

## **Campsite revenue management decision-making - a semi-systematic review**

GRANDE, Kevin and HAYNES, Natalie <<http://orcid.org/0000-0002-8717-0488>>

Available from Sheffield Hallam University Research Archive (SHURA) at:  
<http://shura.shu.ac.uk/32704/>

---

This document is the author deposited version. You are advised to consult the publisher's version if you wish to cite from it.

### **Published version**

GRANDE, Kevin and HAYNES, Natalie (2023). Campsite revenue management decision-making - a semi-systematic review. *Tourism and Hospitality Research*.

---

### **Copyright and re-use policy**

See <http://shura.shu.ac.uk/information.html>

## Campsite Revenue Management Decision-Making – A Semi-Systematic Review

Journal:	<i>Tourism and Hospitality Research</i>
Manuscript ID	THR-23-0150.R1
Manuscript Type:	Original Manuscript
Keywords:	Revenue management, Semi-systematic review, Outdoor Hospitality, Campsite, Camping, Decision-Making
Abstract:	<p>This paper provides a semi-systematic review of the extant literature surrounding the concept of camping and campground revenue management from 1984 until 2023 and presents a conceptual model that encircles and categorizes all the subjects treated in the previous research which was found to be disparate and multidisciplinary in nature. This paper provides a comprehensive review of the state of knowledge in the field and a conceptual structuring of the topic which was previously lacking. By synthesising the various disparate conceptual strands of the topic that have developed over time, the paper presents a revenue management decision-support tool tailored for campsites that organizes the camping revenue management literature around its own conceptual model whilst also highlighting areas for future research.</p>

SCHOLARONE™  
Manuscripts

## A Semi-Systematic Review

**Keywords** – camping, campsites, revenue management, decision-making, semi-systematic review

## Introduction

The principles and applications of campsite revenue management are currently underexplored, despite it sharing several characteristics with the hotels where revenue management has been investigated since the 1980s. Although there is extant literature that touches on the topic dating back to the 1970s, it is disparate and multidisciplinary, making it hard to characterise the evolving concept of campsite revenue management. Due to these challenges, a comprehensive review of the state of knowledge in campsite revenue management decision-making is lacking. This paper addresses this through presenting a semi-systematic review of the related literature between 1984 and 2023, providing a “coherent conceptual structuring of the topic” (Bem, 1995, p.172). By synthesising the various disparate conceptual strands of the topic that have developed over time, the paper is able to present a revenue management decision-support tool tailored for campsites that organizes the camping revenue management literature around its own conceptual model whilst also highlighting areas for future research. We define a campsite as a private or public for-profit establishment, classified and authorized to receive tents, caravans, motor homes, leisure homes and mobile homes for revenue-generating activities.

## Theoretical Background

In the context of performance, decision-making involves identifying actions and strategies that will maximize the organization's effectiveness, efficiency, and productivity (Barros, 2005; Assaf et al., 2010). This can include decisions such as allocating resources, defining performance objectives, implementing continuous improvement measures, and managing key performance indicators (Botti et al., 2009; Assaf and Tsionas, 2018). This involves

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

choosing among several possible alternatives to optimize results, profitability, or the achievement of long-term corporate objectives. In the hotel revenue management context, it generally takes the form of data-driven automated systems and analytical tools that assist managers in the optimal allocation of resources (rooms, locations, seats, etc.) to maximize revenues, while considering constraints such as capacity, fluctuating demand, customer segmentation, and customer preferences (Mariani et al., 2018; Talón-Ballesteró et al., 2022). However, the challenge of modern revenue decision-making is the need for multi-dimensional data analysis managing large quantities of structured and unstructured data, often in real time generated by automated revenue decision tools moderated by manager knowledge and insight (Egan and Haynes, 2019). This use of multidimensional data analysis can remove ambiguity and lead to more accurate decision-making but requires revenue systems that can synthesize highly detailed data (Egan and Haynes, 2019).

60

In campsite revenue management literature, the decision-making tools are less obvious and there have been few articles directly concerned with the subject over the last ten years. The ones that have touched on this subject (Rottembourg and Masson, 2017; Poldrugovac et al., 2019; Salo et al., 2020) are linked to decision support aimed at understanding or shedding light on how to better optimize revenue sources by considering consumer expectations, competitor facilities, types of tourist destination, external factors that can influence choices but rarely make the link to often overlooked parameters such as climatology (Ma et al., 2020; Craig et al., 2023), seasonality (Rice et al., 2019), and lodging quality (Cvelić-Bonifačić et al. 2017). While several tools and scientific contributions have emerged from the literature review on camping management, none of them (Brooker and Joppe, 2014; Rogerson and Rogerson, 2020) have thought to put the puzzle together to show how to combine all the

contributions with a view to offer a conceptual model of revenue management (RM) decision-making for the for-profit campsites.

Faced with these challenges we proposed the need to develop a global and integrated revenue management decision-making approach for campsites. This required taking a comprehensive, integrated and fully coordinated review of all relevant research considering not only the individual elements, but also the relationships, interactions, and mutual impacts between these investigations. Such an approach provided a holistic overview that avoided silos or fragmented treatment of different parts of a complex situation by coordinating different disciplines, methodologies, or perspectives to create a more complete and in-depth understanding of a given situation. In the context of revenue management for campsites, a holistic and integrated approach meant considering not only traditional revenue management parameters, but also elements such as climatology, seasonality, and quality, while combining them in a conceptual RM decision-making model with a view to building a suitable decision-making tool.

### **Literature Review Method and Search Strategy**

The existing literature on camping revenue management draws from a multi-disciplinary field which raises challenges and complexities for doing a review (Watson and Webster, 2020). When a topic is studied by various groups of researchers within diverse disciplines, a fully systematic approach which calls for the review of every single article that could be relevant to the topic are argued to be impractical (Wong et al., 2013). Instead, this paper follows a semi-systematic approach which offers a pragmatic solution recognising it may be impossible to include every article that is judged to have some relevance to the topic, in

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

contrast to the statistical approaches of fully systematic literature reviews (Hall et al., 2016). Zunder (2021) agrees that the approach is “rigorous but flexible” (p.2) and is being increasingly used in a variety of settings. In addition, Fisch and Block (2018) describe this method as a goal of “summarizing and categorizing knowledge” (p.104) and Wong et al. (2013) argue it aids understanding of all relevant topics and synthesizes these using meta-narratives instead of measuring effect by size as may be achieved with a more quantitative approach literature reviews such as meta-analysis. Snyder (2019) supports this is a good strategy when the purpose of a review is to identify themes, knowledge gaps and track development of knowledge over time. Thus, a semi-systematic review supports our thematic analysis approach to the papers included by identifying major themes in each period, tracking the development or removal of these themes over time, as well as gaps to formulate a conceptual framework that highlights the key dimensions of camping revenue management.

A semi-systematic review still requires rigour in identifying and selecting articles to be included in the review and this paper adopted the approach of Kharawala et al. (2020) who divided the process into four stages of identification, screening, eligibility, and inclusion (see figure 1). This demonstrates that the review is transparent, reproducible and centred on a clearly defined topic. In the first stage, articles were identified for inclusion by a single reviewer via Google Scholar using various search terms to be combined with “camping”, “campsite” including “revenue management”, “pricing”, “financial management”. A snowball sampling approach was then used where further articles were identified through reviewing the reference list of previously identified papers. This approach was successfully used by Almela and Calvet (2021) in their semi-systematic review of volunteer tourism and

gender. A second reviewer then conducted a quality check identifying four additional papers. In the second screening, records were checked for relevance using the article title and abstract. Full-text articles were then assessed for eligibility in the third stage and were excluded if they were not peer reviewed or relevant to pricing, revenue management or financial management. This led to the fourth stage where papers were selected for inclusion in the review.

[Figure 1]

## Summary of Identified Publications

### *1980-89*

Only two relevant papers were identified from the 1980s and both had pricing as the dominant focus, pursuing the theme of demand rationing using differential pricing. There was a strong tie between pricing and social policy including equity, community stability and environmental quality. The focus was not on using pricing for commercial gain with Rosenthal et al. (1984) commenting that “pricing has other important implications in addition to raising revenues,” (p. 196) such as rationing demand finding doing so through pricing was more economically efficient than other rationing schemes. They focused on fixed carry capacities set to reduce congestion and ecological damage, but they did recognise that financial surplus could be used as stimulus for developing further campsites. However, what did emerge from this paper was a recognition of the importance of the customers willingness to pay. They recognised the link between price changes and changes in consumer behaviour, for example shifting demand from off-peak times if peak prices were increased. Finally,



1  
2  
3 144 Bamford et al. (1988) focused on differential pricing and price elasticity. The authors  
4  
5 145 identified that quality of location (e.g., water or non-water-based locations) could impact  
6  
7 146 elasticity, with water-based parks found to be price inelastic, therefore resulting in price  
8  
9 147 increases driving revenue.

11 148  
12  
13  
14 149 [Table 1]  
15  
16

17 150  
18  
19 151 **1990-99**

20  
21 152 In 1991, Beaman et al. continued to explore price elasticity of demand. They identified the  
22  
23 153 parameters affecting demand elasticity including price but also variables such as weather.  
24  
25 154 They aimed to develop a pricing policy that shifted demand from extremely busy  
26  
27 155 campgrounds towards those experiencing lower demand during the peak season using a  
28  
29 156 three-tier pricing system where premium prices were charged for high-occupancy sites and  
30  
31 157 discounts offered for low-occupancy sites. Interestingly this introduced the concept of the  
32  
33 158 “feeder” campground, so called because they feed more desirable campgrounds when their  
34  
35 159 consumption drops owing to price increases. Price increases resulted in the full campsites  
36  
37 160 staying full but feeders suffering a greater reduction in use, as if price increases had not been  
38  
39 161 introduced.  
40  
41  
42  
43

44 162  
45  
46 163 Arimond and Lethlean (1996) extended the discussion on pricing and demand to examine  
47  
48 164 profit centre analysis, identifying a link between campsite size and annual average  
49  
50 165 occupancy rates. They found that campsites with 200 or more pitches had an annual average  
51  
52 166 occupancy percentage than those with less than 200 pitches. Unfortunately, the authors did  
53  
54  
55 167 not identify the reasons for this correlation although they did stress the importance of setting  
56  
57  
58  
59  
60

the correct site rental fee. They identified that seasonal campers contributed little revenue through ancillary services and therefore pitching the site rental fee correctly for those segments was key to driving revenue. The paper also highlighted the complexity of camping market segmentation with very distinctive groups of longer-stay and shorter-stay customers that make revenue management in this industry more complex in terms of the impacts of price bundling or unbundling, market segmentation mixes, and total revenue management.

[Table 2].

### **2000-2009**

After the last paper published in the 1990s, there is a six-year gap until the next relevant paper by Bell and Crilley (2002). This paper marked a significant shift to a focus on benchmarking techniques. They created a framework for implementing benchmarking for the camping sector. Interestingly the paper mentions the need to benchmark financial data such as costs but there is no discussion of benchmarking common revenue metrics such as occupancy percentages and average rates. This demonstrates that by the turn of the millennium, revenue KPIs were still not viewed as a focus for camping management., despite the operationalisation of revenue management benchmarking in the hospitality industry (Sigala, 2004).

Like Bell and Crilley (2002), Hayllar et al. (2006) also referred to financial benchmarks without considering non-financial revenue management metrics but did move onto to consider the value versus price equation. They indicated that prices had outstripped service

1  
2  
3 191 and facilities but stated that “further research was needed to tease out this service quality  
4  
5 192 attribute” (p. 125).  
6  
7 193  
8  
9  
10 194 [Table 3]  
11  
12 195  
13  
14 196 **2010-2019**  
15  
16  
17 197 The next two papers were both published in 2011 by Pozo et al. (2011a; 2011b). The first  
18  
19 198 paper (2011a) introduces hedonic pricing models which identify the internal and external  
20  
21 199 factors and characteristics that affect an item’s price in the market. They highlight the  
22  
23 200 increasing sophistication of customers, commenting on the need for campsites to adapt to  
24  
25 201 the constant requests from clients to improve quality of services and installations. The results  
26  
27 202 were explored further later that year (2011b). The authors returned to using price as a tool  
28  
29 203 of rationing campsite availability to reduce environmental harm. They argued that free  
30  
31 204 campsites lead to increased environmental degradation. Alongside this they highlighted the  
32  
33 205 increased complexity of campsite accommodation types and the need for a structured  
34  
35 206 classification of inventory. Later, Brooker and Joppe (2014) stated that lack of access to  
36  
37 207 data, especially from small businesses unwilling to share information have held up academic  
38  
39 208 research in this area but they did identify themes that were now of much closer relevance to  
40  
41 209 revenue management such as price, profitability, and market segments as well as themes  
42  
43 210 related to user experience, operations and change management which all could be considered  
44  
45 211 linked to revenue management.  
46  
47 212  
48  
49  
50  
51  
52  
53 213 Rottembourg and Masson (2017) were the first to mention revenue management in their  
54  
55 214 paper title which examined how to improve decisions around allotment contracts with tour  
56  
57  
58  
59  
60

operators and travel agents. They advanced the discussion of camping revenue management into the field of distribution channel management, discussing balancing volume through direct and in-direct channels. Later, Rottembourg and Masson (2017) described tour operator bookings as a “poisoned chalice” (p. 115) for the campsite owner because though these pre-booked sales guaranteed a good base level of sold inventory they could damage profits if high discount levels through these third-parties could not be controlled. In addition, they identified that less than 10 percent of French campsites used dynamic pricing, suggesting it was not a widely used practice. They argued this was due to popular RM software not being tailored to handle and optimise the combination of heterogeneous sales in the camping industry especially as the number of inventory combinations increased and further challenged the campsite owner to find the optimal mix. These frequent changes in inventory type were also found to pose a challenge for accurate forecasting.

Next Peršić et al. (2017) argued that “academic research has placed relatively little attention on the economic aspect of the camping business and that relevant reporting standards are missing” (p.451) and that both short- and long-term decision-making had not been adequately considered. They specifically focused on the lack of research into campsite benchmarking. They argued for the need to develop software to aid the implementation of benchmarking and for collaboration between experts, educational and consultancy organisations, so that an integrated approach of benchmarking could be applied, and results used in the right manner.

In the same year, Mikulić et al. (2017), presented a relevance-determinance analysis of camping attributes to understand how specific attributes influence customer experience.

1  
2  
3 239 They uncovered which campsite attributes were most important when choosing a campsite  
4  
5 240 for a vacation, and those most important when on vacation. Infrastructure-related campsite  
6  
7 241 attributes, as well as safety and ecological standards were identified as the most important  
8  
9 242 attributes for both campsite choice and the camper's onsite experience confirming the  
10  
11 243 emerging demand for more sophisticated inventory options such as glamping. Cvelić-  
12  
13 244 Bonifačić et al. (2017) also looked at campsite attributes and price but related this to  
14  
15 245 customer age finding that for the younger generation price was the most important driver  
16  
17 246 but for the older generation proximity to the sea was key. Next, Poldrugovac et al. (2019)  
18  
19 247 studied competitive pricing, specifically examining the relationship between pricing strategy  
20  
21 248 and the average percentage difference in revenue per available capacity and occupancy  
22  
23 249 relative to their competitor sets over a three-year period. Interestingly this paper also made  
24  
25 250 the first reference to a camping revenue management metric aimed at measuring revenue per  
26  
27 251 available capacity.  
28  
29  
30  
31  
32 252  
33  
34  
35 253 The final paper of the period returned the focus to demand forecasting (Rice et al., (2019).  
36  
37 254 They also argued that the camping industry remained relatively under-researched  
38  
39 255 contributing to challenges faced by park managers when increasing and predicting future  
40  
41 256 demand. They focused on seasonality and how it can skew visitation patterns testing six  
42  
43 257 different forecasting models. They found no universal measure that performed best for all  
44  
45 258 campsites in the study due to the large variety of campsite characteristics and suggested a  
46  
47 259 combination method was best. The paper also highlighted that park managers favoured non-  
48  
49 260 market allocation of campsites such as lottery systems to smooth demand instead of dynamic  
50  
51 261 pricing as this more directly conformed to pre-set ecological and social carrying capacities  
52  
53  
54 262 of protected areas.  
55  
56  
57  
58  
59  
60

263

264 [Table 4]

265

266 **2020 onwards**

267 Many key papers were published in this period. The first one by Saló et al. (2020) examined

268 the impact of seasonality on supply as well as demand identifying a relationship between

269 star category and the percentage of time spent open. During the period January-April the

270 higher the star category the lesser percentage of opening periods. Once again, they offered

271 also further confirmation that campsite pricing strategies remain under-researched.

272

273 A key set of papers studied exogeneous factors (Craig, 2021; Ma et al., 2020; Craig and

274 Karabas, 2021; Ma et al., 2021; Craig et al., 2023). Authors, such as Ma et al. (2020), Ma et

275 al., (2021) and Craig et al. (2023) introduced a Camping Climate Index (CCI), empirically

276 tested, validated, and applied as a method to quantify the short and long-term effects of

277 weather and climatic variability for camping demonstrating that demand is highly correlated

278 with climate. The authors conclude that future studies should attempt to capture factors that

279 can influence camping behaviors including shifting weather trends (including desirability of

280 conditions within and between seasons), types of holidays, weekend versus weekday

281 occupancy, advanced reservations, cost of stay, cancellation policies, travel distance, and

282 the length of occupancy. Craig (2021) and Craig and Karabas (2021) stressed the importance

283 of exogeneous factors on camping demand with a focus on the relationship between time

284 and distance travelled to each campsite and consequent demand during the Covid-19

285 pandemic. They identified that concrete construal about time and distance positively

286 impacted demand and that travel distance did not negatively influence demand for camping

1  
2  
3 287 decisions in contrast to other tourism offerings during the pandemic. Although not directly  
4  
5 288 related to revenue management metrics these papers offer interesting insights into factors  
6  
7  
8 289 relevant to revenue management decision-making.  
9

10 290  
11  
12 291 Next, Grande (2021) cited the continued lack of research in the campsite field and focused  
13  
14 292 on the intrinsic resources which influence attractiveness and revenue management. Grande  
15  
16  
17 293 (2021) also picks up on the lack of a standardized, tailored method for benchmarking in the  
18  
19 294 camping industry. Later, Grande and Camprubi (2022) identified the existing camping  
20  
21 295 business models aimed at creating categories justified by consistent profiles. This first  
22  
23 296 business model segmentation in the camping management literature aided the understanding  
24  
25  
26 297 of homogeneous categories in a very heterogeneous industry identifying both financial and  
27  
28 298 non-financial indicators. The article ends with an analysis grid of performance and steering  
29  
30 299 indicators adapted to the identified segments. The question of revenue management is  
31  
32  
33 300 addressed in the broadest sense by the revenue stream key theme, which includes bare  
34  
35 301 pitches, rentals, and ancillary sales. They show that the revenues of campsites are dependent  
36  
37 302 to the associated categories. In other words, following the characteristics of a category most  
38  
39  
40 303 likely leads to the identified revenue typologies. However, the authors do not explain how  
41  
42 304 they aggregated the diversity of rentals with currently non-standard names.  
43

44 305  
45  
46 306 Most recently, Grande and Botti (2023) propose a multi-criteria analysis of the intrinsic  
47  
48 307 factors that make up campsites. Again, this article does not directly address revenue  
49  
50  
51 308 management techniques but is relevant due to the contributions it makes to the understanding  
52  
53 309 of the leisure factors that will influence it. The challenge of this research is twofold since the  
54  
55  
56 310 authors aimed to identify categories and at the same time a model to perform a scan of the  
57  
58  
59  
60

competitive environment. The results of this research conclude with the operationalization of their conceptual model, the creation of a segmentation system by the intrinsic resources and the proposal of a benchmarking model adapted to the campsites. In the discussion, the authors show how star segmentation is much less relevant than segmentation by intrinsic resources. This raises the question of the relevance of segmentation in relation to comparable companies from a revenue optimization perspective.

[Table 5]

### ***Observations***

Overall, the literature review is disparate and often multidisciplinary, making it difficult to characterize management development and particularly revenue development in this industry. Thirteen articles have contributed to the research on revenue management applied to campsites between 2010 and 2023, but to date no conceptual model of revenue management linking all the contributions has been proposed. To this we add that the sub-criteria, criteria and dimensions of campsite revenue management are scanty clear and need to be structured based on all the scientific contributions. Categorizing and addressing a comprehensive review of the state of knowledge in this area is an opportunity to illuminate gaps and future research directions.

### ***Sub-criteria and Criteria for Camping Revenue Management***

As the review has shown, revenue management is multidimensional, complex, systemic, cross-functional, and requires the collection of information on the characteristics that make up the enterprise. It is necessary to focus on the entire value chain leading to revenue



1  
2  
3 335 management. To achieve this, we have categorized 58 sub-criteria into 12 main criteria based  
4  
5 336 on the literature (see table 6 below).  
6  
7  
8 337  
9  
10 338 [Table 6]  
11  
12 339

13  
14 340 ***Dimensions for Campsite Revenue Management***

15  
16  
17 341 Further analysis and conceptualization of the sub-criteria and criteria led to the identification  
18  
19 342 of 7 dimensions; actors, key themes, measurements, analysis, corrective actions,  
20  
21 343 benchmarking system, business plan and decisions (see table 7).  
22  
23  
24 344

- 25  
26 345 - Dimension 1 is related to the actors. They include criteria such as demand-side and  
27  
28 346 the supply offer (competitors).  
29  
30 347 - Dimension 2 is related to key themes. They cover lodging facilities, resources,  
31  
32 348 quality, experience, pricing, and exogeneous factors.  
33  
34 349 - Dimension 3 is related to measurement. This section includes measures related to  
35  
36 350 market positioning and offer positioning, for example measurement of customer  
37  
38 351 satisfaction and the attractiveness of companies in the camping market through  
39  
40 352 intrinsic resources.  
41  
42 353 - Dimension 4 is related to analysis. It includes analysis methods to observe  
43  
44 354 differences between competitors or customers.  
45  
46 355 - Dimension 5 is related to corrective actions. These are short-term actions that impact  
47  
48 356 on the price adjustment, the adjustment of the product mix and creation of new added  
49  
50 357 value.  
51  
52 358 - Dimension 6 is related to benchmarking systems. It concerns all non-financial data  
53  
54 359 and financial data through the creation of a benchmarking tool to identify best  
55  
56 360 performing firms.  
57  
58  
59  
60

- Dimension 7 is related to the business plan and decisions. This covers topics such as investment forecasting, innovation management, and the deployment and organization of support functions.

[Table 7]

## Discussion

### *Conceptual model*

This literature review shows that campsite management has changed radically since the 80s. The main publications focused on pricing and the few variables that influenced it. Most articles on campsite management dealt with non-profit organizations. With the growing popularity of leisure time, camping facilities and infrastructures have moved upmarket to meet the quality expectations of holidaymakers. Camping has become a profitable industry, open to investment funds, which means that financial resources vary widely, putting pressure on competitive levers. To remain competitive, revenue management is the perspective addressed in this article. It highlights 7 dimensions as levers to revenue management by decision-makers.

The proposed categorization of the 7 dimensions corresponds to the articulation of the topics revolving around revenue management decision-making. To provide a "coherent conceptual structuring of the subject" (Bem, 1995, p. 172), we have drawn on all the dimensions, key themes, criteria, and sub-criteria identified in this literature review to provide Figure 2. This conceptual framework allowed for the organization and categorization of often disjointed themes in the extant literature to help better understand the current position of camping revenue management understanding and practice (Watson and Webster, 2020) and identify

1  
2  
3 386 the way forward for future research and IT development. Globally, our findings show that  
4  
5 387 the lack of clear definitions and understanding of boundary conditions in the theoretical  
6  
7 388 application of revenue management creates a bottleneck for further adoption of revenue  
8  
9 389 management functions. However, this study presents a conceptual model to ground new  
10  
11 390 research and emit the sensitive links that these research wishes to address. This conceptual  
12  
13 391 framework provides a clear architecture that guides readers through the topics of campsite  
14  
15 392 revenue management.

16  
17  
18  
19 393 [Figure 2]

20  
21 394  
22  
23 395  
24  
25  
26 396 **Dimension 1: Actors**  
27  
28 397 This dimension allows the research to be grounded either on the demand side or on the  
29  
30 398 supply side. It questions the gap obtained via an analysis of the company and its manager or  
31  
32 399 employees on the one hand, but also via the analysis of customer segments on the other. The  
33  
34 400 article by Pozo et al. (2011, a, b) addresses the question of demand, as does Mikulić et al.  
35  
36 401 (2017) and Rice et al. (2019) with the capacity side addressed by Bell and Crilley (2002),  
37  
38 402 Hayllar et al. (2006) and Persic et al. (2017).

39  
40  
41  
42 403  
43  
44 404 **Dimension 2: Key themes**  
45  
46 405 This dimension links themes that have been found to be revenue dependent. Articles by Saló  
47  
48 406 et al. (2020) and Ma et al. (2022) show how seasonality and climate factors impact revenue.  
49  
50 407 Likewise, Poldrugovac et al. (2019) emphasize the importance of evaluating prices by "night  
51  
52 408 rates, weekly rates, period" or Grande and Camprubi (2022) include quality of service or  
53  
54 409 intrinsic resources.

410

**411 Dimension 3: Measurements**

412 This dimension is interesting to include insofar as it appears to be a first milestone of results  
413 in relation to the parameters identified in the key themes. The articles cited in the previous  
414 key themes offer diagnostic tools from the demand or supply perspective. The measurement  
415 then allows for the identification of the most appropriate management methods  
416 (Rottembourg and Masson, 2017; Grande and Botti, 2023).

417

**418 Dimension 4: Analysis**

419 This dimension expresses the results obtained and analysis drawn from the measures applied.  
420 The objective is to analyze the gaps between competitor segments (Grande and Camprubi,  
421 2022), between customer segments (Brooker and Joppe, 2013) or even the gap between  
422 supply and demand (Hayllar et al. 2006) depending on the key theme selected.

423

**424 Dimension 5: Corrective actions**

425 Next comes the dimension of corrective actions on prices and products. Here, many authors  
426 have challenged each other about pricing policies (Rosenthal et al. 1984) or price elasticity  
427 (Willis et al., 1975; Bamford et al., 1988; Beaman et al., 1991). Moreover, Rosenthal et al.  
428 (1984) explained the difficulty of segmenting the market, but this is necessary to adjust  
429 prices and/or products in the face of economic, geographical, and ecological realities.

430

**431 Dimension 6: Benchmarking system**

432 This dimension integrates financial and non-financial elements and deals with the outputs  
433 obtained based on the measures, analysis and corrective actions taken for each key theme

1  
2  
3 434 from the demand or supply perspective. The concept of benchmarking links to the work of  
4  
5 435 Bell and Crilley (2002), Hayllar et al. (2006), Persic et al. (2017), Grande and Camprubi  
6  
7 436 (2022) and Grande and Botti (2023). The issue of data aggregation is addressed, as is the  
8  
9 437 creation of a digital system of data collection, measurement, and analysis. This links the  
10  
11 438 theoretical construction of revenue management models, the empirical application for  
12  
13 439 scientific validation and the democratization and valorization of revenue management  
14  
15 440 techniques. Rottembourg and Masson (2017) are an example of this since they have  
16  
17 441 operationalized their research to democratize it via the tools marketed by Eurodecision.  
18  
19  
20  
21  
22

23  
24 443 ***Dimension 7: Business plan and decisions***  
25  
26 444 This dimension is important because it confirms the contribution of research in the camping  
27  
28 445 industry. Specifically, it is the moment when the valorization of research is done and at the  
29  
30 446 same time contributes to the development of companies that adopt techniques and tools. The  
31  
32 447 whole aims at producing knowledge that has an impact on the managerial organization and  
33  
34 448 the business plan. In revenue management, the work of Persic et al. (2017), Poldrugovac et  
35  
36 449 al. (2019), Grande and Botti (2023) led to the development of a benchmarking tool.  
37  
38 450 However, if these research-based techniques and tools are to be effectively implemented  
39  
40 451 within companies in the camping industry, it is essential to take a closer look at certain key  
41  
42 452 support functions, employee training programs and investment decisions. Regarding support  
43  
44 453 functions, it is crucial to ensure smooth coordination and integration between different  
45  
46 454 departments such as marketing, operations, sales and finance. In addition, data management  
47  
48 455 and information systems play a central role in capturing, analyzing and interpreting the data  
49  
50 456 required for informed decision-making (Grande and Botti, 2023). When it comes to  
51  
52 457 employee training, it is imperative to put in place development programs that enable staff to  
53  
54  
55  
56  
57  
58  
59  
60

understand new techniques and tools, as well as their implications for day-to-day operations (Breen et al. 2006). A well-trained workforce will contribute to the effective and efficient implementation of revenue management strategies. As for investment decisions, it is important to conduct a thorough cost-benefit analysis to assess the potential impact on long-term profitability. Investment decisions must be aligned with the company's strategic objectives and consider both short- and long-term advantages.

For Peer Review

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

**Research Agenda**

The future of research in this area could focus on many emerging topics, including those related to:

- (i) The best and most profitable mix of stocks.
- (ii) The restrictions specific to campgrounds versus hotels, e.g., overbooking, upgrading, etc.
- (iii) Existing business models that highlight the best revenue optimization,
- (iv) Available data sources and difficulties in consolidating them
- (v) The way to combine the data produced
- (vi) The degree of complexity of the hosting/inventory segments for effective revenue management and revenue growth
- (vii) Factors that influence revenue management by family-owned campsites and VSEs
- (viii) Identifying the optimal mix of long and short stay customers for a campsite.

Overall, it would be interesting to observe to what extent European camping managers have integrated revenue management into their business. In addition, it would also be relevant to explore a level of maturity to the business strategy. That is, what is the degree of applicability of all the key themes in integrated criteria in the managerial organization of the camping company.

506

**507 Managerial implications**

508 Our research has high levels of relevance to camping industry stakeholders. Researchers  
509 (Persic et al. 2017; Grande and Camprubi, 2022) and stakeholders (Croatian, English,  
510 French, and Spanish Camping Federations) have been working for several years to build a  
511 revenue management decision-making tool. This research demonstrates to managers the  
512 range of factors to consider in their revenue management decision-making. Firstly, this  
513 research contributes to drawing up specifications for a future RM tool based on scientific  
514 contributions in camping management and where each dimension and key theme is an IT  
515 development brick to be modeled, justified by our solid literature review. For teams of  
516 engineers and developers, each dimension is justified by articles that influence the choice of  
517 analysis techniques. The architecture of the tool can follow the conceptual model presented.  
518 Secondly it should help mobilize regional/national/international funds for proof-of-concept  
519 on a first test platform. Actors seeking credibility will be able to draw on the body of work  
520 to justify the need to develop a revenue management brick. This study is a guarantee of the  
521 growing interest in research and the lack of IT development of support tools. Finally,  
522 stakeholder collaboration could be initiated based on this input. The RM decision-making  
523 model encourages collaboration with stakeholders, including local communities and national  
524 campsite organizations. This could open opportunities for partnerships and joint projects to  
525 improve the camper experience and strengthen the camping industry.

526

527

528

529



1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

**Conclusions**

An analysis of the literature review was proposed based on a semi-systematic approach. Based on the analysis of the literature review, our research focused on the constitution of a conceptual model aiming at encircling and categorizing all the subjects treated in the previous research. Beyond structuring the contributions, this research proposes a conceptual model to follow for the development of new multidimensional revenue management tools. Finally, this paper raises awareness of revenue management practices among camping managers with a view to democratizing the adoption of existing tools.

Our research has a few limitations that are also perspectives. This article uses a semi-systematic methodology to form a conceptual model based on the sub-criteria, criteria, key themes and dimensions identified by the authors. Camping revenue management practitioners were not interviewed. It would be helpful to have their perspective on how market knowledge is structured and understand the most important attributes. Furthermore, future research should focus on the factors identified by camping RM experts to assess the gap between the literature review and the expert review.

554

555 **References**

556 Almela, M.S., and Calvet, N.A. (2021). Volunteer tourism and gender: A feminist research  
557 agenda. *Tourism and Hospitality Research*, 21(4), 461-472.

558

559 Arimond, G., and Lethlean, S. (1996). Profit center analysis within private  
560 campgrounds. *Journal of Travel Research*, 34(4), 52-58.

561

562 Assaf, A., Barros, C. P., and Josiassen, A. (2010). Hotel efficiency: A bootstrapped  
563 metafrontier approach. *International Journal of Hospitality Management*, 29(3), 468-475.

564

565 Assaf, A. G., and Tsionas, M. (2018). Measuring hotel performance: Toward more rigorous  
566 evidence in both scope and methods. *Tourism Management*, 69, 69-87.

567

568 Bamford, T. E., Manning, R. E., Forcier, L. K., and Koenemann, E. J. (1988). Differential  
569 campsite pricing: An experiment. *Journal of Leisure Research*, 20(4), 324-342.

570

571 Barros, C. P. (2005). Measuring efficiency in the hotel sector. *Annals of Tourism  
572 Research*, 32(2), 456-477.

573

574 Beaman, J., Hegmann, S., and Duwors, R. (1991). Price elasticity of demand: A campground  
575 example. *Journal of Travel Research*, 30(1), 22-29.

576

1  
2  
3 577 Bell, B., and Crilley, G. (2002). An application of the CERM performance indicators  
4  
5 578 program to benchmarking in the Australian caravan and tourist park industry. *Journal of*  
6  
7 579 *Hospitality and Tourism management*, 9(2), 83-94.  
8  
9 580  
10  
11  
12 581 Bem, D. J. (1995). Writing a review article for Psychological Bulletin. *Psychological*  
13  
14 582 *Bulletin*, 118(2).  
15  
16 583  
17  
18  
19 584 Brooker, E., and Joppe, M. (2013). Trends in camping and outdoor hospitality—An  
20  
21 585 international review. *Journal of Outdoor Recreation and Tourism*, 3/4, 1-6.  
22  
23 586  
24  
25  
26 587 Brooker, E., and Joppe, M. (2014). A critical review of camping research and direction for  
27  
28 588 future studies. *Journal of vacation marketing*, 20(4), 335-351.  
29  
30 589  
31  
32  
33 590 Craig, C. A. (2021). Camping, glamping, and coronavirus in the United States. *Annals of*  
34  
35 591 *Tourism Research*, 89, 103071.  
36  
37 592  
38  
39  
40 593 Craig, C. A., and Karabas, I. (2021). Glamping after the coronavirus pandemic. *Tourism and*  
41  
42 594 *Hospitality Research*, 21(2), 251-256.  
43  
44 595  
45  
46  
47 596 Craig, C. A., Ma, S., and Karabas, I. (2021). COVID-19, camping and construal level  
48  
49 597 theory. *Current Issues in Tourism*, 24(20), 2855-2859.  
50  
51 598  
52  
53  
54 599 Craig, C. A., Ma, S., and Feng, S. (2023). Climate Resources for Camping: A Resource-  
55  
56 600 based theory perspective. *Tourism Management Perspectives*, 45, 101072.  
57  
58  
59  
60

- 601
- 602 Cvelić-Bonifačić, J., Milohnić, I., and Cerović, Z. (2017). Glamping-creative  
603 accommodation in camping resorts: insights and opportunities. *Tourism in Southern and*  
604 *Eastern Europe*, 4, 101-114.
- 605
- 606 Egan, D., and Haynes, N.C. (2019). Manager perceptions of big data reliability in hotel  
607 revenue management decision making. *International Journal of Quality and Reliability*  
608 *Management*, 36(1), 25-39.
- 609
- 610 Fisch, C., and Block, J. (2018). Six tips for your (systematic) literature review in business  
611 and management research. *Management Review Quarterly*, 68(2), 103-106.
- 612
- 613 Grande, K. (2021). An exploratory analysis of the camping industry as a provider of  
614 attractive resources. The case of outdoor hospitality parks (OHPs) in unattractive  
615 regions. *Journal of Outdoor Recreation and Tourism*, 33, 1-12.
- 616
- 617 Grande, K., and Camprubi, R. (2022). Analysing the business model canvas of the camping  
618 industry using cluster analysis. *Tourism and Hospitality Research*, 0(0), 1-16.
- 619
- 620 Grande, K., and Botti, L. (2023). Measuring the comparative advantage of camping  
621 businesses: A multicriteria sorting methodology. *Tourism and Hospitality Research*, 0(0),  
622 1-21.

1  
2  
3 624 Hall, C. M., Dayal, N., Majstorović, D., Mills, H., Paul-Andrews, L., Wallace, C. and  
4  
5 625 Truong, V. D. (2016). Accommodation consumers and providers’ attitudes, behaviours, and  
6  
7 626 practices for sustainability: A systematic review. *Sustainability*, 8(7), 625-655.  
8  
9 627  
10  
11  
12 628 Hayllar, B. R., Crilley, G., Bell, B., and Archer, D. J. (2006). Benchmarking caravan and  
13  
14 629 tourist park operations. *Tourism Today*, Fall 2009, 112-133.  
15  
16 630  
17  
18  
19 631 Kharawala, S., Golembesky, A. K., Bohn, R. L., and Esser, D. (2020). The clinical,  
20  
21 632 humanistic, and economic burden of generalized pustular psoriasis: a structured  
22  
23 633 review. *Expert Review of Clinical Immunology*, 16(3), 239-252.  
24  
25 634  
26  
27  
28 635 Ma, S., Craig, C. A., and Feng, S. (2020). The Camping Climate Index (CCI): The  
29  
30 636 development, validation, and application of a camping-sector tourism climate index.  
31  
32 637 *Tourism Management*, 80, 104105.  
33  
34 638  
35  
36  
37 639 Ma, S., Craig, C. A., and Feng, S. (2021). Camping climate resources: The camping climate  
38  
39 640 index in the United States. *Current Issues in Tourism*, 24(18), 2523-2531.  
40  
41 641  
42  
43  
44 642 Mariani, M., Baggio, R., Fuchs, M., and Höepken, W. (2018), “Business intelligence and  
45  
46 643 big data in hospitality and tourism: a systematic literature review”, *International Journal of*  
47  
48 644 *Contemporary Hospitality Management*, 30(12), 3514-3554.  
49  
50 645  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

- 646 Mikulić, J., Prebežac, D., Šerić, M., and Krešić, D. (2017). Campsite choice and the camping  
647 tourism experience: Investigating decisive campsite attributes using relevance-determinance  
648 analysis. *Tourism Management*, 59, 226-233.
- 649
- 650 Peršić, M., Janković, S., and Bonifačić, J. C. (2017). Integrated reporting as a trend and  
651 challenge for benchmarking and competitiveness of the camping business. *ToSEE-Tourism*  
652 *in Southern and Eastern Europe*, 4, 451-468. <https://doi.org/10.20867/tosee.04.27>
- 653
- 654 Poldrugovac, K., Janković, S., and Peršić, M. (2019). The significance of competitive  
655 pricing and revenue management in the camping industry. *International Journal of Revenue*  
656 *Management*, 11(1-2), 76-88.
- 657
- 658 Pozo, A. F. G., Ollero, J. L. S., and Lara, M. M. (2011a). Applying a Hedonic Model to the  
659 Analysis of Campsite Pricing in Spain. *International Journal of Environmental Research*,  
660 5(1), 11-22
- 661
- 662 Pozo, A. F. G., Ollero, J. L. S., and Lara, M. M. (2011b). An approach to pricing in the  
663 tourist campsite market. *Cuadernos de Turismo*, 28, 237-240.
- 664
- 665 Rice, W. L., Park, S. Y., Pan, B., and Newman, P. (2019). Forecasting campground demand  
666 in US national parks. *Annals of Tourism Research*, 75, 424-438.
- 667
- 668 Rogerson, C. M., and Rogerson, J. M. (2020). Camping tourism: A review of recent  
669 international scholarship. *Geo Journal of Tourism and Geosites*, 28(1), 349-359.

1  
2  
3 670  
4  
5 671 Rosenthal, D. H., Loomis, J. B., and Peterson, G. L. (1984). Pricing for efficiency and  
6  
7 672 revenue in public recreation areas. *Journal of Leisure Research*, 16(3), 195-208.  
8  
9  
10 673  
11  
12 674 Rottembourg, B. and Masson, J. (2017). When bid price is not enough: Taking better  
13  
14 675 allotment decisions for Camping Revenue Management. *Journal of Revenue and Pricing*  
15  
16 676 *Management*, 16(2), 115-124.  
17  
18  
19 677  
20  
21 678 Saló, A., Teixidor, A., Fluvia, M., and Garriga, A. (2020). The effect of different  
22  
23 679 characteristics on campsite pricing: Seasonality, key theme, and location effects in a mature  
24  
25 680 destination. *Journal of Outdoor Recreation and Tourism*, 29, 1-12.  
26  
27  
28 681  
29  
30 682 Sigala, M. (2004). Using data envelopment analysis for measuring and benchmarking  
31  
32 683 productivity in the hotel sector. *Journal of travel and tourism marketing*, 16(2-3), 39-60.  
33  
34  
35 684  
36  
37 685 Snyder, H. (2019). Literature review as a research methodology: An overview and  
38  
39 686 guidelines. *Journal of business research*, 104, 333-339.  
40  
41  
42 687  
43  
44 688 Talón-Ballesteros, P., Nieto-García, M., and González-Serrano, L. (2022). The wheel of  
45  
46 689 dynamic pricing: Towards open pricing and one to one pricing in hotel revenue  
47  
48 690 management. *International journal of hospitality management*, 102, 103184.  
49  
50  
51 691  
52  
53 692 Watson, R. T., and Webster, J. (2020). Analysing the past to prepare for the future: Writing  
54  
55 693 a literature review a roadmap for release 2.0. *Journal of Decision Systems*, 29(3), 129-147.  
56  
57  
58  
59  
60

694

695 Wong, G., Greenhalgh, T., Westthorp, G., Buckingham, J., and Pawson, R. (2013).

696 RAMESES publication standards: Meta-narrative reviews. *Journal of Advanced*

697 *Nursing*, 69(5), 987-1004.

698

699 Zunder, T. H. (2021). A semi-systematic literature review, identifying research opportunities

700 for more sustainable, receiver-led inbound urban logistics flows to large higher education

701 institutions. *European Transport Research Review*, 13(1), 1-14.

702

703

704

705

706

707

708

709

710

711

712

713

714

715

716

717



1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

**Tables**

Authors	Criteria used	Gaps
Rosenthal et al. (1984)	<ul style="list-style-type: none"><li>- Marginal costs,</li><li>- Ecological costs,</li><li>- Operating costs,</li><li>- Prices,</li><li>- Demand,</li><li>- Sites quantity,</li><li>- Investments (facilities and amenities)</li></ul>	Operationalize the pricing decision model. Identify solutions to relieve congestion in high-demand locations.
Bamford et al. (1988)	<ul style="list-style-type: none"><li>- Location,</li><li>- Prices,</li><li>- Occupancy rates,</li><li>- Facilities,</li><li>- Income of campers,</li><li>- Length of stay,</li><li>- History of Park Use</li><li>- Satisfaction with fee</li></ul>	Social equity of revenue management. Formulating pricing policy with management objectives.

Table 1 - Camping management literature including criteria and gaps from 1980-1989.

Authors	Criteria used	Gaps
Beaman et al. (1991)	<ul style="list-style-type: none"> <li>- Annual capacity,</li> <li>- Current capacity,</li> <li>- Number of campgrounds around,</li> <li>- Level of services available,</li> <li>- Weather conditions,</li> <li>- Prices,</li> <li>- Revenue,</li> <li>- Total nights,</li> </ul>	Authors call for better prediction of behaviour. This study points to additional parameters which need to be incorporated to produce accurate estimates of price elasticity of demand in relation to campgrounds and tourism-related services.
Arimond and Lethlean (1996)	<ul style="list-style-type: none"> <li>- Campsite rental,</li> <li>- Store,</li> <li>- Supplement services,</li> <li>- Recreation,</li> <li>- Occupancy rate,</li> <li>- Prices,</li> <li>- Size,</li> <li>- Net profit,</li> </ul>	<p>Organized recreational activities and rental equipment should increase camping profits.</p> <p>Financial reports help in assessing net profit, but the influence of expenses not considered.</p> <p>Impact of family-ownership on the acceptance and adoption of revenue management techniques for campgrounds.</p>

Table 2 - Camping management literature including criteria and gaps from 1990-1999.

Authors	Criteria used	Gaps
Bell and Crilley (2002)	<ul style="list-style-type: none"><li>- Performance indicators</li><li>- Service quality</li><li>- Facilities and service</li><li>- Marketing</li><li>- Secondary spend</li></ul>	<p>Create a benchmarking program and software</p> <p>Explore further the performance indicators required for benchmarking exercises</p>
Hayllar et al. (2006)	<ul style="list-style-type: none"><li>- Visitor service quality</li><li>- Income share (cabin, powered sites, ensuite, unpowered sites, secondary spend)</li><li>- Cost share (cleaning, maintenance, energy, water, marketing, labour)</li><li>- Other (Operational expenses, occupancy rate, cabin cleaning and maintenance, secondary services)</li></ul>	<p>The parallel between the types of indicators obtained and customer satisfaction is not proposed. The article proposes a set of indicators without being able to offer segmented indicators according to company type. Lack of indicator consistency.</p> <p>Create a benchmarking program and software</p>

Table 3 - Camping management literature including criteria and gaps from 2000-2009.

791  
792

Authors	Criteria used	Gaps
Pozo et al. (2011a)	<ul style="list-style-type: none"> <li>- Total travellers Spanish</li> <li>- Total overnight stays Spanish</li> <li>- Foreigners</li> <li>- Open campsites</li> <li>- Estimated spaces</li> <li>- Estimated pitches</li> <li>- Estimated occupied pitches</li> <li>- Week-end occupation</li> <li>- Employees</li> <li>- With websites</li> <li>- With online booking</li> <li>- With online publicity</li> </ul>	Pricing analysis using hedonic methods at a national scale. Complexity of campsite inventory with new types of accommodations.
Pozo et al. (2011b)	<ul style="list-style-type: none"> <li>- Mean daily price</li> <li>- Infrastructures</li> <li>- Prices</li> <li>- Regions</li> </ul>	Limited database with only supply information. Hedonic pricing model and the attributes of tourism products. Complexity of campsite inventory with new types of accommodations.
Brooker and Joppe (2013)	<ul style="list-style-type: none"> <li>- Individual demand dependent on market segment</li> <li>- Service experience</li> <li>- Product innovation and variety (e.g., glamping)</li> <li>- Price</li> </ul>	Provides review of existing literature only. Suggests the need for research to focus not just on the attraction of repeat business but on ways to attract new market segments.
Rottembourg and Masson (2017)	<ul style="list-style-type: none"> <li>- Capacity</li> <li>- Allotment requests (Mobile-home week quantity)</li> <li>- Length of stay</li> <li>- Prices</li> <li>- Individual demand</li> </ul>	Full time pricing analysts or revenue managers are still very rare and to date there is no training course available in the camping industry. This discipline is new and advocates for dedicated expertise and tools.
Peršić et al. (2017)	<ul style="list-style-type: none"> <li>- Site occupancy</li> <li>- Secondary services income share (per visitor/per night)</li> <li>- Cabin income share</li> <li>- Powered site</li> <li>- En-suite powered site income share and un-</li> </ul>	<p>Relevant reporting standards. Benchmarking tools and software for comparative analysis.</p> <p>Lack of research in performance measurement. Lack of research in camping categorization.</p>

	powered site income share	
Mikulic et al. (2017)	<u>19 attributes:</u> <ul style="list-style-type: none"><li>- Accommodation infrastructures,</li><li>- Leisure infrastructures</li><li>- Quality of services</li></ul>	Authors explain that there is no study that has tried to understand the processes of campsite choice and camping experience.
Cvelić-Bonifačić et al. (2017)	<ul style="list-style-type: none"><li>- Age</li><li>- Nationality</li><li>- Family status</li><li>- Location/Destination</li><li>- Sense of privacy</li><li>- Safety</li><li>- Price</li><li>- New experiences</li><li>- Entertainment</li><li>- Food and beverage services</li><li>- Family community</li></ul>	Authors explain the negative impact on the validity of research results when there is no clear definition or categorization of the term “glamping” and campsite relate glamping to a large range of different accommodation types.
Poldrugovac et al. (2019)	<ul style="list-style-type: none"><li>- Occupancy rate</li><li>- Revenue per available capacity</li><li>- Revenue per overnight stay</li><li>- Average daily rate</li><li>- Length of stay</li><li>- Double occupancy factor</li></ul>	Data were collected in 2010 and the sample size was low. Future research should consider other sources of revenue (FandB and other services). Research should follow campsite segmentation by quality, location, brand, affiliation, and similar businesses.
Rice et al. (2019)	<ul style="list-style-type: none"><li>- Occupancy,</li><li>- Booking,</li><li>- Length of stay,</li><li>- Number of people,</li><li>- Daily fee,</li><li>- Daily paid,</li><li>- Start date,</li><li>- End date,</li></ul>	These amenities could translate into a measure of relative importance for a given NPS unit or subunit. Future research should assess the validity of the reservation window, occupancy, and other measures as indicators of significance.

Table 4 - Camping management literature including criteria and gaps from 2010-2019.

802  
803

Authors	Criteria used	Gaps
Saló et al. (2020)	<ul style="list-style-type: none"> <li>- Number of campsites</li> <li>- Number of sites</li> <li>- Prices</li> <li>- Facilities and services</li> <li>- Location</li> <li>- Size</li> <li>- Star categories</li> </ul>	Pricing strategies for bungalows, caravans and motor homes and the comparison with tents. Not only is it worth analysing the price seasonality pattern, but also the effects on pricing of different attributes also mentioned in this paper (services, campsite size, and location).
Ma et al. (2020)	<ul style="list-style-type: none"> <li>- Daytime comfort index</li> <li>- Daily comfort index</li> <li>- Thermal comfort</li> <li>- Precipitation</li> <li>- Windspeed</li> <li>- Sunshine hours</li> <li>- Cloud cover</li> </ul>	The CCI addresses four gaps in the nature-based tourism literature by (1) introducing a camping sector index, (2) empirically testing relationships between weather variables and actual outcomes (3) independently integrating extreme/adverse weather events into an index, and (4) empirically capturing seasonality using multiple methods.
Craig (2021)	<ul style="list-style-type: none"> <li>- Location</li> <li>- Safety beliefs</li> <li>- 2019 camping experience</li> <li>- 2020 camping plans</li> <li>- Timing</li> <li>- Distance</li> <li>- Overcrowding</li> </ul>	Lack of longitudinality and in-depth measurements. Lack of accounts of travelers' attitudes and social norms. At the same time, the rules of distancing meant that, by default, people had to go to places where social distance was easily respected. The study focuses on behaviors that are planned but not real. Lack of consideration of perceived vs. experienced risks. Lack of differentiation of camping typologies.
Craig et al. (2021)	<ul style="list-style-type: none"> <li>- Travel time</li> <li>- Travel distance</li> <li>- Impact of Covid-19</li> </ul>	A concrete construal about time and distance positively impacted demand and that distance did not negatively influence demand for camping decisions in contrast to other tourism offering during the pandemic.
Craig and Karabas (2021)	<ul style="list-style-type: none"> <li>- Post Covid-19 trip plans for glamping</li> <li>- Post Covid-19 trip plans for resort / hotel</li> <li>- Trips taken in 2019 and pre-Covid-19</li> <li>- Sociodemographic data</li> </ul>	Influence of Factors Other than Leisure; Fuzzy Temporal Definition; Lack of Characterization of Different Types of Accommodation; Diversification of Travel Motives; Longitudinal Study; Comparison with Other Disruptive Events.
Ma et al. (2021)	<ul style="list-style-type: none"> <li>- Thermal comfort</li> <li>- Sunshine hours</li> <li>- Max/Min temperature</li> <li>- Precipitation</li> <li>- Windspeed</li> </ul>	Spatial distribution of seasons, regional trends in the CCI index, and adaptation to climatic extremes illustrate the main findings of this research. There are gaps to be filled, such as the geographical resolution of campsites, evaluation of campsite characteristics, and the impact of climate change on consumption patterns.

Grande (2021)	<ul style="list-style-type: none"><li>- Intrinsic resources</li><li>- Star rating</li><li>- Size</li></ul>	The proposed conceptual model has not been empirically tested. No benchmarking methodology is proposed. No financial data is associated with intrinsic resources. Proposed evaluation under a multi-criteria analysis logic.
Grande and Camprubi (2022)	<ul style="list-style-type: none"><li>- Key resources</li><li>- Key activities</li><li>- Key partners</li><li>- Value proposition</li><li>- Customer channel</li><li>- Customer relationship</li><li>- Cost structure</li><li>- Revenue stream</li><li>- Human Resources</li><li>- Size</li><li>- Number of sites</li><li>- Service Quality</li><li>- Length of stay</li><li>- Customer satisfaction</li><li>- External providers</li><li>- Maintenance and Repairs</li><li>- Salaries</li><li>- Accommodation revenues</li><li>- Additional sales</li></ul>	Benchmarking at the micro level. Integrate more companies to conceptualize the results. Revenues are not detailed due to a lack of data standardization. Firm performance analysis. Operationalize the method via a data consolidation platform
Craig et al. (2023)	<ul style="list-style-type: none"><li>- Tent and RV occupancy (dependent variables)</li><li>- Climate resources (independent variables)</li><li>- CCI index</li></ul>	This article introduces the notion of heterogeneous climatic resources by territory, thus broadening the scope of RBV, between public and private resources. The gaps considered are based on Lack of Theoretical Application, Segmentation of Camping Types, Limited Temporal Data. Comparing different climatic indices and seeing which are the most appropriate for the world's tourist destinations. Also, how climatic resources influence different camping activities and especially their revenues.
Grande and Botti (2023)	<ul style="list-style-type: none"><li>- Lodging facilities</li><li>- Additional sales</li><li>- Bathing areas</li><li>-Additional amenities</li><li>- Entertainments and activities organized</li><li>- Sports and activities non-organized</li><li>- Multimedia facilities</li></ul>	Evaluating the performance of tourism companies. Measure the camping-destination effect, business model, firm efficiency and finally create a complete model for measuring camping competitiveness

Table 5 - Camping management literature including criteria and gaps after 2020.

## The 58 sub-criteria and 12 criteria related to revenue management for the camping industry.

	Contribution	Sub-criteria	Criteria
1	Hayllar et al. (2006) Pozo et al. (2011a, b) Mikulic et al. (2017) Cvelić-Bonifačić et al. (2017) Rice et al. (2019)	<ul style="list-style-type: none"> <li>- Main motivations (lodging, attracting resources, quality, pricing, exogeneous factors)</li> <li>- Variety of facilities</li> <li>- Occupancy rate</li> <li>- Number of Booking</li> <li>- Number of customers</li> <li>- Length of stay</li> <li>- Daily fee</li> <li>- Daily paid</li> <li>- Start date</li> <li>- End date</li> <li>- Customer Satisfaction</li> </ul>	Demand
2	Rosenthal et al. (1984) Bell and Crilley (2002) Hayllar et al. (2006) Brooker and Joppe (2014) Persic et al. (2017) Poldrugovac et al. (2019) Grande (2021) Grande and Camprubi (2022) Grande and Botti (2023)	<ul style="list-style-type: none"> <li>- Typologies of innovative managers</li> <li>- Typologies of businesses</li> <li>- Profiles of managers</li> <li>- Profiles of businesses</li> <li>- Diversity of resources</li> <li>- Diversity of business models</li> <li>- Stakeholder impact studies</li> </ul>	Supply
3	Hayllar et al. (2006) Brooker and Joppe (2013) Rottembourg and Masson (2017) Cvelić-Bonifačić et al. (2017) Grande and Botti (2023)	<ul style="list-style-type: none"> <li>- Quantities</li> <li>- Characteristics</li> <li>- Specificities</li> <li>- Year of purchase</li> <li>- Maintenance budget</li> </ul>	Lodging
4	Brooker and Joppe (2013) Salo et al. (2020) Grande (2021) Grande and Camprubi (2022) Grande and Botti (2023)	<ul style="list-style-type: none"> <li>- Internal Attractive Potential</li> <li>- External attractive potential</li> </ul>	Recreation Resources
5	Hayllar et al. (2006) Mikulic et al. (2017) Cvelić-Bonifačić et al. (2017) Grande and Camprubi (2022)	<ul style="list-style-type: none"> <li>- Value for money</li> <li>- Park Cleanliness</li> <li>- Accommodation comfort</li> <li>- Suitable secondary services</li> <li>- Customer satisfaction</li> <li>- Star-rating</li> </ul>	Quality, experience and reputation



Authors	Dimension 1 Actors	Dimension 2 Key themes	Dimension 3 Measurements	Dimension 4 Analysis	Dimension 5 Corrective	Dimension 6 Benchmark-	Dimension 7 Decision
6	Bamford et al (1988) Beaman, Hegmann and DuWors (1991) Arimond and Lethlean (1996) Pozo et al. (2011a, b) Rottembourg and Masson (2017) Cvelić-Bonifačić et al. (2017) Poldrugovac et al. (2019) Salo et al. (2020)		- Period - Night rates - Weekly rates - Previous night rates - Previous week rates				Pricing
7	Beaman et al. (1991) Pozo et al. (2011a, b) Rice et al. (2019) Salo et al. (2020) Craig (2021) Ma et al. (2020) Ma et al. (2021) Craig and Karabas (2021) Craig et al. (2023)		- Weather forecast - Exceptional natural events - Tourist destination governance - Economic crisis - Climate crisis - Epidemic crisis				Exogeneous factors
8	Brooker and Joppe (2013) Rottembourg and Masson (2017) Grande and Camprubi (2022)		- Customer channel - Customer relationship				Distribution actions and impacts
9	Arimond and Lethlean (1991) Hayllar et al. (2006) Peršić et al. (2019) Grande (2021) Grande and Botti (2023)		- Period - Short stay - Long stay - Current occupancy level - Occupancy related to previous years - Industry occupancy level				Non-Financial Data
10	Rosenthal et al. (1984) Arimond and Lethlean (1991) Bell and Crilley (2002) Hayllar et al. (2006) Grande and Camprubi (2022)		- Overall revenue per lodging category - EBITDA - Operating income after taxes				Financial Data
11	Rosenthal et al. (1984) Arimond and Lethlean (1991) Bell and Crilley (2002) Hayllar et al. (2006) Poldrugovac et al. (2019) Peršić et al. (2019) Grande and Camprubi (2022)		- Occupancy rate - Length of stay - Quantity of demand - Revenue stream - Cost of structure				Performance Analysis
12	Grande and Botti (2023) Rottembourg and Masson (2017) Brooker and Joppe. (2014)		- Investment forecast - Training process - Support function				Business Plan

806

807 Table 6 - The 58 sub-criteria and 12 criteria related to revenue management for the  
808 camping industry.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

					actions	ing	process
Rosenthal et al. (1984)	Both	-	-	-	Product adjustment	-	Investment forecast
Bamford et al. (1988)	Supply	Pricing and forecasting	-	-	Price adjustment	-	Support function
Beaman et al. (1991)	Demand	-	-	-	Price adjustment	-	Support function
Arimond and Lethlean (1996)	Supply	Leisure resources; Pricing and forecasting	-	-	Both	-	Investment forecast
Bell and Crilley (2002)	Supply		Market position	-	Both	Financial	Support function
Hayllar et al. (2006)	Both	Lodging and Leisure resources; Quality	Both	Both	Both	Both	Support function
Pozo et al. (2011a)	Supply	-	Market position	Gaps to competitors	Price adjustment	Non-financial	Support function
Pozo et al. (2011b)	Supply	-	Market position	-	Price adjustment	-	Support function
Brooker and Joppe (2014)	Demand	-	-	-	Product adjustment	-	Investment forecast
Rottembourg and Masson (2017)	Supply	Pricing and forecasting	-	-	Distribution actions	-	Support function
Peršić et al. (2017)	Supply	Pricing and forecasting	-	-	-	Both	Support function
Mikulić et al. (2017)	Demand	Lodging and Leisure resources	Demand position	-	Product adjustment	-	Investment forecast
Cvelić-Bonifačić et al. (2017)	Demand	Pricing, Lodging, Exogeneous factors	Demand position	-	-	-	Support function
Poldrugovac et al. (2019)	Supply	Pricing and forecasting	Market position	Gaps to competitors	-	Both	Support function
Rice et al. (2019)	Demand	Pricing and forecasting; Exogeneous factors	Demand position	-	-	-	Investment forecast
Saló et al. (2020)	Supply	Lodging and Leisure resources; Exogeneous factors	Market position	Gaps to competitors	-	-	Support function
Ma et al. (2020)	Both	Exogeneous factors	Market position	Gaps to competitors	Both	Non-financial	Support function
Craig (2021)	Both	Exogeneous factors	Demand position	-	Both	-	Support function
Craig and	Both	Exogeneous	Demand	-	Both	-	Support

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

		factors	position				function
Karabas (2021)							
Craig et al. (2021)	Both	Exogeneous factors	Demand position	-	Both		
Ma et al. (2021)	Both	Exogeneous factors	Market position	Gaps to competitors	Both	Non-financial	Support function
Grande (2021)	Supply	Leisure resources	Market position	Gaps to competitors	Product adjustment	Non-financial	Investment forecast
Grande and Camprubi (2022)	Supply	Lodging and Leisure resources	Market position	Gaps to competitors	Both	Both	Business plan
Craig et al. (2023)	Both	Exogeneous factors	Market position	Gaps to competitors	Both	Non-financial	Support function
Grande and Botti (2023)	Supply	Lodging and Leisure resources; Pricing and forecasting	Market position	Gaps to competitors	Product adjustment	Non-financial	Investment forecast

Table 7 - The dimensions of revenue management in the camping sector: Analysis of academic contributions.

Figures

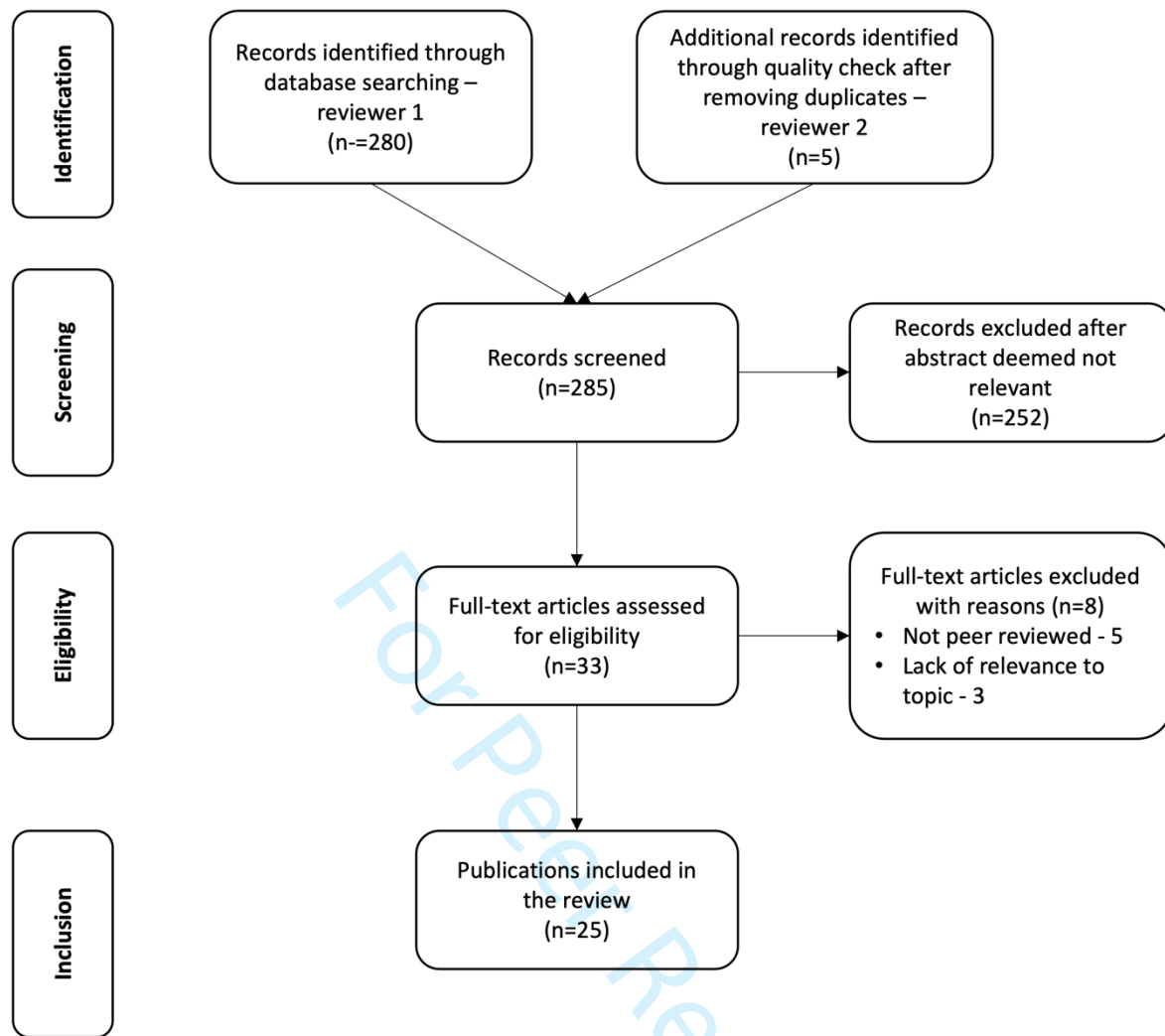
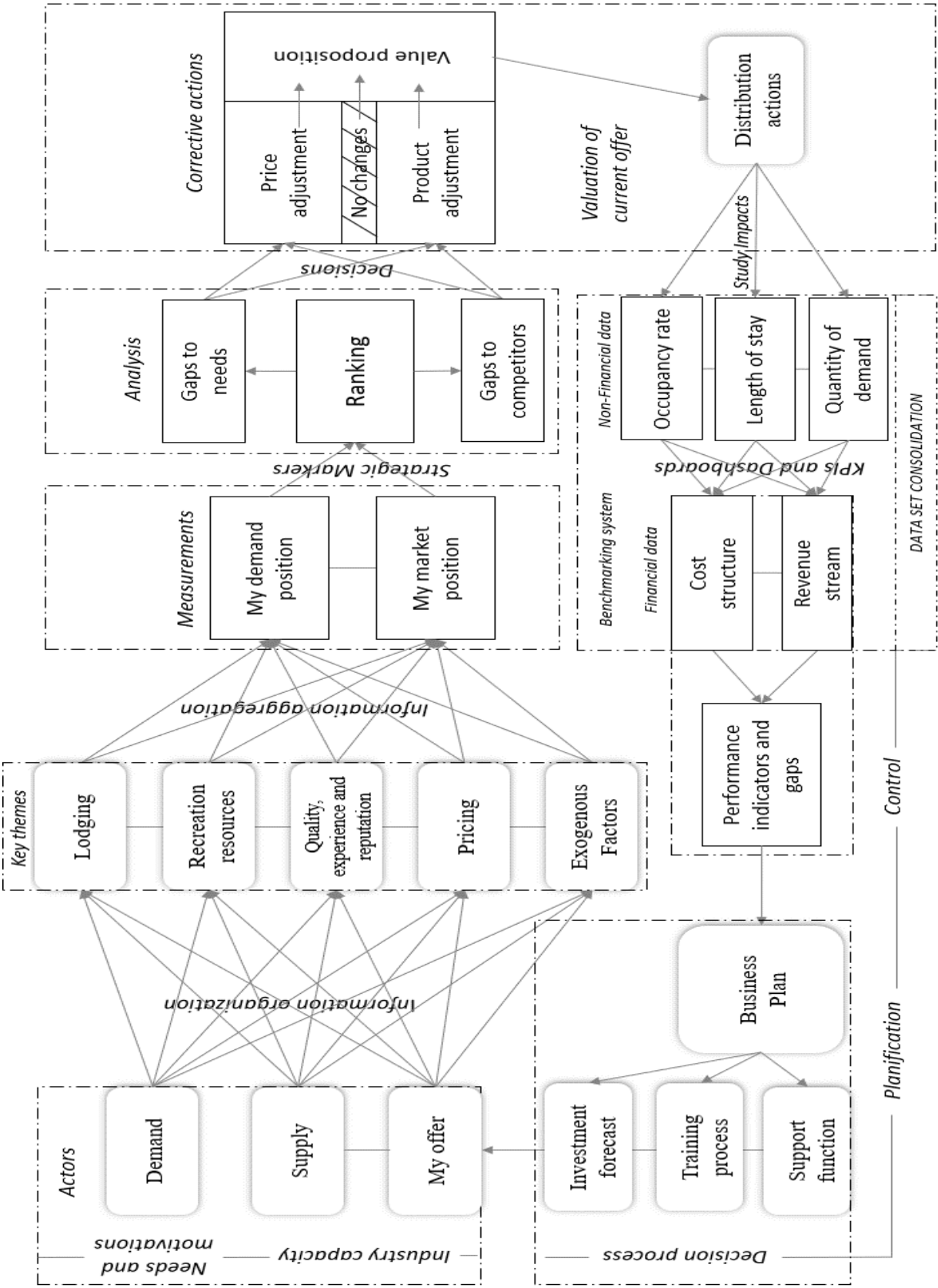


Figure 1 - Flowchart for the identification, selection, and prioritisation of articles in the review

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

Figure 2 - Dimensions of camping revenue management - a conceptual framework



Dr K  vin Grande is a Lecturer in Hospitality and Tourism Management Studies. He holds a PhD from the University of Girona (Spain) and joined Excelia Business School located in La Rochelle in 2022. Dr K  vin Grande has expertise and interests in Outdoor Hospitality Management, focusing on strategy and decisions. He works in collaboration with the National Federation of French Outdoor Hospitality businesses and many camping groups and chains. Previously director of campsites, he is now dedicated to the development of decision support tools, competitiveness measurement, and performance analysis.

Dr Natalie Haynes is a Principal Lecturer and has taught revenue management across a range of Hospitality and Airline Management courses for over ten years after joining Sheffield Hallam University from a successful career in hotel sales and marketing. She holds a PhD from Sheffield Hallam University that focused on the use of big data by hotel general managers in transient price decision-making. She has published several articles on hotel pricing, big data, and the use of revenue management in alternative sectors.