chain of a travel process. All services in the form of consulting and booking are provided for the customer. Due to the constant availability of the data on the internet, customers can now design their own travel process and book their individual trip independently [25, p. 33],[14]. "[...] through the transparency of the internet and the wealth of information, [...]. everything is accessible or available online." (Dieter)

The influence of digitization in the tourism industry cannot replace the right of travel agencies to exist. Above all, the consulting services must be used by travel agencies as a competitive advantage [25, p. 33],[14]. Five of the tourism experts surveyed shared this opinion, in fact "with excellent advice". (Miriam)

Dieter expanded this aspect by giving customers the benefit of having a good feeling and trust in the travel agency. He also added that there are always people who do not want to go along with digitization. Sarah also brought this argument in her interviews and mentioned that the personal aspect could take a higher position again in the future. "[...] I have someone here to take care of where I can go, where I might just call during the trip if something doesn't work [...]." (Sarah)

Werner added that travel agencies might have the advantage in future that the traditional population class, which prefers a personal contact person, lives in rural areas in particular. More than half of the interview partners cited the takeover of the services within the travel process and the associated timesavings for the customer as benefit because they "[...] don't feel like researching the Internet for three days [...]." (Dieter)

Anna mentioned that many customers are overstrained with the abundance of data and that travel agencies as specialists take over the processing of the entire information. "This is an unlikely service." (Anna)

The expert interviews produced many recommendations and ideas on how travel agencies in rural regions can prepare for digitization. Marie and Sarah suggested the use of digital technologies and current trends (e.g. VR glasses). Marie mentioned also the use of online marketing (e.g. Facebook) to offer the customer a completely different travel experience. In order to maintain contact with existing customers and attract new ones, Sina recommended direct mailing as a cost-effective alternative. In this context, according to Max "[...] cheap ways to keep in touch, such as WhatsApp or newsletters, giving you the opportunity to reach the customer quickly."

Werner and Hans even see the travel agencies as specialized in niches and segments for the future as "[...] a competence development or a specialization on individual topics [with] a competent contact person [...] and also offer online products as a stationary travel agency [...]." (Hans)

Two experts suggested that travel agencies should expand their services through qualified online advice. This enables new customers to be acquired and access to the online channel made possible. Anna added the use of the customer's digital accompaniment as a further opportunity: "[...] send the customer inspiration over and over again or [...] my products, which I offer, which communicate holiday ideas to my customers." In order to inspire customers from the journey, she advised to communicate the customer experiences from journeys digitally to strengthen the part of travel agencies.

In summary, travel agencies should use digital technologies, especially in structurally weak areas in order to benefit from changing customer needs. Thus, the travel planning of the customers can be positively influenced and a foretaste of the travel experience can be given. In addition, they should present their own travel experiences to their customers personally as well as digitally. The use of digital communication channels is also an essential requirement to win and retain customers in the long term.

#### 4. Conclusion

The authors developed a conceptual model investigating the potentials of changing customer needs caused by digitization with a focus on the tourism industry. Therefore, the authors implemented a semi-structured guideline interview to get empirical data from German experts. The evaluation of this study is based on Grounded Theory, which revealed important influencing factors. As a result, the authors found four main factors influencing the potentials of changing customer needs in tourism: digital services, digital marketing, data mining and online travel communities. Furthermore, the analysis of the data shows that structurally weak regions moderates the different influencing factors within the conceptual model, i.e. there is an impact on the relationship between each influencing factor (as independent variable) and the potentials of changing customer needs in tourism (dependant variable).

From a managerial perspective, the tourism providers can implement the recommendations to manage the changes in demand caused by digitization in order to strengthen the competitive position of suppliers. Tourism service providers can benefit sustainably through the application of data mining, for instance, resulting in the possibility to address customers in a personalized manner by integrating social media, inherent influencers as well as bloggers. Companies, however, have to prepare their products and services digitally in order to achieve an increasing customer appeal and loyalty. The elaboration recommends that the tourism providers should accompany the entire customer journey of their customers digitally. Especially in structurally weak areas, digital applications and communication instruments open up new opportunities to reach customers and to fulfill the changing customer needs.

Nevertheless, there are still some limitations to mention within the research. First, there are a number of very weak influencing factors mentioned which were neglected in our model during the iterative approach of the Grounded Theory. This is because only the minority of the experts noticed such a factor or other experts argue that this factor does not play an important role regarding the potentials of changing customer needs in the tourism industry. For instance, one of the experts emphasized not to ignore personal advice from a travel agency completely. This is often a necessary basis for maintaining customer loyalty to the target group, which cannot be reached digitally. Within the semi-structured questionnaire (see also Appendix), questions 2.1 / 2.2 and 5.1 / 5.2 should be viewed critically as they do not allow a very clear distinction between each other. Consequently, we received not clearly distinguishable answers, which might also due to the methodology of Grounded Theory. In addition, the examples of online travel communities proposed in question 6.1 ("tripadvisor", "tripwolf", "holiday pirates", "couchsurfing") were not sufficiently differentiated, too. During the analysis of the results, it emerged finally that the experts have different views on this broad concepts. A holistic examination of the study results revealed that, up to now, there has been no possibility of accurately measuring the relationship between the usage of digital media and the booking behavior. Another limiting fact of our qualitative research approach is the focus on a sample of only ten different experts from Germany. Although the authors tried to arrange a representative sample of experts with different expertise in the tourism industry, the conceptual model might be different when asking experts from different markets. As implications for science, the developed conceptual model serves as a basis for a quantitative approach to validate the relationship between each influencing factor and the potentials of changing customer needs in tourism.

For future research, it might be very interesting to get deeper insights into the requirements of different markets by surveying experts from other countries. A differenced investigation of single European states, for instance, would be

worth to consider. Based on this model, new research-led questions can be derived in the future, especially for small and medium-sized tourism providers and with respect to tourism provider in structurally weak regions. It can be summarized that the qualitative method used and the empiricism gained from it made an excellent contribution to answering the question leading to research as to what recommendations for action exist for the tourism industry.

**Appendix.** Questionnaire for the qualitative survey "recommendations for action to exploit the potentials of digitization in the tourism industry"

Number	Question
0	Please introduce yourself briefly (name, position in the company, work experience) Could you give us some facts about the size of your company (turnover, industry, products, number of employees)? ( <i>introductory questions about the person and firm</i> )
1.1	Do you expect a change in the needs of your customers in the course of digitization?
1.2	<i>(If question 1.1 is answered in the affirmative)</i> How have internet technologies changed the services for the customer during the travel process (idea/inspiration; research; booking (local or online); travel experience; post processing/travel reflection)?
2.1	How have internet technologies changed the services for the customer during the travel process (idea/inspiration; research; booking (local or online); travel experience; post processing/travel reflection)?
2.2	Where do you think there is room for improvement here?
3.1	To what extent are digital media used to implement marketing strategies?
3.2	Is there a connection between the use of digital media and accounting behavior?
4.1	Does your company use data mining technologies? ( <i>for scientists: in the tourism industry</i> ) <i>[Definition: Data mining is the process of identifying valid, novel, useful and ultimately understandable patterns in data, e.g. analysis of customer data to determine new patterns of purchasing behavior.]</i>
4.2	<i>If question 4.1 is answered in the affirmative, but on No it could be asked:</i> For what purposes do you think data mining could be used in your company? For what purposes is data mining used in your company (in the tourism industry)?
4.3	<i>If customer-specific marketing was not mentioned in 4.2:</i> Does your company also use data mining for customer-specific marketing?
5.1	Can the travel behavior be influenced by digital interaction with the customer?
5.2	How can travel behavior be influenced in this context?
6.1	How do you assess online travel communities ("tripadvisor", "tripwolf", "holiday pirates", "couchsurfing") with regard to their chances for the tourism industry? <i>[Definition: In online travel communities, the users themselves generate all information. A goal of such a platform is the mutual exchange of experience of the members to touristic products. In this way, the communities function as support for travel planning.]</i>
6.2	How do you rate the online travel communities with regard to their risks for the tourism industry?
7	How can travel agencies maintain customer loyalty through digitization (especially in structurally weak areas)?

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