POLICY BRIEF

Leveraging Multi-Source Data for Decision-makers in the Finnish Experience Industry

The datasets cover all regions and key sectors of the Finnish Experience Industry, offering a detailed view of its structure and performance.

Multi-Source Data (Tripadvisor, Amadeus, Network, Visit Finland, Salmi Platform) provide insights into customer reviews, financial performance, tourist behavior, network relationships.

The Finnish Experience Industry (FinEI) is a broad ecosystem where businesses create value by delivering customer-centred experiences. Covering all 19 regions of Finland and spanning 12 industry sectors—including accommodation, food and beverage, events, arts, transport, marketing, design, architecture, music, audiovisual, gaming, and publishing—FinEI plays a vital role in the country's economy and regional development (Figure 1).
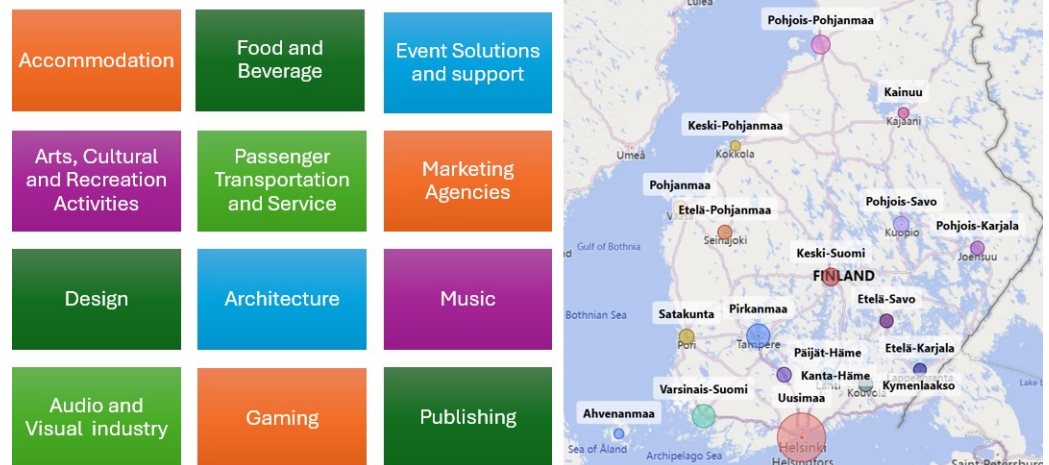

Figure 1. Finland Experience Industry Ecosystem (Circle size indicates the size of FinEI per region by company count).

This policy brief presents and compares five key datasets that can enhance decision-making concerning FinEI: Tripadvisor, Amadeus, Companies' Hyperlinks Network, Visit Finland's Matkailijamittari, and Salmi Platform. Each dataset offers a unique perspective on different aspects of the industry, from customer reviews and financial performance to tourist behaviour and business networks. While these datasets are rich in insights, each also has its limitations that should be considered in decision-making.

Metaverse meets the Experience Industry

Peng Yang, Katja Pasanen

University of Eastern Finland, Business School

UNIVERSITY OF EASTERN FINLAND

BUSINESS FINLAND

The FinEI is an amalgamation of different industries and sectors that cannot be measured properly by using standard figures from statistical bureaus, and for that reason alternative metrics and datasets, as well as combination of alternative datasets are needed to understand the Finnish Experience industry sector. Given the complexity of FinEI, a data-driven approach is essential. By leveraging these datasets, policymakers and industry stakeholders can make informed, evidence-based decisions that drive growth, foster innovation, and improve the overall performance of the Finnish Experience Industry.

Overview of the datasets

To gain a thorough understanding of the Finnish Experience Industry (FinEI), five distinct datasets were analysed and utilized, each offering unique perspectives on different aspects of the industry: Tripadvisor, Amadeus, Companies' Hyperlinks Network, Visit Finland (Matkailijamittari), and Salmi Platform. These datasets provide insights into customer reviews, financial performance, tourist behaviour, network relationships, and event-related data, offering a comprehensive basis for exploring the industry across all regions and key sectors. Each dataset contains a variety of data types, and selecting the appropriate metrics is crucial for exploring the success of the FinEI. Table 1 summarizes the key characteristics of each dataset.

Tripadvisor Dataset: We utilized a Python script to systematically collect the front pages of all businesses on Tripadvisor in May 2024, starting from the national level in Finland, and then narrowing down to regions, cities, and individual businesses. The TripAdvisor dataset includes information on Finnish businesses and captures customer feedback across the accommodation, restaurants, and attractions sectors. It covers 12,140 businesses across 19 regions and 284 cities, with 449,000 reviews and an average rating of 4.08 overall, indicating generally positive customer feedback. From this dataset, the review ratings were aggregated by region, and businesses were categorized into accommodation, restaurants, and attractions to assess customer satisfaction across different sectors.

Matkailijamittari Dataset: This dataset focuses on tourist behaviour and spending patterns. Based on surveys conducted at eight border points, this dataset captures information on visited destinations, spending patterns, and other travel-related behaviours. The data includes responses from 8,221 international travellers (between March 2023 and June 2024), covering aspects such as age, travel group type, origin, destination, and spending on accommodation, food, shopping, and transportation. Data about the number of nights tourists stayed in different regions, tourists' spending patterns (including accommodation, food, transportation, and shopping), and CO_2 emissions were analysed to understand tourist behaviour and its environmental impacts.

Salmi Platform Dataset: The Salmi Platform dataset provides event-related customer data. It includes data on customer satisfaction, Net Promoter Score (NPS), and spending patterns, primarily from Finnish tourists attending events. Focusing on the event sector within the FinEI, this dataset includes information from 44,480 respondents across 15 regions from the year 2023. Net Promoter Score (NPS), customer satisfaction, and spending patterns were analysed by region to evaluate the success of events within the FinEI.

Amadeus Dataset: We accessed Amadeus data in July 2024 (now known as Orbis Europe) through the University of Eastern Finland's library. This dataset provides financial data on Finnish companies across all 12 sectors within the FinEI. It includes key financial metrics such as

operational revenue (52 billion EUR), total assets (60 billion EUR), and net income (1 billion EUR) of a total of 31,038 companies. The dataset also includes employment data, revealing that there are 267,230 employees across the sectors. From this dataset, we chose the basic key financial metrics for closer examination: operational revenue, net income, total assets, and employee count, which were selected to assess the financial health and performance of companies within the FinEI.

Hyperlinks Network Dataset: The Network dataset, collected in February 2024, maps hyperlinks between websites of the experience industry companies to analyse their interconnections and relationships within the industry. Using company names and websites from the Amadeus dataset, this dataset was created by scraping hyperlinks from company websites. The Hyperlinks Network included 8,234 companies (websites) and 148,610 edges (links). The dataset categorizes links as internal or external and measures the influence and cooperation between companies within the FinEI. The E-I index was used to measure the level of cooperation, influence, and followership among companies within different regions and sectors. The E-I index compares the number of external links (links outside the group) to internal links (links within the group).

Table 1. Dataset Profile

Data Source	Unit/data collection	Key Metric	Main Entity / Target group	Sector	Region
TripAdvisor	Online review, User-generated content	Review rating	Domestic and international tourists	Tourism related: accommodation, things to do, food	Whole Finland
Matkailija-mittari	Onsite survey	Tourist spending	International tourists	Tourism related: food, hotel, shopping, transportation	Whole Finland
Salmi Platform	Electronic survey on events and in tourism destinations	Satisfaction NPS	Mainly domestic tourists, some international tourists	Finnish events	Major cities and events across Finland
Amadeus	Financial Data	Revenue and Profit	Finnish Companies	All 12 FinEI sectors	Whole Finland
Hyperlinks Network	Website Hyperlinks Network	Collabo-ration and connections	Finnish Companies	All 12 FinEI sectors	Whole Finland

Dataset Comparison

The datasets were analysed and compared based on their characteristics. The analysis revealed that each of the datasets has both advantages and disadvantages. For example, Tripadvisor data, with its focus on accommodation, food, and attraction sectors, is easy to access and provides comprehensive customer feedback, making it highly useful for identifying satisfaction trends and improving services. However, it might have limited reliability, and the data might be richer when it comes to services and attractions in bigger cities.

Matkailijamittari data concentrates on tourist spending and behaviour across the accommodation, food, and transportation sectors at both the city and regional levels. It highlights patterns in international tourist behaviour and spending that are critical for understanding regional dynamics, but does not offer similar information concerning domestic tourism. The Salmi Platform, on the other hand, is focused solely on the event sector, and captures event-based satisfaction, Net Promoter Score (NPS), and spending patterns, offering valuable insights into how events impact local economies and tourist experiences. However, the data is mainly collected from domestic travellers and lacks insights from international tourism.

The Amadeus dataset offers detailed financial data, including revenue, profit, assets, and employment metrics, making it an essential resource for monitoring the financial health of businesses in the industry, but on the other hand, it does not offer any company-related customer data. Finally, the Network Data provides a broader view of how businesses are connected through their online presence, covering all 12 sectors within the Finnish Experience Industry. It helps to identify key influencers and collaboration networks within the industry. However, position in the network does not always correlate, for example, with financial success.

The strengths and weaknesses of each dataset are presented in Table 2. However, it is good to keep in mind that the strengths and weaknesses are in some parts situational, which means that in some cases a strength might be a weakness and the other way around. This depends on the aim of the data usage.

Table 2. Dataset Comparison

Dataset	Strengths	Weaknesses
TripAdvisor	- Captures all-time customer feedback through online reviews. - Covers sectors like accommodation, food, and attractions. - Accessible for both locals and tourists from Finland and abroad. - Almost anyone can write a review - Both positive and negative reviews	- Biased towards tourists who use online platforms. - Does not capture actual spending or behavior. - May overrepresent more tech-savvy tourists - Limited reliability (fake reviews) - Limited yearly data, especially from smaller destinations - Does not capture business success

Matkailija-mittari	- Data about the spending behaviour of international tourists (food, hotel, shopping, transportation). - Includes international tourists at 8 border points, with extended coverage to some other regions.	- No data about the travel behavior or spending of domestic tourists - Limited to specific survey points, which might not fully capture broader tourist patterns. - Does not capture business success
Salmi Platform	- Captures event-based satisfaction, Net Promoter Score (NPS), and spending. - Focus on Finnish tourist behaviour, especially during events. - Can track event success in larger cities.	- Only limited data on international tourists' feedback. - Narrow focus on event-related data, possibly missing other aspects of the experience industry. - Does not capture business success
Amadeus	- Provides detailed financial data (revenue, profit) from Finnish companies across 12 sectors. - Objective measure of business performance.	- Financial success may not directly reflect customer satisfaction or experience. - Lacks direct consumer engagement metrics (e.g., reviews, feedback).
Network Data	- Measures network leadership and influence among companies in Finland's 12 sectors. - Highlights relationships and cooperation within the industry. - Data that cannot be found anywhere else	- Does not directly measure customer satisfaction or financial outcomes. - Network positioning (influence) may not always correlate with actual financial or experiential success

Conclusion

The alternative datasets presented in this policy brief to analyse the FinEI sector offer different perspectives at the company, city, and regional levels. Each dataset has unique strengths and limitations, and decision-makers could use them to address specific needs at the local, regional, and national levels.

Each of these datasets serves different purposes depending on the decision-making context. **At the local level**, Tripadvisor and Salmi Platform data are particularly useful for identifying customer satisfaction trends and tracking event performance. City authorities can use these insights to improve tourist services and organize more impactful events. **At the regional level**, datasets like Amadeus, Matkailijamittari, and Network Data become more relevant for understanding the financial health of businesses, tourist spending patterns, and collaboration between companies across multiple cities. Regional development agencies can use these insights to create more cohesive strategies that promote business growth and enhance cooperation between stakeholders. **At the national level**, Amadeus and Network Data provide a broader picture of the Finnish Experience Industry. Policymakers can use Amadeus data to monitor overall business performance and track sector-wide growth, while Network Data helps them understand how businesses are interconnected and where cooperation can be strengthened. These insights are

crucial for shaping long-term strategies and developing policies that foster innovation and collaboration across the industry.

No single dataset provides a complete picture of the industry, but combining multiple datasets can offer a much richer understanding of its complexities. For example, integrating Tripadvisor data with Amadeus allows decision-makers to assess both customer satisfaction and business performance, providing a balanced view of how well businesses are meeting customer expectations while maintaining financial sustainability. In summary, these datasets offer a powerful foundation for data-driven decision-making in the Finnish Experience Industry. By adopting a multi-source approach, stakeholders at all levels—local, regional, and national—can develop more effective strategies that improve FinEI performance.

You can familiarise yourself with the datasets and the data visualisations produced in Power BI on this website.