Review

Railway and Tourism: A Systematic Literature Review

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Abstract: From the second half of the 20th century, numerous railways, especially in industrial and mining areas, were abandoned for economic reasons. The activism of the “railfans”, who are fond of trains, has made it possible to set up voluntary associations that have been the lifeblood of the beginning of projects for the recovery of the historic railway heritage and the promotion of it in a touristic sense. This topic is worthy of attention, and during recent years it has been the focus of several research papers. A systematic literature review was performed using the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) methodology. This tool is a minimal set of evidence-based elements aimed at helping authors to carry out a systematic literature review. This systematic literature review sought to consolidate knowledge on the subject. The research team formulated three research questions related to the dynamics of railway heritage recovery, the dynamics of railway tourism and the relationship between sustainability and railway tourism. The findings highlighted that the railway tourism process always originates from a project for the restoration of railway heritage, possibly maintaining authenticity. The voluntary associations, along with their “railfans”, are the main stakeholder, not only preserving the rail heritage but also developing railway tourism activities. The touristic railway could regenerate the local community, with positive benefits on the local economy. Many tourists could be attracted by railway tourism destinations in that they wish to live memorable experiences related to the nostalgia of the past.

Keywords: tourist travel; railway transport; tourism development; tourist perception; heritage; tourism train; steam trains

1. Introduction

From the mid-nineteenth century, the railway system contributed to the development of the industrial revolution and made it possible to significantly reduce travel time between cities. Some of these trains became iconic for their luxury, such as the Orient Express, the Trans-Siberian, the Ghan and the Blue Train, and continue to retain their appeal in international railway history [1–3].

From the end of the 1950s, many railways were closed or downsized for economic reasons in some European countries. In particular, the British railway model, despite having been emulated in many parts of the world, was on the one hand praised for promoting a high density of lines, but on the other criticized for the costly duplication of routes. This situation led to a systemic inefficiency, whose weaknesses are to be found in regulation and flaws in government policy [4].

The passage of the railway as a tourist resource is a debated topic in many parts of the world [5,6]. These places have a transitory nature, and the railway has allowed, in the past, a process of economic development, for example with industrial settlements. The economic dynamics in question involve evolution of these places, and railway tourism
could represent a differentiation in the local system [7–10]. An essential stakeholder in this possible step is voluntary associations. Some of these originated in the United Kingdom, for the rescue, restoration and management of railway heritage in order, in some cases, to use it for tourism purposes [11]. Talyllyn Railway in Wales was the first tourist railway [12]. This British model was disseminated in other European countries [13,14].

Railway tourism has shown positive dynamics in recent years [15]. According to the data of the European Federation of Tourist Railways (FEDECRAIL) in 2014, there were more than 5200 route kilometres (www.fedecrail.org/en/index_en.html, accessed on 13 December 2021) of tourist railways. France has almost as much, with 1200 km, followed by Austria, with 1100 km, and Great Britain, with 890 km. Moreover, there was found to be a workforce of some 35,000 volunteers, of which 19,100 were in the UK, and there were also 4000 paid staff. Railway tourism is still not very representative in Italy, Portugal and Spain. Lastly, there were an estimated 20 million annual travellers.

As a product, railway tourism should seek to enhance travel experiences, including nostalgia, a sense of history and authenticity. Furthermore, in the experiential travel scene, it is necessary to implement services that can respond to travellers’ expectations [16–19]. These expectations rise when there is an association with the word “luxury” [20,21]. These factors, together with others such as sustainability, must be implemented and promoted in the tourism product, as they are mainly sought after by the new generations [22–25]. The process for the development of a railway tourism product must, over time, involve all the actors in the community of the tourist destination [26–28]. Most rail tourism initiatives have been developed thanks to public financial funds, although entrepreneurial initiatives will need to be set up in the lifecycle of the long-term tourist destination [29,30]. Developing tourism for economic diversification in regions not suited to this sector requires fundamental changes to previous ways of operating, including new approaches to business creation, capacity building, education and knowledge exchange, networking and public-private interactions [31–33].

Given the interest in the recovery and enhancement of railway heritage for tourism purposes, the authors considered it important to investigate in what terms the researchers contributed to the description of the aspects and to the identification of the key characteristics of railway tourism. To better set the objectives and guide the investigative process, three research questions (R.S.) have been identified and are summarized below.

- R.S.1 What are the main dynamics in the recovery and management of railway heritage?
- R.S.2 What are the main trends in rail tourism?
- R.S.3 What are the main relationships between sustainability and rail tourism?

2. Materials and Methods

The present research is a systematic review of railway tourism. After the stage of research questions, the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) methodology [34,35] was used, in line with other studies [36–39]. The paper selection process consists of four stages: databases selection (i), papers extraction (ii), abstract screening (iii) and full-text screening (iv). For the completion of phases (ii), (iii) and (iv), eligibility criteria were applied. Each step of the entire selection process is explained in detail below.

Scopus by Elsevier and Web of Science (WoS) by Thomson Reuters were the two databases chosen for consultation. The exploratory investigation was important for the choice of keywords as it was noted that the researchers do not refer with univocal words to railway tourism. The authors decided to use the keywords “railway” AND “tourist” OR “preserved railway” OR “heritage railway”. Overall, 313 potentially selectable contributions were identified within the databases. Only scientific papers written in the English language and published between 2000 and 2021 were selected.

After eliminating the duplicates, the papers were submitted to abstract screening in order to select only those in which railway tourism represented the main focus; these were
analyzed individually. Therefore, before proceeding to full-text screening, the authors excluded 140 papers because they were not focused on the purpose of the research.

Finally, the number of papers selected to be subjected to full-text screening was 153. The full-text screening step was conducted to further verify the existence of the aforementioned eligibility criteria. All papers that did not have railway tourism as their main object of discussion and therefore would not have been allowed to answer at least one of the research questions were eliminated. The implementation of the search strategy led to the selection of 56 papers (Table 1).

Table 1. Papers selection process.

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<thead>
<tr>
<th>Papers</th>
<th>Database</th>
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<tr>
<td>Eligible papers</td>
<td>313</td>
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<td>Duplicated removal</td>
<td>20</td>
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<tr>
<td>Abstract screening</td>
<td>293</td>
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<tr>
<td>Full text screening</td>
<td>153</td>
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<tr>
<td>Full text selected</td>
<td>56</td>
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Overall, of the 56 papers, there is has been little produced on the relationship between railways and tourism. Examining individual years, 10 papers were published in 2014, whilst 14 articles have been published two years 2020–2021. The scientific production on the subject was very rich in 2014, with 10 papers, likewise in 2020 with 9 and 2021 with 5.

The breakdown of the papers by geographical area showed that 50% of the articles were made in Europe and 29% in Asia. In Europe, 11 papers investigated the subject of study in the UK.

3. Results

In this section, the results of the three research questions will be presented.

R.S.1. What are the main dynamics in the recovery and management of railway heritage?

From the end of the 1950s, many European countries decided for economic reasons to cut numerous railways, which were partly downsized or abandoned, especially those that connected industrial and mining sites [40–42].

This situation made “railfans” aware of the railway issues that invited governments to preserve their railway heritage [43]. Railway heritage, as well as industrial heritage, due to a different ideological vision linked to industrial culture as a phenomenon of national pride, had been valued above all in Anglo-Saxon countries such as the United Kingdom, which led the industrial revolution in the nineteenth century [44,45]. “Railfans” actively participated in the birth of numerous voluntary associations with the aim of managing the historic railways of many European countries [46]. Volunteering was mainly active in civil societies where collective identity revolved around the phenomenon of industry and the railway [44].

Volunteering is considered as a real “lifeblood” [47] that keeps the world of railway heritage alive [48]. Some studies have underlined the volunteers’ socio-demographic profile: predominantly male, over 50 years of age and a good level of income and education, many of them being engineers. They are “railfans”, fond of photography of historical railways. Many volunteers, now retirees, make good use of their time in their “second life” through their hobby of the world of railways [49]. The key motivations of volunteers are altruism towards the community, a means of escape from everyday life and the need to feel useful, but many are also motivated by sociability, leisure and fun [50,51]. The findings of one study highlighted the dilemma faced by managers of voluntary associations. On the one hand, there was the desire for greater efficiency and professionalism in the various activities such as restoration and hospitality, which implied management approaches with
paid human resources, while on the other hand, the “spirit of volunteering” implied a “gratuitousness” in performance [46].

Some scholars carried out studies analyzing programs of recovery for the railway heritage. The FEDECRAIL (European Federation of Museum & Tourist Railways) played an important role in bringing together in a single association most of those present in various European countries with the aim of developing common programs to safeguard and promote railway heritage [45]. The “Conrail system” association in the US was founded with the goal of providing funding and subsidies for the restoration and preservation of railroad-related equipment and objects, including reactivating railroads. Furthermore, this association stimulated the governments of the individual US states to allocate economic resources for this purpose [41]. Other railway heritage recovery initiatives, such as those dedicated to buildings, locomotives and lines, have been built in Romania, Ethiopia and Taiwan. In some cases, the rolling stock was in good condition, while in others the interventions were carried out without in-depth technical knowledge [52–55].

Recovery activities aimed at railway heritage were highly inhomogeneous in various European countries. Among the main factors were a lack of financial resources, location of the tourist destination, a diversity of ideological vision, neglect of the heritage of the area and the absence of civic pride [56–60]. Dragan et al. highlighted in their study a dilemma over the recovery of some Polish railways. The good state of conservation of the railway heritage there, even in the absence of a strong industrial culture and national pride on the theme of railways, could be a source of inconvenience for the community, as the railways recall bad memories, linked to the subjugation and colonization of Poland.

Some studies have highlighted the dilemma of authenticity surrounding the restoration of railway heritage. Technical evaluation of railway finds could involve two restoration approaches. The first is functional, with the replacement of obsolete or damaged parts with materials that may even be inauthentic. The museum approach replaces only what is strictly necessary, substantially maintaining the authenticity of the railway find [49]. Choosing one option over the other is not always an easy choice, and it is often useful to conduct a market survey to understand the collective thinking of the community [56,61]. The authenticity of a railway find is only a social construction of its evaluators. It has often been necessary to find a compromise between the preservation of a place or a railway building and the current needs such as the safety of the movement of a historic train [49,61–63].

One of the main weaknesses of the restoration and maintenance of railway heritage is the matter of skilled technique. Some volunteers, with their abilities, performed essential activities that allowed the defence of this railway legacy [44,47].

Some studies have highlighted the importance of some railways being inscribed on the UNESCO World Heritage List, such as the Darjeeling Himalayan Railway, the Semmering Railway (Austria) and the Rhaetian Railway (Switzerland). Local communities must try to promote these sites from a tourist point of view [48,64,65].

**R.S.2. What are the main trends in rail tourism?**

In recent years, railway heritage has become, in many countries, a tourist asset, giving a second life to railways, trains and railway buildings by making them tourist attractions [58,66]. Notably, a few industrial areas in Europe have developed railway tourism, with countless advantages for the local economy [45,47].

The fulfilment of railway tourism destinations was a long and complicated process. It was necessary to carry out some market surveys on which to build in order for the tourist destination to be successful for a long time [48].

Safeguarding the historic railway heritage could also have an educational and recreational element [67]. Train journeys of the past were recreated using original locomotives and carriages [68]. These were a way to evoke nostalgia for the past [65], even if the impossibility of being able to recreate it in a perfect and accurate way leads to a romanticization of the heritage [56]. Conservation is highly influenced by reality, and its value depends on human interpretation [69].
Most studies focused their investigations on the quality and attractiveness of the destination, leaving out research on the intrinsic characteristics of travel [69–71]. Su et al. [66] pointed out that the trip and the destination have the same importance. Moreover, the train was the main vehicle from which to appreciate the landscape.

Rail tourism was primarily linked to the travel experience, being slow, cultural, heritage-based and a much more dynamic form of tourism than mass tourism [45]. Railway heritage could attract both the young and old generations looking for new experiences, or with nostalgia for past memories [72].

The exploration of the relationships between motivation, nostalgia and a memorable tourist experience revealed how the feeling of nostalgia is a mediator between personal emotion and a memorable experience [65]. The ability of marketing to harness the appeal of nostalgia to increase the attractiveness of heritage consists in the attempt to induce nostalgia with the re-enactment of the past, or to produce cultural memory [56, 65, 73].

According to Niedzielski and Malecki [74], people love to travel because the trip has a remarkable inherent utility. The experience of travelling on a steam train could become an attraction, and the journey could lead to nostalgia [52, 72].

Travelling on a steam train can evoke memories of the past with the whistle of the locomotive or conductor [69]. Working on nostalgia in a tourism product means staging authenticity or a convincing scene, in which the visitor perceives it as authentic. The results of some studies have shown that visitors have considered the experience as not authentic, but similar to a show [69, 75].

Among the categories of actors, residents have a central role in transmitting to tourists the values of local cultural identity, which could help the development of the tourist railway [76].

Taylor et al. [77] focused their study on the role of actors in the planning process of a railway tourist destination. According to them, there are three distinct phases. In the first, the main activities are the development of the idea of a railway line, acceptance of the proposal by the interested parties, the finding of the necessary financial capital and renovation, ensuring the safety of the old infrastructure. In the second phase, it is necessary to develop accommodation and tourist reception services, whilst in the last phase, it is necessary to create an agreement with all the stakeholders for effective governance of the destination.

R.S.3. What are the main relationships between sustainability and rail tourism?

In the past, the relationship between tourism and territory was almost exclusively based on economic issues; later, however, the consequences and long-term transformations that tourism has wrought on the natural environment and societies, in particular on mobility, began to be considered with greater attention.

The train could be one of the most suitable vehicles for sustainable mobility. Therefore it was necessary to increase the awareness of tourists in the use of the train, trying to reduce the use of other means of transport such as the car and the plane [78]. Policies on sustainable mobility in some countries are trying to encourage train use for both the population and tourists [79]. In this new scenario, the tourist railway should stimulate the railway market by emphasizing both the values of railway heritage and the quality of the travel experience [47, 74].

The results of the research on the Qinghai-Tibet railway have highlighted, on the one hand, the benefits to the local economy, thanks above all to tourists, while on the other hand, they have shown that the railway has caused an increase in human pressures on the mountain ecosystem [55, 77].

The process of revitalizing a particular piece of railway heritage is similar in most areas, but success or failure depends on the economic dimension [67]. To start a recovery project it is necessary to encourage the railfans to form an association [43, 47]. This should raise awareness among public bodies, which are often reluctant to invest in railway heritage, regardless of its cultural importance [80]. The planning of the recovery activities for
railways, trains and railway buildings, in addition to the substantial financial resources necessary, should include an evaluation with the State, with the approval of specific rules relating to the safety of train traffic and to the environmental impact of historic trains and the construction provisions that allowed this heritage to be used for tourism purposes [45,48,67]. However, the results of some studies show that the lack of financial resources is the main concern in the restoration of railway heritage, as well as the use of it later [49,81]. It was also necessary to carry out a cost-benefit analysis for local communities [82].

In addition to the costly restoration and maintenance of railway material, it should also be noted that the tourist railways will have to achieve economic sustainability in the long term, keeping under control some factors that could negatively influence their budgets, such as the seasonality of the tourist product and the disproportion between the number of resources necessary for the functioning of the train and the number of passengers [45].

The results of some research carried out on some tourist railways underlined the positive economic effects on the local economy, which lasted for a long time [47,65,83]. A successful case of rail tourism was the “Jacobite”, a historic Welsh steam train that inspired the Hogwarts Express in the Harry Potter saga. The organizers of the Harry Potter festival used the opportunity to include the Jacobite among the tourist attractions designed to immerse the thousands and thousands of visitors in the fabulous world of the wizard [50].

On the other hand, some railway tourist destinations have had a short life cycle. In the initial phase, they received huge funding to restore the railways, but after a short time, the interest of tourists greatly diminished. These tourist destinations fell into decline [67,84]. Although most governments are reluctant to invest in rail assets, there are many development projects for certain tourist destinations [85]. The concept of economic sustainability is increasingly considered in tourism planning. Jiang et al. [86] applied a heritage assessment methodology for six railway destinations in an attempt to provide a comprehensive approach to sustainable tourism development. The results provide useful information to policymakers on the real and potential value of tourist destinations.

Willard et al. [87] and Sal et al. [88] argued that rail tourism was a sector that needs continuous investment to survive competition and to make the revitalization of the railways economically feasible. Furthermore, Niedzielski et al. [74] stressed that careful planning of the railway tourism product for the implementation of services was necessary. According to Halsall [69], to design an economically sustainable railway product over time it is necessary to conduct market surveys to identify tourism potential.

According to the results of some studies, rail tourism could be economically sustainable mainly in contexts where other tourist activities are already consolidated, relying on the support of large nearby tourist centres [40,89].

The social dimension of sustainability has been explored in some studies. Hoekstra [59] pointed out that it was necessary to investigate how the community perceived its railway heritage and decide whether to preserve it or to change it, for example with new buildings to provide a new local identity. Furthermore, the poorest social classes of local communities, affected by the deindustrialization of territory, as has happened in the Netherlands, could find social redemption in a territorial railway regeneration project, rebuilding cohesion and local pride.

The findings of some research conducted in some communities of Eastern European countries that for years were under a socialist ideology underlined that the railway was not perceived positively and could not be used as a tool to develop the local economy [57,90,91]. Projects for the recovery and promotion of railway heritage from a tourism point of view could help develop the community, with mutual benefits for both the individual and the community [51,81,92–95].

Projects for the recovery and promotion of railway heritage from a tourism point of view could help develop the community, with mutual benefits for both the individual and the community [51,81,92–95]. The “Adopt a Station” project in Scotland was an example of how community engagement in joining this program is representative of a sustainable social approach over time, as citizens do not feel the weight of volunteering as an obligation but as a chance to feel useful for the community [50,75].

According to Niedzielski and Malecki [74], “Reviving a tourist railway in support of efficient urbanization needs not only economic and environmental sustainability but above
all social sustainability. Unified design and support for the tourist railway should emphasize the element of “social cohesion”, as opposed to the acceptance of “social separation imposed by alternative means of transport such as cars”.

Willard and Beeton [87] pointed out that the single components of sustainability must be considered in a railway tourism product that can contribute to improving the quality of the tourist experience.

4. Discussion

This systematic literature review has attempted to answer the three research questions. In particular, the first research question highlighted that the first phase of a process for the realization of a railway tourist destination requires the restoration of the railway heritage, consisting of trains, buildings and other railway material. Most of the examined pointed out that the start this recovery activity takes place thanks to voluntary associations, made up of “railfans” [43,45].

These voluntary associations often have a dilemma. On the one hand, there is the desire for greater efficiency and professionalism in the various activities carried out with paid human resources, while on the other hand the “spirit of volunteering” implies a “gratuitousness” of the work. The restoration activities are linked to the concept of the authenticity of the railway heritage [46].

The second research question pointed out that the success of projects for the recovery of railway heritage and any promotion for tourism purposes is linked to the planning and management capacity of the organizations, which must be able to finance the activities with public and private financial funds constantly over time [77].

Rail tourism is constantly increasing in different parts of the world. Notably, this kind of tourism is highly developed in some European countries, such as Germany and Switzerland. Among the main actors, in addition to voluntary associations, numerous private entrepreneurial initiatives have been launched in the tourism field [84].

On the supply side, several destinations have discovered tourism by giving a second life to, for example, abandoned industrial areas or mining sites with important economic repercussions on the local economy [74]. For some tourists, the journey represents the nostalgia of the past, whilst for others it means to live the possibility of living a new experience such as travelling on a steam train [50,56,69].

Finally, the analysis of the literature has provided some interesting elements of discussion on the third research question relating to the possible link between sustainability and railway tourism. Most of the papers have focused their research solely on the economic and social dimensions. In particularly, the social dimension was focused on the role of the community in a process of enhancement of the railway heritage of a destination [59]. On the contrary, research on the environmental dimensions is not still very thorough. The development of the railway tourist destination must be linked to economic sustainability in the long term, with increasingly efficient management [77].

5. Conclusions

Railways can play a significant role in developing the attractiveness of a tourist destination and could act as a catalyst for territorial branding. Not only do they have natural, historical and patrimonial value, but they also contribute to the development of local communities, including the creation of jobs, the improvement of living standards and opportunities for cultural exchange.

Notably, the tourist railway could help to regenerate above all small local communities, some of which have been affected, for example, by a process of deindustrialization. If well-managed, tourism diversification could have positive economic impacts.

Furthermore, many tourists could be attracted by railway tourism destinations by a wish to live memorable experiences, related to the nostalgia of the past. In this context, the authors developed this systemic review aiming to consolidate knowledge of railway tourism at the international level. The findings highlighted that the railway tourism process
always originates from a project of restoration of the railway heritage, possibly maintaining
authenticity. The voluntary associations are the main stakeholder, not only for preserving
the rail heritage but also for developing the railway tourism activities. Currently, the
most meaningful railway tourism projects are in Europe, such as in Germany, Switzerland
and Great Britain. Some railways have also been transformed into railway cycle lanes for
cyclists, wheelchairs and buggies.

This review provided a framework of knowledge that is useful for setting future
research on rail tourism in countries where this aspect is less development, such as, for
example, in Italy. Among the potential research lines, a topic could be how the railway
industry and cultural and heritage bodies can best coordinate their efforts and their skills
in order to promote the tourism product, territorial attractiveness and tourism development.
Other potential topics include which tools could be used to create quality and value
experiences for potential customers during their rail tourism trips and how digitalization
can help add value to the customer experience.

This study, although not exhaustive, has tried to highlight the main drivers of rail-
way tourism. The systemic review focused mainly on the use of disused railways while
maintaining their original use as an objective, i.e., with trains and stations.

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