Self-Determination Theory in the Field of Tourism: A Bibliometric Analysis

Abstract
This research aims to reveal the current state of knowledge of the studies in which tourism and self-determination theory are used together and to provide clues for future studies. To achieve the aim of the research, the Web of Science was used as a database. In the WoS database, the search terms "self-determination theory", "tourism", and "tourist" were searched in the "topic" category. The data set of the research consists only of published articles. Thanks to the bibliometric method and software used in this study, the development of studies in which tourism and self-determination theory are used together has been analysed. Before the examination, seven parameters most frequently used in bibliometric analyses were determined. This article is the first study that analyses the articles using self-determination theory in tourism. Studies on tourism and self-determination theory are receiving more and more attention, and this article provides a significant opportunity to see the gap in the literature. In the research, 55 articles published between 2009-2022 were analysed, and as a result, prominent articles, authors, keywords, journals, institutions, and countries were revealed. It was observed that there was a jump in articles in this field between 2019-2021.

Keywords: self-determination theory, tourism studies, bibliometric analysis, Web of Science

1. Introduction
Self-determination theory is a psychological theory that aims to understand and explain the intrinsic motivations of individuals (Sheldon et al., 2004). Self-determination theory, which is also related to behavioural intention, explains the motivation of individuals associated with a particular behaviour and positive outcomes, such as life satisfaction and well-being (Deci & Ryan, 2008). This theory suggests that satisfying individuals' basic psychological needs (autonomy, relatedness, and competence) will increase their intrinsic motivation and satisfaction levels (Ryan & Deci, 2020). In this context, self-determination theory is used in various fields and as a tool by researchers to determine individuals' behaviour, motivation, and satisfaction levels.

Tourism is a dynamic sector with major economic and social impacts worldwide. With the expansion of tourism travel and the diversification of tourists' expectations, the tourism sector has to constantly renew and develop itself (Tanriverdi & Ciki, 2022). In this context, it is vital to understand and manage psychological and behavioural factors in tourism (Huang et al., 2015). At this point, self-determination theory, a theory of motivation, plays a guiding role in the tourism sector.

Self-determination theory has been applied to various fields, including consumer behaviour (Lin et al., 2009) and employee behaviour (Meyer & Gagne, 2008). Through self-determination theory, the motivation and satisfaction levels of tourism employees in their work life have been tried to be determined. Self-determination theory has also been used in tourism to understand its effects on individuals' touristic experiences, travel motivation and satisfaction (Gatling et al., 2016).

A literature review reveals that "self-determination theory" studies have gained momentum in tourism research. This research is essential to see which topics have more tendency and which have less tendency and,
most notably, to identify the existing gaps. Some researchers have examined tourists’ behavioural intentions (Huang et al., 2016; Zhang et al., 2017), subjective well-being (Mackenzie & Hodge, 2020; Thal & Hudson, 2019), brand loyalty (Ahn & Back, 2019), and travel motivations (Ye et al., 2014) within the scope of self-determination theory. In addition, these studies examined the relationship between various variables and their effects on each other. In these studies, various topics such as adventure tourism, mega-events, wine tourism, resort experience, and travel of people with mobility difficulties have been addressed within the scope of self-determination theory. However, no study analyzes the studies in which tourism and self-determination theory are used simultaneously. Therefore, this article is the first study to analyze the studies that use self-determination theory in tourism.

This study aims to reveal the current state of research on "self-determination theory" in tourism and clues for future studies. In this context, through the bibliometric method and the software used in this study, the development of the studies in the WoS database of the studies in which tourism and self-determination theory are used together has been analyzed. In this context, the first article published in the WoS database, and the related articles published until the last analysis data were interpreted. In line with the purpose of the research, some parameters were determined by considering the previous bibliometric studies and the analysis was completed (01.02.2023-10.02.2023).

Information on self-determination theory and bibliometrics is given in the first part of the study. In the second part, information about the research methodology is provided. In the third section, the data obtained from the WoS database are presented due to the analysis made with VOSviewer software. In the last quarter, conclusions and implications of the research are given, followed by limitations of the research and suggestions for future studies.

2. Theoretical background

Self-determination theory, which has been studied in various fields since the 1970s, explains the motivation of individuals related to specific behaviour and positive results (Deci & Ryan, 2008). Self-determination theory is a dialectical motivational framework that considers people actively seeking new experiences to master and integrate (Ryan & Deci, 2000). Self-determination theory proposes that clients have three basic psychological needs that affect their motivation, self-integration, and self-regulation (Deci & Ryan, 2000).

According to Deci & Ryan (2000), these psychological needs are essential elements of growth, integrity, and health of a living being and have three types: autonomy, competence, and relatedness. Freedom is defined as following the orders of personal will or an authentic self (Niemiec & Ryan, 2009). Competence means a sense of effectiveness and mastery over one’s environment (La Guardia et al., 2000). Relatedness describes the desire to feel connected and relate to others. Self-determination theory suggests that basic psychological needs are innate, like biological needs (Deci & Ryan, 2000).

Many studies have investigated the universality of mechanisms of self-determination theory in general life domains such as work, exercise, and relationships in general (Chen et al., 2015; Zhang et al., 2017). In addition, various studies conducted in different fields of study have sought and provided evidence for this claim (e.g. Chirkov et al., 2003; Deci & Ryan, 2000; Lin et al., 2009; Van den Broeck et al., 2010; Vansteenkiste et al., 2008). One of these research areas is tourism.

It has been seen that the theory of self-determination is used in various studies in the field of tourism, especially to understand employees’ behaviour towards their work (Gatling et al., 2016; Lee et al., 2015). Ahn and Back (2019) state that self-determination theory is essential in explaining travel decision-making. The number of studies on the use of self-determination theory in describing the motivation and behaviour of tourists is also increasing (Aicher & Brenner, 2015; Buzinde, 2020; Ciki & Tanriverdi, 2023; Japutra & Keni, 2020; Shavanddasht & Schänzel, 2017; Zhang et al., 2017). As a result, self-determination theory is becoming increasingly popular in tourism studies, and it is believed that this research will guide future studies.
3. Data and methods

This paper aims to put up with the relevant literature by examining the articles that use the theory of self-determination in the field of tourism. To achieve the aim of the research, bibliometric analysis was used. The bibliometric analysis, which provides statistical analysis of the progress of the studies in a particular field (article, conference paper, book chapter, etc.) in a certain period, also makes it easier to see the gaps in the literature (Zhang et al., 2022).

According to Osareh (1996), bibliometric analysis has been known since the 1890s but has been popular for some time. The idea of supporting bibliometric analyses with scientific maps and making them more transparent is not old but has been in the works for several decades (Hodak & Krajinović, 2020). The bibliometric method, used with increasing interest in various fields, offers important clues to researchers (Barač–Miftarević, 2023).

Bibliometric analysis, which is applied in various fields, is also used to reveal the current situation in studies on different subjects in the field of tourism (Gursoy & Sandstrom, 2016). Some of these studies are wine tourism (Durán-Sánchez et al., 2016), diaspora tourism (Ciki, 2022), bicycle tourism (Ciascai et al., 2022), film tourism (Ciki et al., 2023), heritage tourism (Bhowmik, 2021), coastal tourism (Pathmanandakumar et al., 2021), sport tourism (Jimenez-Garcia et al., 2020). However, journal articles are not the only option for bibliometric analysis. A journal that has served as a consciousness branch for years can also be examined with bibliometric analysis (Wang et al., 2019). Bibliometric analysis can also review articles, theses, or other documents on a topic in any country. Even studies using the bibliometric method in a field can be examined with bibliometric analysis (Ulker et al., 2023). In this context, the current research aims to contribute to the literature by using the bibliometric method, which is beneficial in many ways for studies in which the self-determination theory and tourism are used together.

Various softwares are available to create bibliometric maps and facilitate bibliometric analysis. One of these software is VOSviewer software (Van Eck & Waltman, 2010), and the data set of this research was analyzed based on seven parameters through VOSviewer software. The methodological process of the study is given in Figure 1.

![Figure 1 Methodological process](image-url)
Web of Science (WoS) database, one of the databases with high impact value, was used to analyze tourism studies based on the self-determination theory. The data collection process started on 01.02.2023, and the authors completed the final controls on 10.02.2023. In this process, some inclusion criteria were determined while creating the research data set.

It is possible to find more publications on the topic examined in the current research in journals in high-impact or lower-impact databases. However, the WoS database was preferred in this research since it contains reputable academic journals with high-impact values (Chadegani et al., 2013). Therefore, this research does not fully reflect the scope of research on self-determination theory.

The keywords "self-determination theory", "tourism", and "tourist" were used to access related articles in the database. With these keywords, a search was made by selecting the "topic" (Title, Abstract and Keywords) research area in the WoS database. The initial result was 144 studies. After this stage, the inclusion criteria were introduced. For example, only articles (early Access, review articles and research articles) were selected as the document type, and articles written outside of English were excluded from the research. As the WoS category, only articles made within the scope of "Hospitality Leisure Sport Tourism" were included in the analysis. As a result, the number of studies was reached (n=55) (VOSviewer, 2023).

4. Results

In the present study, analysis was made by considering seven parameters. The parameters of the research are as follows: "The distribution of articles published in the WoS database by years", "the authors who contributed the most in the WoS database to the subject", "the countries that contributed the most in the WoS database to the subject", "The organizations that contributed the most to the subject in the WoS database", "the journals that contributed the most in the WoS database", "the most cited articles in the WoS database", "the most preferred keywords related to the topic" and "co-citation analysis for authors" were made (VOSviewer, 2023).

4.1. The annual number of articles by years in WoS database

The first parameter examined in the article is the distribution of articles on self-determination theory and tourism by years. Figure 2 shows the distribution of articles written on the subject by year. As a result of the analysis made through VOSviewer, the first study on the current research topic in the WoS database was in 2009. Since the analyses were made at the beginning of 2023, the last study published belongs to 2022. At the beginning of the study, no year range was determined as the exclusion criterion. Therefore, the year range of the research emerged as 2009-2022 (WoS, 2023).

After the article was published in 2009, no article was published in WoS until 2014. From this year to 2018, there was a massive increase in the number of publications in 2019 (n=16). This year was followed by 2020 and 2021 with ten articles each. In 2022, fewer articles were published than in the previous few years. No articles were published in years not shown in Figure 2 (WoS, 2023).

Figure 2
The annual number of articles
4.2. The most contributing countries

This section presents the geographical distribution of the recordings of tourism and self-determination theory research in WoS by affiliation of the authors. The continent that contributed the most to this research topic in WoS is Asia, with 31 co-authored articles. The continent of North America follows Asia with 22 pieces, with the significant contribution of the USA. Europe follows it with 13 co-authored articles, Oceania with 10 co-authored articles and Africa with four co-authored articles (WoS, 2023).

The USA made the highest contribution to the co-authored articles dealing with the theory of self-determination in the context of tourism, with 20 pieces (with 436 citations). China follows the USA with 12 co-authored articles (with 110 citations). The top countries are followed by New Zealand (with 5 documents and 60 citations), Australia (with 5 documents and 53 citations) and Malaysia (with 5 documents and 31 citations). In addition, 30 different countries contributed to this research area (WoS, 2023).

A country-level co-authorship analysis was conducted to define the collaborative relationship of the articles in WoS from the first study in 2009 to 2022. Countries that met at least three threshold (article) criteria were included in the analysis, and 3 clusters were obtained. The red cluster includes China, Australia and New Zealand. South Africa (with three documents) is included in the green cluster, along with the USA, which contributes the most to the literature. In the last cluster, the blue cluster is Malaysia (Vosviewer, 2023).

Figure 3
Link to the countries that contributed the most to the topic in WoS database

4.3. The most contributing organizations

This section reveals the productivity of the universities of which researchers are members by linking the theory of tourism and self-determination. Ninety-three different organizations have contributed to the literature on tourism and self-determination theory. At the top of the list of institutions with the most articles, are four universities with three papers each (until 10.02.2023). These universities are as follows: Sun Yat-Sen University (with 55 citations), Univ. South Carolina (with 39 citations), Hong Kong Polytech University (with 32 citations) and Johannesburg University with 23 citations. 8 universities have two articles on this research topic. All the remaining organizations contributed to the research field with an article (WoS, 2023).

4.4. The most contributing journals

"Anatolia: International Journal of Tourism and Hospitality Research", with 6 published articles, is at the top of the list of journals that most accept articles on tourism and self-determination theory research in WoS. This journal is followed by 'Journal of Travel Research' and 'Current Issues in Tourism' with five articles each. Three journals have contributed to the literature with four articles each: International Journal of Hospitality Management, Asia Pacific Journal of Tourism Research, and Tourism Review International (WoS, 2023).
4.5. The most contributing authors

This section presents the most prolific authors who published using tourism and self-determination theory together (until 10.02.2023). In terms of the number of articles, there are ten authors, with two articles in the first place in the list of the most productive authors. This author is followed by 13 with two articles each (WoS, 2023). The authors are listed according to the number of citations: K. Hodge (with 36 citations), S. Houge Mackenzie (with 36 citations), S. Cole (with 36 citations), Y. Zhang (with 36 citations), D. B. Morais (with 29 citations), S. Hudson (with 26 citations), J. Ahn (with 17 citations), T. Wallace (with 15 citations), M. Shavanddasht (with 12 citations) and C. N. Buzinde (with eight citations). The link view of the authors created without specifying the inclusion criteria is shown in Figure 4 (VOSviewer, 2023).

Figure 4
Link to the most prolific researchers

4.6. The most important keywords in articles

In this part of the article, the most important keywords are presented in studies dealing with tourism and self-determination theory. Two hundred forty-one different keywords were used in 55 articles and at least two threshold criteria (used in at least two other studies). The keywords’ link map was created using the VOSviewer software (VOSviewer, 2023). The most used keyword in articles is self-determination theory, with 19 occurrences. It has been seen that the keyword motivation seven occurrences follow this keyword. Then comes the use of these two keywords differently with three occurrences: motivations and self-determination. Nineteen keywords were repeated twice in the articles (VOSviewer, 2023).

Figure 5
The most important keywords
4.7. Top 5 most cited articles

In this section, the five most cited articles on tourism and self-determination theory in WoS were examined and presented in Table 1 (until 10.02.2023). The five most cited articles were published in 4 different journals. At the top of the list is the study named "Exploring the Implications of Virtual Reality Technology in Tourism". In this study prepared by Huang et al. (2016), a questionnaire was applied to tourism professionals to understand how the psychological needs of virtual tourist activities were met and presented an application model to the literature for more comprehensive studies in the future.

"The influence of volunteer motivation on satisfaction, attitudes, and support for a mega-event" is the second most cited article in WoS. Lee et al. (2014) investigated the relationship and satisfaction between volunteering motivation and support for Expo 2012 Yeosu Korea using the self-determination theory and developed a theoretical model. As a result of the research, in which an on-site survey was conducted, the main dimensions of the motivation to volunteer in mega events were discovered.

Table 1
Top 5 most cited articles

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Journals</th>
<th>Year</th>
<th>WoS citation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ye, B.H. et. al.</td>
<td>Intentions to participate in wine tourism in an emerging market: theorization and implications</td>
<td>Journal of Hospitality &amp; Tourism Research</td>
<td>2014</td>
<td>28</td>
</tr>
<tr>
<td>Thal, K.I., &amp; Hudson, S.</td>
<td>A conceptual model of wellness destination characteristics that contribute to psychological well-being</td>
<td>Journal of Hospitality &amp; Tourism Research</td>
<td>2017</td>
<td>21</td>
</tr>
</tbody>
</table>

Source: Prepared by the authors using the WoS database.

The study "Adventure Recreation and Subjective Well-being: A Conceptual Framework" by Mackenzie and Hodge in 2020 ranks third in the list. Researchers suggest that adventure recreation within the scope of self-determination theory improves the eudaemonic aspects of subjective well-being by supporting the satisfaction of basic psychological needs such as autonomy, competence, and relatedness. They also proposed a conceptual framework integrating adventure recreation, self-determination theory, basic psychological needs, and eudaemonic subjective well-being.

Another most cited article is "Intentions to Participate in Wine Tourism in an Emerging Market: Theorization and Implications" (with 28 citations) by Ye et al. Based on the theory of self-determination that deals with motivations, it examined the factors that may influence the intention of Chinese people to visit local wineries. As a result of the survey, it was determined that subjective norms affect visit intentions through the mediating role of travel motivation.

The last article ranked fifth in the list of most cited articles, belongs to Thal and Hudson (2017). Thal and Hudson (2017) evaluated the conditions in a wellness facility by using the self-determination theory in their study. Researchers have investigated the conditions that will positively affect the subjective well-being of staying in this destination and propose a conceptual model in this context. In addition, the researchers brought three components to the literature as managerial inference: service product, service delivery and the service environment. As a result of the research, the applicability of the self-determination theory for the wellness facility was confirmed empirically, as well as the focus group interviews.
4.8. Co-citation analysis

Co-citation analysis shows how often published articles appear in the bibliographies of other publications and links accordingly (Dominko & Verbič, 2019). In a way, it identifies the leading authors and journals in the field in developing the researched subject (Pathmanandakumar et al., 2021). The current study’s minimum number of citations for co-citation analysis was set to 5. As a result of the analysis, it was seen that 78 of 2807 authors met the 5-citation threshold, and 6 main clusters were formed, it is presented in Figure 6. The red cluster has M. Gagne with 12 citations and 179 total link strength, and the green cluster has J. F. Hair with 31 citations and 560 total link strength. Ryan is in the blue cluster (with 80 citations and 1179 total link strength). R.P. Bagozzi is in the yellow cluster with 12 citations and 179 total link strength. E. L. Deci is the prominent author with 71 citations and 960 total link strength in the purple cluster, and in the last cluster, the black cluster, D. Getz is the main author with 18 citations and 257 total link strength (VOSviewer, 2023).

![Author co-citation network](image)

5. Conclusion

Although it is a relatively young field of research, the use of self-determination theory in tourism is expanding. However, despite the increasing interest, no study was found in which the publications in which tourism and self-determination theory were used together were examined by bibliometric analysis. The current study has some theoretical contributions to explore the development of tourism and self-determination theory studies using the bibliometric method and to provide clues for future research.

In this research, prominent articles, authors and their countries, journals, publication years and universities on the target subject were examined within the scope of the research. The first article on the subject in the WoS database appears to have been published by Leonard and Jennifer in the ‘Annals of Leisure Research’ in 2009 (according to the inclusion criteria). After the stagnation period, a similar number of articles were published between 2014 and 2018, and the articles in this field gained great momentum between 2019 and 2021.
The most cited articles and the most frequently used keywords were emphasized in the articles. In this way, the subjects the researchers had previously focused on (the universe and the sample are only journals scanned in WoS) were brought into the body of knowledge. As a result of the analysis, a set of articles was determined in which the attitudes and behaviours of the employees in the field of tourism towards their work and the motivation and behaviour of the tourists were examined within the framework of the self-determination theory. In this context, gaps in the literature are likely to attract more attention.

Bibliometric studies allow current progress in a field to be visualized with statistical information collaboration and social network maps. In this article, this process has been applied for certain parameters by using the VOSviewer program. In addition, the research was supported by co-citation analysis and bibliographic coupling analysis. Co-citation analysis reveals how often an article appears in the bibliographies of two other papers. The similarity level is analyzed with bibliographic coupling (Sharifi, 2020).

When the body of knowledge on the subject is evaluated, it is seen that the general orientation of tourism studies in the context of self-determination theory is on motivation, subjective well-being, and behavioural intentions. In tourism, self-determination theory has been researched in various areas, from adventure tourism to museum visits. In addition, there are studies on how the subjective well-being and different variables of visitors to accommodation facilities are affected based on self-determination theory (Ahn & Back, 2019; Ahn et al., 2019; Thal & Hudson, 2017). However, there are limited studies on whether visits to a destination affect subjective well-being, satisfaction, or similar variables within the scope of self-determination theory (Allan et al., 2015). In future studies, subjective well-being, satisfaction levels and revisit intentions of tourists visiting a destination within the scope of self-determination theory can be addressed. In addition, research can be conducted in the context of restaurants, museums, and similar businesses, which are components of the tourism sector.

On the other hand, it is seen that the knowledge on the subject is addressed within the scope of the self-determination theory of accommodation business employees (Gatling et al., 2016; Lee et al., 2015). However, there is no study on tourist guides, one of the other professions of the tourism sector. Moreover, more empirical studies are needed to better understand the implications of self-determination theory in tourism. These studies can provide more information on the general validity of self-determination theory, considering the differences between different types of tourism and destinations.

Tourism can easily affect local people positively or negatively. Another body of knowledge gap is the perspective of local people. Tourism activities have various socio-cultural and psychological effects on local communities, but no studies have been found. In this context, the psychological effects of tourism on local people should be examined within the scope of autonomy theory, which is a macro theory, and the perceptions of local people should be evaluated in detail.

Self-determination theory in tourism is essential for tourism researchers and practitioners. By providing services sensitive to tourists’ needs, tourism businesses can deliver personalized experiences and maximize tourists’ satisfaction. Providing options that give a sense of autonomy and allow tourists to make their own choices can make their experiences more meaningful. At the same time, providing activities where tourists can develop their competencies and meet new people can also increase tourists’ satisfaction (Grobbelaar et al., 2019).

Tourism companies and destination decision-makers can increase tourists’ satisfaction levels by providing experiences fulfilling their basic psychological needs. It can also become more accessible to identify services sensitive to tourists’ needs, and businesses can provide personalized experiences to their customers. In this way, tourists’ satisfaction can be maximized. At the same time, this situation affects subjective well-being, behavioural intentions, and satisfaction (Japutra & Keni, 2020; Thal & Hudson, 2019). Providing options that provide a sense of autonomy and allow tourists to make their own choices can make their experiences more meaningful.
However, some challenges and limitations are associated with using self-determination theory in tourism. The full implementation of the principles of self-determination theory may face practical challenges in the tourism sector. Tourism businesses may have to show flexibility to meet the different needs of tourists, and this can sometimes be a tricky balance.

Additionally, to the limitation mentioned earlier in the article that the population and sample of the study are based only on the WoS database, there are other limitations. First, only published articles were analyzed in this study; therefore, it is not a representative sample of the whole field. Further studies using different types of documents and other databases would contribute to the literature. Second, the data for this study was collected in February 2023, so the results are likely to vary. Finally, inclusion criteria were set to exclude irrelevant articles and ‘restricted searches’ were conducted using three key concepts. As a result, a dataset was obtained. Therefore, publications that are less relevant to the target topic may have been excluded from the analysis of this study.

References


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