



TOURISM VALUE CHAIN DETERMINANTS TOWARD DESTINATION COMPETITIVENESS AND HOW THEY INFLUENCE TAX BASE AND MOBILE APPLICATION USAGE AS A MEDIATING VARIABLE: A CASE OF TANZANIA

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ABSTRACT: *The research paper investigates the influence of tourism value chain determinants on destination competitiveness and tax base, focusing on the mediating role of mobile application usage. It emphasizes the importance of technology, particularly mobile apps, in enhancing the tourism sector's competitiveness and increasing tax revenue. Key factors include perceived advantages, technological self-efficacy, market capabilities, and ICT usage in Tanzania. Despite the lack of an official regional mobile application and low web-based marketing ratings, the study highlights the mediation effect of mobile apps on the relationship between the tourism value chain and destination competitiveness. The proposed model examines mobile app usage's impact on pre-travel, during-travel, and post-travel experiences. Data collected via questionnaires from May to July 2022, with 89 responses, support the theoretical model, showing that mobile app usage enhances destination competitiveness. The study concludes that to compete with other African destinations, Tanzania needs to adopt official mobile applications.*

KEYWORDS: Pre-travel, During travel, post-travel, Mobile application, Destination Competitiveness.



INTRODUCTION

The tourism industry in Tanzania is undergoing significant transformations due to the increasing adoption of information and communication technologies (ICTs) (Gliceria et al., 2023). Mobile applications play a crucial role in enhancing tourism experiences by providing time-saving benefits convenience, and improving technological self-efficacy among users (Ferhat et al., 2023). Moreover, the utilization of mobile applications has proven to be an efficient method for disseminating knowledge in communities, as evidenced in the case study conducted in the Arusha region of Tanzania (Justine et al., 2022). Additionally, tour operators' acceptance of database marketing initiatives in Tanzania is influenced by factors such as perceived ease of use, perceived usefulness, self-efficacy, and innovativeness, highlighting the importance of technology adoption in the tourism sector (Omary & Swallehe, 2022). Furthermore, the determinants of ICT usage at UNESCO World Heritage Sites in Tanzania have been identified, emphasizing the significance of perceived advantages, less complexity, support infrastructures, support skills, competitive pressure, and pressure from customers in driving ICT usage among decision-makers (Mugobi & Mlozi, 2020).

Information and communication technology (ICT) usage has significantly impacted the tourism and travel industry, revolutionizing people's lives and tourism organizations (Bakar et al., 2020). Recently, more than 92% of travel information searches have been carried out on the internet, and mobile applications and travel websites can lead to puzzlement and slower decision-making by tourists (Yi et al., 2019). Many countries have succeeded in using ICT over mobile applications and, more precisely, the internet to market their destinations. There has been an increase in the global number of internet users in the travel and tourism industry. However, using ICT through mobile applications to bring a competitive advantage to a destination for Tanzania is still low.

Although Tanzania has a variety of mobile applications, fewer non-government mobile apps cater to travel purposes, and they are not supportive of users. The structures are so confusing, and they are not updated. The available mobile application does not contain all the five "As" necessary in creating a tourism destination (i.e., accommodation, activities, amenities, attractions, and accessibility). Mtweve (2013) reported that visitors take a long time handing out their entry visas at airports and other entry points. These challenges are caused by inadequate investment in innovation and infrastructure development (Mtweve, 2013; Rahmiati, 2019). Mobile internet users in Tanzania are 20% less relaxed than stationary internet users and feel 20% more pressure than stationary (The Citizen, 2019). Mobile internet users have a low to medium level of patience compared to stationary users, who have a high level of patience.

The continuously changing business environment presents many challenges to many tourism destinations, specifically those that need to efficiently and effectively utilize ICT through mobile applications to meet the universal international destination standards and increase the information supply (Bystrowska et al., 2017). Therefore, tourism destination needs to set out critical measures to ensure the effective and efficient use of mobile applications to gain international visibility of their attractions, enlarge the right of entry to global supply chains, empower people with data access, and increase demands for greater openness and transparency (Kim & Kim, 2017). One way to achieve this is by focusing on mobile applications that provide destination management organizations with the possibility of reaching tourists and prospects



in a direct way, such as through online promotion and marketing, distribution of tourism products, managing and coordination of all stakeholders involved in the creation and delivery of tourism product, hence achieving competitive advantage of a destination (Adukaite et al., 2016).

Digital connectivity has been bolstered by a growing number of individuals using the internet and mobile internet subscriptions, meaning more economies can now leverage the ever-increasing list of digital travel and tourism services industry (World Economic Forum, 2019, p. 9). In 2017, mobile subscriptions per 100 people increased by more than one quarter. Therefore, more tourism and travel service providers are standing to open the fruit of the increasing attractiveness of online services, information sharing, and marketing opportunities (World Economic Forum, 2019). However, the report argues that in sub-Saharan Africa, “there is a pronounced lack of mobile application usage, a vital requirement to attract visitors as soon as a traveler and industry performers increasingly rely on technology,” while East Africa keeps a significant breach on ICT eagerness (World Economic Forum, 2019, p. 87; Starcevic & Konjikušić, 2018).

This paper focuses on the determinants of mobile application usage for the attractiveness of tourism destinations. The subject is assisted within the tourism value chain model to remain effective and contribute extraordinary travel experiences; the model will benefit endpoint top leaders for strategic planning, maximizing value creation while minimizing costs (Adelakun, 2020). With the relationship between determining factors towards mobile application usage having broad scholarly acceptance, this study switches focus to the factor that mobile application mediates tourism value chain and destination competitiveness. Based on the researcher’s best knowledge, none of the studies globally and specifically in Tanzania has investigated the mediation effect of mobile application usage on the relationship between tourism value chain determinants and destination competitiveness, hence providing the basis for conducting this study due to fill both theoretical gap and contextual gap. Therefore, adopting mobile applications in tourism destinations will improve progression efficiency, the turnaround time for decision-making, and the quality of the service. A theoretical gap will be added to the study using a value chain model through mobile application usage as a mediating variable.

THEORETICAL VALUE CHAIN

Tourism Value Chain Model and Destination Competitive

The tourism value chain shows several sources of competitive advantage from the ability to create and effectively handle all actors in the tourism trade, supported by the power of local governance to push the area's attractiveness and differentiate it from competitors (Kim & Kim, 2017). All tourism players in the tourism chain must work together to create a competitive advantage for their destination. To distinguish a goal from others, the tourism value chain model consists of three variables: pre-travel experience, trip experience, and post-trip experience. Therefore, the mobile application must mediate the variables in the tourism value chain model to gain a competitive advantage in Tanzania's tourism industry. Thus, this study examines mobile application usage intervention connecting tourism value chain elements and



purpose competitiveness. Next, the discussion will be on the tourism value chain determinant, which also connects to how it can lead to a competitive advantage.

Pre-travel Experience and Destination Competitiveness

In the pre-travel experience, tourists search for as much information as possible regarding the travel destination and end with the traveler's assessment after consuming the experience (Cretu et al., 2021). In this stage, tourists will have alternatives before they decide which tourism product will be chosen.

Therefore, mobile application usage will be paramount to providing this information with good eminence and convincing the user to book a destination. Mobile application usage will provide detailed and accurate information from the pre-travel activities about the goals and other significant things that tourists may need before departure (Munoz, 2019). Booking.com (2020) surveyed 20,000 travelers across 28 countries.

It was revealed that 51% of travelers will find their vacation inspiration online, 35% want online travel booking sites giving reward points for making sustainable choices to use for free extra perks and discounts, 29% are looking to travel online booking sites to use clearer signposting so they can quickly identify when something is (not) sustainable, 28% expect travel companies to offer tips on how to be more sustainable while traveling, 55% are excited about tech's potential to personalize their travel experiences in the future further, 53% will want tech options to make last-minute reservations (56% of women agree with this statement vs. 50% of men), and 65% travelers are excited about traveling again after lockdowns. Other essential factors, according to Travelport (2022): 61% of travelers include a simple online booking process, and 58% request a faster booking process—66% of leisure travelers.

Albayrak et al. (2021) investigated mobile application user behavior while planning and booking travel in Turkey. With the aid of two combined frameworks, the Stimulus-Organism-Response (S-O-R) framework and Technology Acceptance Model (TAM), and the use of a structural equation model, they found that the service quality dimension of mobile application significantly influences user intention in booking a destination (Do et al., 2020). Likewise, Stetic et al. (2021) investigated how mobile applications could be a tool for goal and development and bring a competitive advantage in Belgrade. They found a positive relationship between mobile application usage and destination product development; the destination is ahead of their competitor. Moreover, June et al. (2022) examined how travelers adopt mobile applications to gain more information about the goal they wish to visit and to orient more on a different destination for them to decide. The study used a survey to collect data from 630 tourists, and structural models with research hypotheses were tested using partial least squares. The findings reveal that many factors determine the impact of mobile users on tourism—factors such as perceived usefulness, perceived ease of use, e-servicescape environment, and eWOM communication.

During this stage, travel itineraries will be personalized based on the tourist experience, thus offering different alternatives to the regular itineraries provided by travel organizations. During the pre-travel experience, the help of a mobile application will link travelers to local merchants for booking instruments to reduce the cost of payment gateway and bank charges (Christian, 2015). Promotion deal offers can be redeemed directly with the local merchants, depending on the offer's mechanics. The contributors will indicate the minimum consumption price for the



specific product or service when they share the itinerary or travel items, providing an info searcher with a more accurate budget estimation. The mobile application will allow users to upload and view pictures or videos in 360 degrees, therefore providing more accurate environmental insights than false imaginative expectations from static photos (Tabi et al., 2019). Hence, the following hypothesis regarding pre-travel experience and competitive advantage is proposed.

H1: *There is a positive relationship between pre-travel practice and destination competitiveness.*

During Travel Experience and Destination Competitiveness

Travel experience is the second stage of the model, where the traveler consumes the destination products such as transport to the destination, accommodation, visiting attractions, etc. (Kim & Kim, 2019). On the travel stage, tourists use mobile applications in search of directions while at a site, and forms of accommodation such as hotels, boutique hotels, motels, apartments, and resorts. This phase emphasizes that travelers continue to research and book while at their end point, thanks to the portability and availability of internet access. Literature reveals that the response to a tourism practice focuses on what travelers expect the experience to be and their gratification of the experience (Kim & Kim, 2019).

From a technological perspective, some factors can improve the overall experience, like ensuring availability and reliable access to the internet during one's trip. Once the internet factor is in place (in reserve), the focus shifts to providing valuable online content and information to help improve the overall travel experience, and when the tourist experience is met, it will bring a competitive advantage to the destination (Kim & Kim, 2019; Rivera et al., 2019). Tourist experience will be satisfied with the help of a mobile application. During the travel experience, travelers are involved in tourism activities either through consuming tourism products or services (Lugedo, 2021; Önder, 2015; Küçükaltan, 2016). The activities consumed could include buying tangible products such as arts and crafts, foods and drinks, and staying in a hotel. All these activities during the travel experience contribute to destination competitiveness (Okocha, 2021). A study by Calvignac and Smolinski (2020) examined how using a mobile application changes the course of a sightseeing tour through exploratory analysis in the city of Albi. The study's results suggest that mobile application usage during the travel experience stage significantly modifies the planned walking pace and program—the outcome results in a modest benefit to the endpoint.

Potapkina (2017) investigated the mobile application triangulation in tourism destinations with mixed methods and applied a competitive benchmarking analysis. The results revealed that mobile application users during the travel experience stage have common ground when using mobile applications to navigate and sightseeing. Additionally, Kim and Kim (2017) examined the status and role of mobile technology in achieving sustainable and keen tourism by utilizing multiple sources, such as patents, academic articles, news, and selected methodologies. The findings revealed that mobile applications in a destination foster a sustainable competitive advantage for tourism destinations and tourism-related suppliers, and create sustainable competencies for intelligent tourism. In this case, the service quality offered through the mobile application is essential for achieving an end competitive advantage. Based on the abovementioned, this study seeks to inspect the tourism value chain model toward destination



competitiveness, with the mobile application being a mediating variable. Hence, the following hypothesis regarding travel experience and competitive advantage is proposed.

H2: *There is a positive relationship between travel experience and destination competitiveness*

Post-Travel Experience and Destination Competitiveness

This final stage of the tourism value chain model will be tested through travelers based on destination performance to create a competitive advantage by measuring their satisfaction and loyalty. At this stage, travelers' understanding is weighed, and customer experience is calculated from the whole tourism along the activities along the value chain from the pre-travel location, during the travel stage, and lastly, the satisfaction and loyalty measurement in the post-travel experience stage (Rahmiati et al., 2019).

In this phase, the tourists feel satisfied and feel the significance of the tourism activities they have experienced (Kim & Kim, 2019). A traveler's post-travel experience is shared, becoming the travel inspiration for another customer. The travel cycle is completed through participation in the sharing phase (Larsen et al., 2019; Altinay & Kozak, 2021). A mobile application will facilitate the post-travel experience as travelers can share their trip photos; social media platforms are also a more powerful tool for post-travel expertise; thus, the destination social media should be linked with the mobile application (Liu et al., 2020). The factors to consider are the format, quality, and content of the shared experience. Experiences can also be shared via film footage of the destination, customer testimonials, and specific authentic experiences captured using various types of media during the trip (Arica et al., 2022). Tourists store mementos in photos or souvenirs; in addition to the era in which mobile application plays a vital role in human life, tourists also share or share via social media (Buhalis, 2003). For example, high-quality photos can convey a moment or allow an individual to imagine him or herself at the destination of choice.

Therefore, for destinations to gain a competitive advantage and deliver memorable travel experiences, mobile application usage at each phase of the value chain is inevitable. Hence, the following hypothesis regarding post-travel expertise and competitive advantage is proposed.

H1: *There is a positive relationship between post-travel experience and destination competitiveness*

Few studies have examined the mediation effect of mobile application usage on the relationship between tourism value chain determinants and destination competitiveness in Tanzania. Thus, this study presents a model of the mediation effect of mobile application usage on the relationship between tourism value chain determinants and destination competitiveness grounded by tourism value chain mode.



PROPOSED MODEL OF THE STUDY

The proposed model includes three theoretical constructs from the determining factors that enhance destination competitiveness and their sets of indicators chosen as testable. The independent variables consist of three constructs borrowed from studies that utilized the tourism value chain model. Mobile application usage mediates the relationship between the determining factors and the dependent variable (i.e., destination competitiveness). A study by Yuniawati and Ridwanudin (2020) measured the quality of the tourist experience by using the tourism value chain model with three phases with the aid of descriptive and verification using factor analysis data analysis techniques. The results showed that the proposed model is valid and reliable for measuring travel experience and destination competitiveness—the theoretical framework for Tanzania. In addition, the framework includes mobile application usage variables to mediate the relationship between determining factors and destination competitiveness. In theory, including mobile application usage as a mediating variable is critical to explaining the tourism value chain determinant toward destination competitiveness. The proposed order of the model is that mobile application usage depends on tourism value chain determinants, and then mobile application usage may lead to destination competitiveness.

METHODOLOGY

This study applied positivism philosophy with explanatory design through a deductive approach. The study also used non-probability (purposive) and probability (stratified) sampling techniques. Questionnaires with closed-ended questions were used for data collection. Structural Equation Modelling analyzed the collected data with the help of AMOS software. The targeted population was 100 tourists from different nations who visited Tanzania from May to July 2022. Administered questionnaires were applied and 89 usable responses were retained for further analysis.

MEASUREMENT

The measurement scales used to collect data were adopted from the existing studies. The items were measured using five-point Likert-type scales. The travel value chain determinants measurements were adopted from previous studies and adapted to fit the Tanzania context (Akhoondnejad, 2015; Jung & Cho, 2015; Köchling, 2021; Matovell & Baez). The items for measuring each variable were 8 for pre-travel experience (PRE), 6 for during-travel experience (DUR), 7 for post-travel experience (POST), and 7 for mobile application. However, in ensuring model fit, only four items were left for analysis (MOB). In comparison, destination competitiveness had five things, and through providing model fit, only three items were gone (PEF).



STRUCTURAL MODEL RESULTS

In testing the structural model for the overall sample, the analysis started by evaluating goodness-of-fit indices. The model met the recommended guidelines for the goodness of fit (CMIN/DF = 2.174, RMSEA = 0.156, GFI = 0.542, CFI = 0.585, TLI = 0.547), as represented in Figure 1. In testing for mediation, the initial process involves the removal of the mediator mobile usage (MOB); a direct effect of travel value chain model variables (PRE, DUR, POST) on destination competitiveness (PEF) indicators is significant. The model produced the following indices: CMIN/DF = 2.048, GFI = 0.593, TLI = 0.617, CFI = 0.654, and RMSEA = 0.148; thus, model fit confirms the suitability of the structural model to explain the mediation effect of mobile application usage on tourism value chain determinants toward destination competitiveness, as indicated in Figure 2.

The magnitude of a direct effect indicated the path coefficient from PER to PEF (.14), DUR to PEF (.74), and POST to PEF (.02). When Mobile application usage was placed in the model, the magnitude of the path was as follows: PER to MOB (.16), DUR to MOB (.67), POST to MOB (.02) and MOB to PEF (.01). This helps to compare the test of the indirect effect of the structural model when ICT Usage is entered as a mediator, as presented in below.

The Mediation Test for both Direct and Indirect Effects with Mediator

The structural model is executed to test for direct and indirect effects with a mediation variable of MOB. This process is intended to test for direct and indirect effects. This is followed by the confirmation of model fit to ascertain the estimates' legitimacy. The model fit results for the structural model with the mediator are CMIN/DF 2.174, GFI = 0.542, TLI = 0.547, CFI = 0.585, and RMSEA=0.156. This confirms that the structural model is appropriate for explaining the mobile application usage's mediation effect on the relationship between tourism value chain determinants and destination competitiveness (PEF). Results from the direct impact before mediation, where PRE has a direct relationship with PER, supported the study by having a significant positive relationship between PRE and PER ($\gamma = 0.143$, $p = 0.000$).

However, when the mediator entered the model, the strength of the direct effect increased while the relationship was significant ($\gamma = 0.160$, $p = 0.041$). Thus, partial mediation occurs, and H1a is supported.

The study also examined the mobile application usage mediating the relationship between DUR and destination competitiveness (PER). Results from the direct effect before mediation, where DUR has a direct relationship with DUR, supported the study. The relationship between DUR and PER was positive and significant ($\gamma = 0.20$, $p = 0.007$) when the mediation entered the model, and the strength of the direct effect increased. The relationship was slightly meaningful ($\gamma = 0.204$, $p = 0.006$); thus, mobile application usage mediates the relationship between DUR and PER, and H2 is supported. The relationship between POST and PER was positive and significant ($\gamma = 0.182$, $p = 0.034$) when the mediation entered the model; the strength of the direct effect did not change and dropped. The relationship was significant ($\gamma = 0.182$, $p = 0.033$); thus, mobile application usage would mediate the relationship between POST and PRE, and therefore, H3 is supported.



DISCUSSION

This study was inspired by the need to learn more about the mediation effect of mobile application usage on the relationship between the tourism value chain determinants and destination competitiveness. The findings prove that mobile application usage fully mediates the relationship between PRE, DUR, POST, and destination competitiveness. The results reveal that mobile application usage mediates the relationship between pre-travel experience and destination competitiveness (H1). The findings are similar to those of Köchling (2021), who found that pre-travel experience through destination websites influences destination marketing. Likewise, Tassawa and Banjongprasert (2019) found that from pre-travel familiarity, tourists form trust with the endpoint, and hence, endpoint attractiveness significantly impacts tourists' beliefs. Through pre-travel experience, tourists become advocates of the destination, which thus results in destination competitiveness. Leht et al. (2005) found that pre-travel experience through destination websites influence destination competitiveness in line with the above. Destination competitiveness among African destinations is increasing, and tapping the dimensions of factors influencing destination competitiveness is invaluable. Therefore, pre-travel information should have strong content with unique attractions that affect tourists. Providing data regarding interests and activities is a critical dimension contributing to destination competitiveness during the pre-travel experience (Woyo & Slabbert, 2021). Leht et al. (2005) found that pre-travel experience tourists develop knowledge of a destination through the online content search that a traveler engages in while planning a trip.

During travel experience, the findings revealed that mobile application convention facilitates the relationship between travel involvement and destination effectiveness. These findings are consistent with Simone and Baez (2018), who showed that during the trip experience, tourists develop personal enrichment with the destination through a mobile application. Woyo and Slabbert (2021) found that, through mobile applications during the trip experience, tourist suppliers rate natural attractiveness, cultural attractiveness, and human resources as critical dimensions contributing to the competitiveness of Zimbabwe. During travel experiences, with the help of mobile applications, tourists develop a positive image of their destination. Thus, it increases destination performance (Akhoondnejad, 2015). During the post-travel experience, the findings revealed that mobile application usage mediates the relationship between post-travel experience and destination competitiveness.

These findings are similar to Milićević (2020), who found that post-travel experience through mobile application has an unforeseen good impact on the international tourism receipts in a destination. Lee (2021) found that post-travel experience through mobile application has a good result on returning visitors; mobile application within a goal plays a significant role in tourism development and, therefore, is an inevitable part of the tourism industry's expansion (Zengeni & Chaneta, 2018).

Kim and Kim (2017) found that mobile application usage generates inventive experiences for consumers, fosters a sustainable competitive advantage for tourism destinations and tourism-related suppliers, and creates sustainable competencies for intelligent tourism. These findings are supported by Neto et al. (2020) and Moradi et al. (2022), who revealed that travel experience influenced by the three tourism value chain determinants is appropriate for categorizing tourists based on destination competitiveness attributes. Likewise, Meng and

Uysal (2007) found that destination competitiveness is positively influenced by the excellence of tourism familiarity in all phases of the tourism value chain model (pre-travel experience, during-travel experience, and post-travel experience).

MANAGERIAL IMPLICATIONS

The above results indicate that using mobile applications clearly and meaningfully facilitates the relationship between tourism value chain factors and endpoint competitiveness in Tanzania. Destination management officers need to engage more in developing an official mobile application for the destination so that Tanzania can compete with similar goals worldwide. Mobile application usage transforms tourism destinations and acts as a change agent within the country and internationally, providing expert information and knowledge transfer to public and private organizations about the tourism industry in the country, as a result enhancing the tax revenue base.

With the changing tourism demand, Came (2022) recognized that 60% of queries for travel destination information come from mobile devices, 69% use the mobile application in search of travel inspiration, 46% use the mobile application in search of directions order, and 45% use the mobile application in comparing deals provided by target, while 52% of Facebook users said their friends’ photos inspired travel plans. This call for destination management officers to increase the competitiveness of Tanzania’s destination and mobile application usage is necessary to help visitors plan their trip by acquiring information about the goal and travel by allowing visitors to find directions during their journey. After the trip, a mobile application will help visitors share their experiences on social media, attracting others to travel to a particular destination.

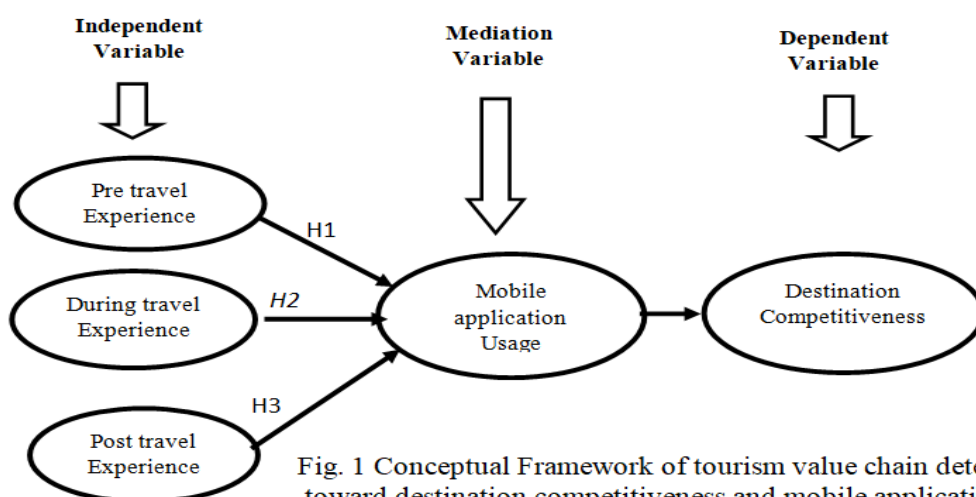


Fig. 1 Conceptual Framework of tourism value chain determinants toward destination competitiveness and mobile application usage mediating variable

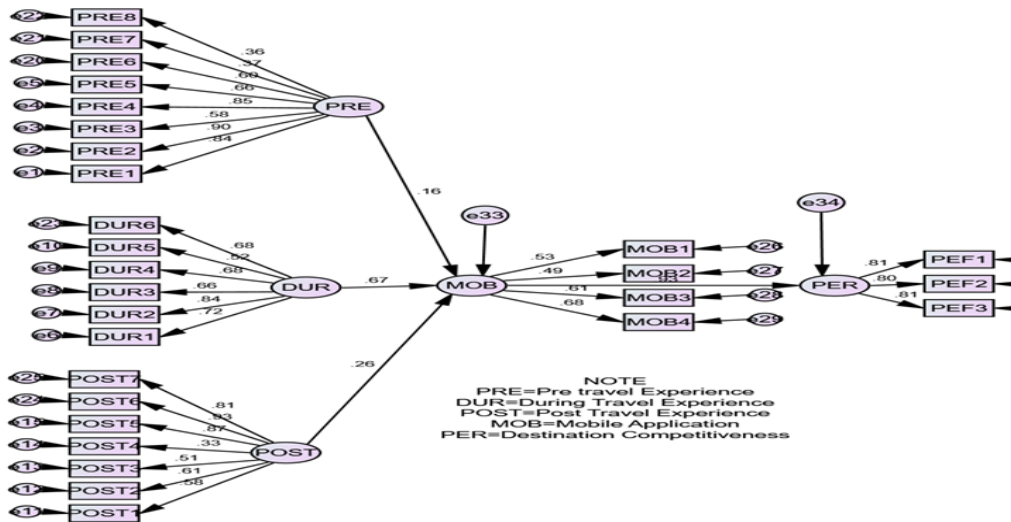


Figure 2: The standardized Regression weights for every path in the model

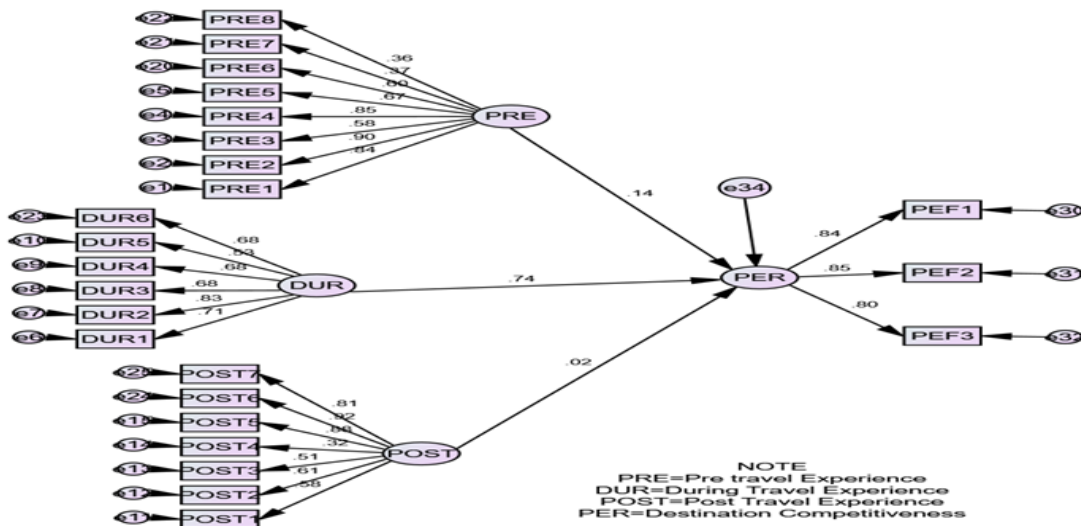


Figure 3: The structural Model for Direct Effect without a mediator (MOB)



REFERENCES

- Adukaite, A., van Zyl, I., & Cantoni, L. (2016). The Role of ICT in Tourism Education: A Case Study of South African Secondary Schools. In Review of Tourism Research (eRTR). ENTER 2016 Conference of Information and Communication Technologies in Tourism (Vol. 7).
- Akhoondnejad, A. (2015). Analyzing the pre-travel, on-travel, and post-travel behaviors of Iran's first-time visitors. *Journal of Travel & Tourism Marketing*, 32(8), 1023-1033.
- Albayrak, T., Rosario González-Rodríguez, M., Caber, M., & Karasakal, S. (2021). The use of mobile applications for travel booking: impacts of application quality and brand trust. *Journal of Vacation Marketing*, 13567667211066544.
- Altınay, L., & Kozak, M. (2021). Revisiting destination competitiveness through chaos theory: The butterfly competitiveness model. *Journal of Hospitality and Tourism Management*, 49, 331-340.
- Aramendia Muneta, M. E., & Ollo López, A. (2013). ICT Impact on the tourism industry. *International Journal of Management Cases* 2013; 15 (2): 87-98.
- Arica, R., Cobanoglu, C., Cakir, O., Corbaci, A., Hsu, M. J., & Della Corte, V. (2022). Travel experience sharing on social media: effects of the importance of content sharing and what factors inhibit and facilitate it—*International Journal of Contemporary Hospitality Management*.
- Bakar, N. A., Hashim, N. A., Nawi, N. M. M., Rahim, M. A., Muhamed Yusoff, A., Aziz, C., & Ahmad, G. (2020). Travel mobile applications: The use of unified acceptance technology model—*International Journal of Innovative Technology and Exploring Engineering*.
- Calvignac, C., & Smolinski, J. (2020). How can using a mobile application change the course of a sightseeing tour? A question of pace, gaze, and information processing. *Tourist Studies*, 20(1), 49-74.
- Christian, M. (2015). Mobile application development in the tourism industry and its impact on on-site travel behavior. Modul Vienna University.
- Cretu, C. M., Turtureanu, A. G., Sirbu, C. G., Chitu, F., Marinescu, E. Ș., Talaghir, L. G., & Robu, D. M. (2021). Tourists' perceptions regarding traveling for recreational or leisure purposes in times of health crisis. *Sustainability*, 13(15), 8405.
- Do, H. N., Shih, W., & Ha, Q. A. (2020). Effects of mobile augmented reality apps on impulse buying behavior: An investigation in tourism. *Heliyon*, 6(8), e04667.
- Ferhat, Şeker., Ahmet, Erdem. (2023). The factors affecting tourism mobile app usage. *Tourism & Management Studies*, doi: 10.18089/tms.2023.190101
- Glicería, Gómez, Ceballos., Juan, Pablo, Vázquez-Loaiza. (2023). ICT as a Support for Value Chain Management in Tourism Destinations: The Case of the City of Cuenca, Ecuador. *Sustainability*, doi: 10.3390/su151310181
- Justine, M., Kemhe., Edith, Talina, Luhanga., Michael, Kisangiri. (2022). Mobile Application for Research Knowledge Sharing and Dissemination: The Case of Nm-Aist Univeristy Tanzania. *Journal of Software Engineering and Applications*, doi: 10.4236/jsea.2022.157012
- Kim, D., & Kim, S. (2017). The role of mobile technology in tourism: Patents, articles, news, and mobile tour app reviews. *Sustainability*, 9(11), 2082.



- Küçükaltan, E. G., & Pirnar, I. (2016). Competitiveness factors of a tourism destination and impact on residents' quality of life: The case of Cittaslow-Seferihisar. *Journal of Tourism, Heritage & Services Marketing*, 2(1), 22-29.
- Kuo, T. S., Huang, K. C., Nguyen, T. Q., & Nguyen, P. H. (2019). Adoption of mobile applications for identifying tourism destinations by travelers: an integrative approach. *Journal of Business Economics and Management*, 20(5), 860-877.
- Larsen, S., Wolff, K., Doran, R., & Øgaard, T. (2019). What makes tourist experiences interesting? *Frontiers in Psychology*, 10, 1603.
- Lee, C. C., Chen, M. P., Wu, W., & Xing, W. (2021). The impacts of ICTs on tourism development: International evidence based on a panel quantile approach. *Information Technology & Tourism*, 23(4), 509-547.
- Liu, X., Mehraliyev, F., Liu, C., & Schuckert, M. (2020). The roles of social media in tourists' choices of travel components. *Tourist Studies*, 20(1), 27-48.
- Lugendo, A. (2021). The Determinants of Tourism Destination Competitiveness: A Case of Tanzania Wildlife Management Authority (TAWA).
- M., & Hosseini, R. N. S. (2022). How can destination competitiveness be essential in developing small island sports tourism? Integrated ISM-MICMAC modeling of critical factors. *Journal of Hospitality and Tourism Insights*, (ahead-of-print).
- Meng PhD, F., & Uysal PhD, M. (2016). Examining The Relationship Between Quality of Tourism Experience and Perceived Destination Competitiveness: The Tourists' Perspective. The University of Massachusetts. Amherst ScholarWorks@UMass Amherst. 2007 Ttra International Conference.
- Milićević, S., Petrović, J., & Đorđević, N. (2020). ICT as a factor of destination competitiveness: The case of the republics of former Yugoslavia. *Management & Marketing*, 15(3), 381-392.
- Neto, A. Q., Dimmock, K., Lohmann, G., & Scott, N. (2020). Destination competitiveness: how does travel experience influence choice? *Current Issues in Tourism*, 23(13), 1673-1687.
- Omary, Swallehe. (2022). The influence of technology acceptance model aspects on tour operators' adoption of database marketing technology in Tanzania. doi: 10.4324/9781003153580-13
- Potapkina, E. (2017). Designing a mobile multiple-destination app for city traveling.
- Rahmiati, F., Ismail, Y., Amin, G., Simatupang, T., Larson, D., & Othman, N. A. (2019, September). Tourism Value Chain Activities Model for Competitive Advantage Measurement. In *International Conference on Trade 2019 (ICOT 2019)* (pp. 43-47). Atlantis Press.
- Raimkulov, M., Juratargunov, H., & Ahn, Y. J. (2021). Destination attractiveness and memorable travel experiences in Silk Road tourism in Uzbekistan. *Sustainability*, 13(4), 2252.
- Rejoice Okocha, E., Agina, E. K., & Ojiula, U. B. (2021). Influence of Tourism Marketing on Destination Competitiveness and Economic Development: Exploring Nigeria and Other African Countries. *European Journal of Hospitality and Tourism Research*, 9(4), 19-28.
- Rivera, M., Croes, R., & Zhong, Y. (2016). Developing mobile services: A look at first-time and repeat visitors in a small island destination—*International Journal of Contemporary Hospitality Management*.
- Starcevic, S., & Konjikušić, S. (2018). Why millennials as digital travelers transformed marketing strategy in the tourism industry. Starcevic, S., & Konjikusic, S.(2018), Why



- Millenials As Digital Travelers Transformed Marketing Strategy in Tourism Industry, International Thematic Monograph Tourism in Function of Development of the Republic of Serbia-Tourism in the Era of Digital Transformation, University of Kragujevac, 221-24.
- Štetić, S., Šimičević, D., Aksentijević, J., & Trišić, I. (2020). Mobile apps as a destination management tool—a Belgrade case study. *Modern management tools and economy of the tourism sector in the present era*, 569.
- Sutomo, Y. A. W., Sianipar, C. P., Basu, M., Onitsuka, K., & Hoshino, S. (2022). Tourism value chain: synthesizing value webs to support tourism development and planning. *Tourism Review*, (ahead-of-print).
- Tabi, K., Randhawa, A. S., Choi, F., Mithani, Z., Albers, F., Schnieder, M., ... & Krausz, M. (2019). Mobile apps for medication management: review and analysis. *JMIR mHealth and uHealth*, 7(9), e13608.
- Thereza, Mugobi., Shogo, Mlozi. (2020). ICT Usage Determinants among Tanzania World Heritage sites. doi: 10.1344/THJ.2020.2.4
- Yi, Y. K., del Vas, G. M., & Muñoz, A. (2019). An integral mobile application for pre-travel, on-site, and post-travel stages. *International Journal of Information Systems and Tourism (IJIST)*, 4(1), 7-17.
- Yuniawati, Y., & Ridwanudin, O. (2015). Analysis of Travel Experience Quality at City Destinations. *Journal of Business on Hospitality and Tourism*, 1(1), 8.
- Zainuddin, Z., Hilmy, P., Ghafar, A., Zahari, M. S. M., & Radzi, S. M. (2012). Destination competitiveness, tourism performance, and residents' quality of life. *Current Issues in Hospitality and Tourism Research and Innovations*, p497-50.
- Zengeni, D. M., & Chaneta, I. (2009). Information communication technologies and destination competitiveness in Zimbabwe.