

PAWEŁ ŁUKA

Department of Economics and Management, Faculty of Economics and Finance, University of Rzeszów, e-mail: pluka@ur.edu.pl; ORCID:0000-0001-9573-6202

PRO-ENVIRONMENTAL FACTORS INFLUENCING THE ATTRACTIVENESS OF TOURISM PRODUCTS: THE CASE OF THE FOODSERVICE SECTOR

Abstract: *The contemporary development of tourism is increasingly shaped by the concept of sustainable development, which emphasizes the balanced integration of economic, social, and environmental dimensions. Among the wide range of tourism products, the foodservice sector has gained particular importance, serving not only as a means of satisfying travelers' basic needs but also as a significant component of the overall tourism experience. The growing environmental awareness of consumers has made pro-environmental factors an important criterion in evaluating the attractiveness of gastronomic offerings.*

The aim of this article is to analyze the impact of selected pro-environmental factors on the attractiveness of tourism products, using the foodservice sector as a case study. The paper presents the theoretical foundations of gastronomy as a tourism product and characterizes the principal environmental sustainability practices adopted by food service establishments. The study employs a literature review methodology, supplemented by an analysis of industry reports and secondary data concerning consumer trends.

The findings indicate that the use of locally sourced products, the reduction of food waste, the adoption of renewable energy sources, waste minimization, and the implementation of circular economy principles significantly enhance the perceived value of tourism products. These practices contribute to building a positive destination image, increasing tourist satisfaction, and strengthening the competitiveness of food service businesses. The study concludes that pro-environmental factors have become a significant determinant of the attractiveness of contemporary tourism products.

Keywords: sustainable tourism; foodservice; tourism product; environmental sustainability; tourism attractiveness; pro-environmental factors

CZYNNIKI PROŚRODOWISKOWE WPLYWAJĄCE NA ATRAKCYJNOŚĆ PRODUKTÓW TURYSTYCZNYCH NA PRZYKŁADZIE GASTRONOMII

Abstrakt: *Współczesny rozwój turystyki jest coraz silniej determinowany przez koncepcję zrównoważonego rozwoju, która zakłada harmonijne współistnienie aspektów ekonomicznych, społecznych i środowiskowych. Wśród licznych produktów turystycznych szczególne znaczenie zyskuje gastronomia, będąca nie tylko elementem zaspokajającym podstawowe potrzeby podróżnych, lecz również istotnym składnikiem doświadczenia turystycznego. Rosnąca świadomość ekologiczna konsumentów sprawia, że czynniki prośrodowiskowe stają się ważnym*

elementem oceny atrakcyjności oferty gastronomicznej. Celem artykułu jest analiza wpływu wybranych czynników prośrodowiskowych na atrakcyjność produktów turystycznych na przykładzie gastronomii. W opracowaniu przedstawiono teoretyczne podstawy funkcjonowania gastronomii jako produktu turystycznego oraz scharakteryzowano główne działania proekologiczne podejmowane przez przedsiębiorstwa gastronomiczne. Zastosowano metodę analizy literatury przedmiotu, raportów branżowych oraz danych wtórnych dotyczących trendów konsumenckich. Wyniki wskazują, że wykorzystanie lokalnych produktów, ograniczanie marnowania żywności, stosowanie odnawialnych źródeł energii, redukcja odpadów oraz wdrażanie zasad gospodarki obiegu zamkniętego znacząco wpływają na postrzeganą wartość produktu turystycznego. Działania te przyczyniają się do budowania pozytywnego wizerunku destynacji, wzrostu satysfakcji turystów oraz zwiększenia konkurencyjności przedsiębiorstw gastronomicznych. Wskazano, że czynniki prośrodowiskowe stają się istotnym determinantem atrakcyjności współczesnych produktów turystycznych.

Słowa kluczowe: zrównoważona turystyka, gastronomia, produkt turystyczny, ekologia, atrakcyjność turystyczna, czynniki prośrodowiskowe

I. INTRODUCTION

The dynamic development of tourism observed over recent decades has contributed to increasing attention being paid to issues related to environmental protection. Today, the tourism sector is one of the world's most significant industries, generating substantial revenues and creating employment opportunities. At the same time, tourism activities exert considerable pressure on the natural environment, manifested, among other things, in increased energy consumption, waste generation, greenhouse gas emissions, and the excessive exploitation of natural resources (Kasprzak, 2006, 2015; Jęczynek & Kasprzak, 2017; Jęczynek et al., 2019).

In response to growing environmental challenges, the concept of sustainable development and the need to slow the transformation and depletion of natural resources have become increasingly important (Sachs, 2015; Poskrobko, 2010; Poskrobko & Kostecka, 2016). This concept has also been widely adopted within the tourism sector (Kasprzak, 2015). According to its underlying principles, economic development should proceed while maintaining ecological and social balance. This requires the implementation of measures that minimize the negative environmental impacts of human activities without compromising the quality of the services provided (Einarsson & Sorin, 2020; Greer et al., 2020).

One of the most important components of the tourism product is gastronomy. Today, the foodservice sector is no longer limited to its traditional function of providing food; instead, it has become an integral element of the overall tourism experience. Increasingly, travelers choose destinations based on opportunities to explore local culinary traditions, regional products, and traditional food preparation methods. The literature has consequently witnessed the development of the concept of culinary tourism, defined as a form of travel motivated by the desire to experience the gastronomic heritage of a particular region (Woźniczko et al., 2015; Orłowski & Woźniczko, 2016).

Changing consumer preferences have resulted in a growing proportion of tourists paying attention not only to the quality and taste of the food offered but also to the methods of its production and the environmental impacts of food service operations. The increasing environmental awareness of society has led to greater interest in locally sourced products, organic food, and services delivered in accordance with the principles of sustainable development.

To meet these evolving customer expectations, food service businesses are implementing a wide range of environmentally sustainable practices. These include reducing energy and water consumption, minimizing waste generation, using biodegradable packaging, cooperating with

local suppliers, and preventing food waste. Such initiatives not only contribute to environmental protection but also strengthen firms' competitive advantage and enhance the attractiveness of tourism products.

Product attractiveness constitutes an economic category that is closely related to product utility. Both concepts play a fundamental role in the design, development, and evaluation of tourism services, including gastronomic offerings. Utility refers to a product's ability to satisfy consumers' needs and expectations, whereas attractiveness reflects the degree to which the product is desired in the marketplace, resulting from the combined influence of its functional and economic characteristics. In market practice, these two categories complement one another, jointly determining purchasing decisions and the level of market demand.

From an economic perspective, consumers evaluate a product by comparing the expected benefits derived from its use with the costs incurred in acquiring it. Consequently, the perceived attractiveness of a product depends not only on its level of utility but also on its market price, which represents the primary acquisition cost (Colander, 2013). The literature indicates that product attractiveness is positively associated with utility and negatively associated with market price (Łuka, 2014). Accordingly, an increase in utility enhances product attractiveness, whereas an increase in price reduces it.

It should be noted, however, that this relationship is not static. Under certain market conditions, a product's utility may gradually decline while its price decreases at an even faster rate. As a result, the benefit-to-cost ratio improves, potentially increasing the product's attractiveness and, consequently, its popularity among consumers (Łuka & Kwiatkowska-Sienkiewicz, 2010).

The aim of this article is to analyze selected pro-environmental factors determining the attractiveness of tourism products in the food service sector. Particular attention is devoted to the importance of sustainability-oriented practices from both the demand-side perspective, encompassing customer preferences and behavior, and the supply-side perspective, focusing on the activities undertaken by food service businesses. The analysis also identifies the economic, environmental, and reputational benefits, as well as the challenges associated with implementing environmental sustainability strategies in the foodservice operations.

II. RESEARCH METHODOLOGY

Achieving the research objective required the application of research methods commonly used in socio-economic studies of tourism and gastronomy. The primary research method employed in this study was a comprehensive review of the relevant literature, including scholarly publications in the fields of tourism, food service, environmental management, and sustainable development. Particular attention was given to studies on culinary tourism and consumer behavior in the context of the environmental sustainability of food service operations.

To systematize the research material, pro-environmental factors were classified into five principal categories:

- The use of locally and regionally sourced food products.
- Food waste reduction.
- Waste minimization and the use of environmentally friendly packaging.
- Efficient management of energy and water resources.
- The implementation of circular economy principles.

The analysis was conducted using a qualitative research approach. The relationships between the implementation of the identified environmentally sustainable practices and the perceived attractiveness of tourism products were examined. It was assumed that the attractiveness of a gastronomic tourism product can be evaluated in terms of customer satisfaction, perceived service

quality, the authenticity of culinary experiences, and the competitiveness of the offering within the tourism market.

The study also adopted a systems perspective, according to which gastronomy constitutes one component of a broader tourism product encompassing the natural, cultural, and social assets of a destination. Accordingly, the environmentally sustainable practices implemented by food service businesses may influence not only the evaluation of an individual service but also the overall perception of the tourism destination.

The adopted methodological approach enabled a comprehensive assessment of the role of environmental sustainability factors in shaping contemporary gastronomic offerings and determining their influence on the attractiveness of tourism products.

III. RESULTS AND DISCUSSION

The Importance of Gastronomy as a Tourism Product

Gastronomy has long been recognized as one of the most important components of the tourism product (Stasiak, 2007). Traditionally, food service activities were viewed primarily as a supporting service that met travelers' basic nutritional needs. Today, however, their role has expanded considerably. Gastronomy has increasingly become a primary travel motivation, influencing both destination choice and tourists' overall satisfaction.

The literature emphasizes that culinary experiences are among the most influential factors shaping travelers' memories of a destination (Hall & Mitchell, 2005; Jęczyk & Kasprzak, 2017). Experiencing local cuisine enables visitors to gain insight into the traditions, history, and culture of the destination. Consequently, the quality of gastronomic services significantly influences the overall evaluation of a tourism destination.

The growing popularity of culinary tourism has compelled food service businesses to adapt their offerings to evolving customer expectations. An increasing number of consumers seek not only high-quality cuisine but also information regarding the origin of food products, production methods, and the environmental impact of food service operations. Consequently, environmentally sustainable practices have become an essential component of enhancing the attractiveness of gastronomic offerings.

Contemporary tourists are becoming increasingly aware of the environmental consequences of their consumption choices, including those related to dining experiences. Restaurants that use locally sourced ingredients, minimize waste generation, and implement environmentally responsible practices are perceived as more socially responsible and trustworthy. As a result, environmental sustainability has emerged as an important source of competitive differentiation within the tourism market.

The Use of Locally and Regionally Sourced Food Products

One of the most significant pro-environmental factors influencing the attractiveness of tourism products is the use of locally and regionally sourced food products. This approach aligns with the concept of short food supply chains, which seek to reduce the distance between producers and consumers.

The use of local products provides numerous environmental benefits. Most importantly, it reduces greenhouse gas emissions associated with the long-distance transportation of food. Furthermore, it supports local agriculture and contributes to preserving traditional food production methods.

From the tourist's perspective, the use of regional ingredients enhances the authenticity of culinary experiences. Visitors increasingly expect opportunities to taste products that are characteristic of the destinations they visit. Dishes prepared from locally sourced ingredients

are perceived as more authentic, fresher, and more consistent with the principles of sustainable consumption.

Examples include tourism regions that promote local cheeses, honey, wines, fish, and organically produced foods. In this way, gastronomy becomes an effective instrument for promoting both the cultural and natural heritage of the region. Consequently, the attractiveness of the entire tourism destination is enhanced.

Collaboration between restaurants and local producers also strengthens social ties and stimulates regional economic development. The resulting economic benefits remain within the local economy, thereby supporting the objectives of sustainable development and contributing to a positive destination image (Greer et al., 2020).

Food Waste Reduction

Food waste represents one of the most serious environmental challenges facing the modern world. It is estimated that a substantial proportion of food produced never reaches consumers but instead becomes waste at various stages of the supply chain. The food service sector plays a significant role in addressing this issue.

The current food system has made it possible to meet the needs of a rapidly growing global population while stimulating economic growth and urbanization. However, these productivity gains have come at a considerable cost, and the existing food system is not adequately designed to address long-term sustainability challenges. Approximately half of these costs – estimated at around USD 5.7 trillion annually worldwide – result from current food production practices. These costs are a direct consequence of the prevailing linear food production model, which relies on the intensive exploitation of finite natural resources, generates substantial waste and pollution, and contributes to ecosystem degradation (Ellen MacArthur Foundation, 2019).

Implementing measures to reduce food loss and waste generates both environmental and economic benefits. The most commonly adopted practices include:

- precise purchasing and inventory planning,
- optimizing portion sizes,
- using seasonal products,
- donating surplus food to charitable and community organizations,
- composting organic waste.

An increasing number of restaurants are also embracing the zero-waste concept, which seeks to maximize the utilization of all food resources. Examples include using vegetable peels to prepare stocks and broths or transforming unsold products into new menu items.

For contemporary tourists, such initiatives serve as tangible evidence of a company's social and environmental responsibility. Consumers increasingly appreciate food service establishments that actively reduce resource waste. Consequently, these practices enhance the attractiveness of gastronomic offerings while strengthening customer trust.

Moreover, restaurants pursuing food waste reduction strategies frequently incorporate these initiatives into their marketing activities. Communicating environmentally sustainable practices to customers can positively influence purchasing decisions and foster long-term customer relationships (Chiaraluce et al., 2024).

Another important issue concerns the irresponsible disposal of food waste in the vicinity of food service establishments. When food waste is discarded in locations that are not adequately protected from wildlife, it may attract wild animals, including large predators, thereby posing risks not only to local ecosystems but also to tourists' safety. In the context of the issues addressed in this article, it is therefore important to acknowledge the need for

comprehensive wildlife deterrence strategies that effectively and safely prevent wild animals from approaching areas designated for tourism and recreation (Olechniewicz, 2026).

Waste Reduction and the Use of Environmentally Friendly Packaging

A major environmental challenge associated with food service operations is the generation of large quantities of waste, particularly packaging waste. The rapid expansion of takeaway services and food delivery has significantly increased the use of single-use plastic packaging.

In response to growing consumer expectations and evolving regulatory requirements, food service businesses are increasingly implementing measures to reduce waste generation. The most common initiatives include:

- replacing conventional plastics with biodegradable materials,
- introducing reusable packaging systems,
- waste separation and sorting,
- recycling raw materials and packaging,
- reducing the use of single-use materials.

The adoption of environmentally friendly packaging positively influences customers' perceptions of a business. Tourists are increasingly attentive to the way products are packaged and to opportunities to reduce the environmental impacts associated with consumption.

In many cases, waste reduction initiatives have become an integral component of restaurants' marketing strategies. Information regarding the use of biodegradable packaging or participation in recycling programs is frequently highlighted in promotional materials, thereby increasing the attractiveness of the offering for environmentally conscious consumers.

From the perspective of the tourism product, these measures influence not only the evaluation of an individual establishment but also the perception of the entire destination as an environmentally responsible place to visit.

Efficient Energy and Water Management

Another important environmentally sustainable factor is the efficient management of natural resources, particularly energy and water. The food service sector is characterized by high levels of resource consumption due to the requirements of food preparation, food storage, and compliance with sanitary and hygiene standards.

To reduce their environmental impact, food service businesses are increasingly adopting a range of technological solutions, including:

- energy-efficient kitchen equipment,
- heat recovery systems,
- LED lighting,
- photovoltaic installations,
- water-saving faucet aerators,
- intelligent energy management systems.

These measures reduce the environmental footprint of businesses while simultaneously lowering operating costs. From a long-term perspective, they contribute to improving the economic efficiency of food service operations.

Information regarding the implementation of environmentally sustainable technologies is increasingly communicated to customers. Tourists perceive such initiatives as indicators of innovation and environmental responsibility. Consequently, these practices enhance both the

attractiveness of food service establishments and their competitiveness within the tourism market.

Circular Economy in the Food Service Sector

In recent years, the concept of the circular economy has gained increasing prominence as an approach aimed at maximizing resource utilization while minimizing waste generation (Lacy et al., 2020).

Within the food service sector, the implementation of circular economy principles may include:

- the reuse of packaging materials,
- composting biodegradable waste,
- recycling raw materials,
- collaboration with local producers,
- the utilization of by-products in food production processes.

This model reduces pressure on the natural environment while improving the efficiency of resource utilization. At the same time, it aligns with the expectations of contemporary consumers seeking products and services consistent with the principles of responsible consumption.

Businesses implementing circular economy practices frequently establish a strong environmentally responsible brand image. Such initiatives are particularly valued by younger groups of tourists, for whom environmental considerations constitute an important factor in purchasing decisions.

The Impact of Environmentally Sustainable Practices on the Competitiveness of Food Service Businesses

The literature indicates that the implementation of environmentally sustainable practices can serve as a significant source of competitive advantage for food service businesses. An increasing proportion of consumers report a willingness to choose establishments that operate in accordance with the principles of sustainable development.

Environmental sustainability initiatives enhance business competitiveness by:

- improving brand image,
- increasing customer loyalty,
- strengthening market recognition.
- facilitating the acquisition of environmental certifications,
- reducing operating costs.

The importance of environmentally sustainable practices in gastronomy is particularly evident in tourism destinations where culinary experiences constitute a key component of the visitor experience. Tourists increasingly associate the quality of food service offerings with the environmental responsibility demonstrated by the business.

Consequently, environmentally sustainable initiatives should not be viewed merely as an operational cost but rather as a strategic investment that enhances the attractiveness of tourism products while supporting the long-term competitiveness and sustainable development of food service businesses.

IV. CONCLUSIONS

The analysis conducted in this study confirms that pro-environmental factors play an increasingly important role in shaping the attractiveness of tourism products associated with gastronomy. The growing environmental awareness of society has led tourists to evaluate not

only the quality and taste of food offerings but also the operating practices of food service businesses and their impact on the natural environment.

The most important factors enhancing the attractiveness of gastronomic tourism products include the use of locally sourced food products, food waste reduction, waste minimization, the adoption of environmentally friendly packaging, efficient energy and water management, and the implementation of circular economy principles. These practices contribute not only to environmental protection but also to strengthening the positive image of both food service businesses and tourism destinations.

The findings indicate that environmentally sustainable practices contribute to higher customer satisfaction, improved business competitiveness, and the development of local economies. Of particular importance is the use of locally sourced products, which simultaneously reduces the environmental impacts associated with food transportation while enhancing the authenticity of culinary experiences.

It can therefore be concluded that, in today's tourism market, environmentally sustainable practices represent not only an expression of corporate social responsibility but also an important strategic instrument for achieving competitive advantage. Looking ahead, the importance of environmental sustainability and measures aimed at mitigating the environmental impacts of food service operations is expected to continue increasing. Consequently, the implementation of sustainable development principles will likely become one of the fundamental prerequisites for the long-term success of businesses operating within the tourism sector.

In conclusion, pro-environmental factors should be regarded as key determinants of the attractiveness of contemporary tourism products, while the foodservice sector should be recognized as one of the sectors best positioned to implement the principles of sustainable development. Responsible management of natural resources, support for local producers, and efforts to minimize adverse environmental impacts can contribute not only to enhancing the competitiveness of food service businesses but also to fostering the long-term development of tourism in accordance with the principles of sustainable development.

REFERENCES

- Chiaraluce G., Bentivoglio D., Conte Del A., Lucas M. R., Finco A. (2024). The second life of food by-products: Consumers' intention to purchase and willingness to pay for an upcycled pizza. *Cleaner and Responsible Consumption*. 14. 100198.
- Colander D. C. (2013). *Economics*. Irwin-McGraw Hill Publishing Company. Boston. MA.
- Einarsson S., Sorin F. (2020). Circular economy in travel and tourism: A conceptual framework for a sustainable, resilient and future-proof industry transition. CE360 Alliance.
- Ellen McArthur Foundation (2019). Food and the circular economy – deep dive. <https://www.ellenmacarthurfoundation.org/food-and-the-circular-economy-deep-dive>
- Greer R., Wirth T., Loorbach D. (2020). The diffusion of circular services: Transforming the Dutch catering sector. *Journal of Cleaner Production*. 267. 121906.
- Hall C. M., Mitchell R. (2005). Gastronomic tourism: Comparing food and wine tourism experiences. M. Novelli (ed.). *Niche tourism: Contemporary issues, trends and cases*. Elsevier Butterworth-Heinemann. Oxford. 73-88. <https://doi.org/10.4324/9780080492926>
- Jęczmyk A., Kasprzak K. (2017). Turystyka kulinarna w świetle koncepcji zrównoważonego rozwoju w Polsce. *Polish Journal for Sustainable Development*. 21(1). 7-14. DOI:10.15584/pjsd.2017.21.1.1
- Jęczmyk A., Ugliś J., Kasprzak K. (2019). Zanieczyszczenie powietrza a turystyka. *Polish Journal for Sustainable Development*. 23(2). 17-24. DOI: 10.15584/pjsd.2019.23.2.2

- Kasprzak K. (2006). Ochrona środowiska w hotelach - wybór problemów. Południowo-Wschodni Oddział Polskiego Towarzystwa Inżynierii Ekologicznej z siedzibą w Rzeszowie, Polskie Towarzystwo Gleboznawcze, Oddział w Rzeszowie. Zeszyty Naukowe. 7. 35-44.
- Kasprzak K. (2015). Inwestycje sportowe i turystyczno-rekreacyjne mogące potencjalnie pogorszyć stan środowiska. Polish Journal for Sustainable Development. 19. 31-38. DOI: 10.15584/pjsd.2015.19.4
- Lacy P., Long J., Spindler W. (2020). The Circular Economy Handbook: Realizing the Circular Advantage. Palgrave Macmillan.
- Łuka P. (2014). Wpływ użyteczności produktów na proces podejmowania decyzji na rynku. Modern Management Review. MMR. vol. XIX. 21 (1). 67-75.
- Łuka P., Kwiatkowska-Sienkiewicz K. (2010). Attractiveness evaluation of the second-hand passenger cars in Poland. Quality management of selected Processes. Methods and techniques of quality management. Radom. Politechnika Radomska. 144-155.
- Olechniewicz P. (2026, June 19). I Bieszczadzkie Forum Dużych Drapieżników. Eksperti rozmawiają o wilkach i niedźwiedziach. Wiadomości. Polskie Radio Rzeszów. <https://radio.rzeszow.pl/329926/i-bieszczadzkie-forum-duzych-drapieznikow-eksperti-rozmawiaja-o-wilkach-i-niedzwiedziach/>
- Orłowski D., Woźniczko M. (2016). Turystyka kulinarna w Polsce – wstępne badania nad fenomenem zjawiska. Turystyka kulturowa. 5. 60-100. <http://dx.doi.org/10.62875/tk.v5i0.764>
- Poskrobko B. (2010). Nowe podejście do bogactwa przyrodniczego jako podstawa retardacji wykorzystania zasobów. Biuletyn KPZK PAN. 242. Warszawa. 90-108.
- Poskrobko B., Kostecka J. (2016). Retardacja w świadomości społecznej. Polish Journal for Sustainable Development. 20. 145-159. DOI:10.15584/pjsd.2016.20.16
- Sachs J. D. (2015). The Age of Sustainable Development. Columbia University Press.
- Stasiak A. (2007). Gastronomia jako produkt turystyczny. Turystyka i Hotelarstwo. 11. 103-132.
- Woźniczko M., Jędrzyś T., Orłowski D. (2015). Turystyka kulinarna. PWE. Warszawa.

