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AGRITOURIST BOARDING HOUSES IN ROMANIA: SEASONAL CONCENTRATION OF DEMAND AND YEAR-ROUND CAPACITY USE, 2010-2025

MILITARU FLORIN DANIEL[1], POPESCU COSMIN ALIN[2], CIOLAC RAMONA[1], DINCU ANAMARIA[1], POPESCU GABRIELA[*1]

[1] *University of Life Sciences “King Mihai I” from Timisoara, Faculty of Management and Rural Tourism, Timisoara, Romania*
[2] *University of Life Sciences “King Mihai I” from Timisoara, Faculty of Agriculture, Timisoara, Romania*
[*] *Corresponding author: gabrielapopescu@usvt.ro*

Abstract: *The paper measures how seasonal the demand for Romanian agritourist boarding houses is and how well their capacity is used across the year. Monthly INS data on overnight stays and capacity in function for 41 counties (2010-2025) were used to compute Gini indices of monthly stays and net occupancy by season. Within the same county and year, stays in agritourist boarding houses were more concentrated than in hotels (Gini +0.053) and tourist boarding houses (+0.055). Concentration declined slowly (-0.0034 per year), while the July-August share did not change. Annual occupancy stayed low (national mean 15.8%) because capacity grew almost as fast as demand and remained open in the low season. Most cross-county differences in annual occupancy arise outside July-August.*

Key words: *agritourism, seasonality, occupancy, Gini index, boarding houses*

• Introduction

Agritourist boarding houses are small, family-run units closely tied to rural development in Romania. Their viability depends on how many beds are sold over the whole year, not only in the peak month; seasonality lowers occupancy and leaves staff and capital idle. A national, county-level comparison with other accommodation types was still missing.

Aim: to measure the seasonal concentration of demand and the year-round use of capacity, 2010-2025. Hypotheses:

H1 Demand is **more seasonal** than in hotels and tourist boarding houses of the same county

H2 Seasonal concentration **decreased** over 2010-2025

H3 County differences in annual occupancy come mainly from **outside the peak season**

• Material and method

Monthly INS TEMPO-Online data (TUR104F, TUR103E, TUR105H) for 41 counties, 2010-2025: 482 complete county-years for agritourist boarding houses. Seasons fixed ex ante: **peak** July-August, **shoulder** May-June and September-October, **off-season** November-April. Years 2020-2021 are excluded from trend estimates.

DATA
Monthly stays, arrivals, capacity in function
41 counties, 2010-2025

→

INDICATORS
Net occupancy = stays / capacity
Gini of 12 monthly stays
July-August share

→

TESTS
H1: paired, same county-year
H2: county fixed-effects trend
H3: variance decomposition

→

ROBUSTNESS
Arrivals, balanced panel
Capacity weights
Leave-one-county-out

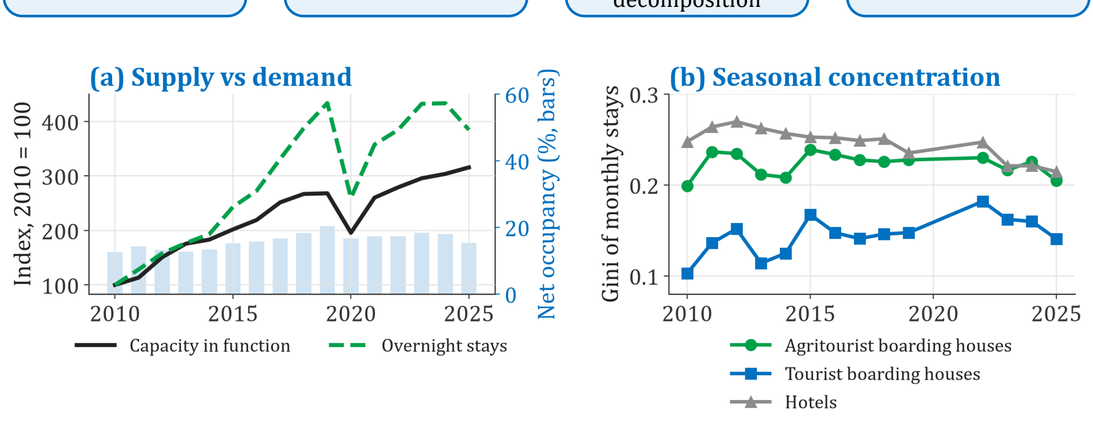


Figure 1. *Capacity in function, overnight stays and occupancy of agritourist boarding houses (a) and Gini index of monthly stays by type (b)*

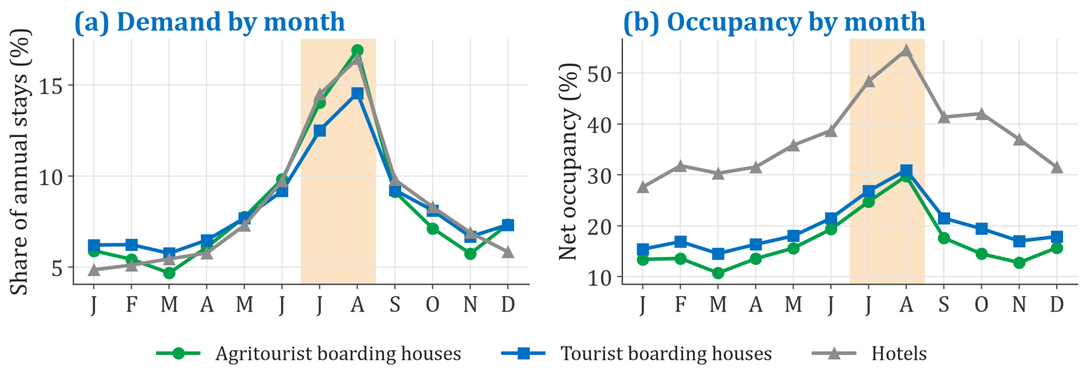


Figure 2. *Monthly distribution of overnight stays (a) and net occupancy (b) by type of establishment, 2022-2025*

• Results and discussions

+0.053
higher Gini than hotels in the same county and year ($p < 0.001$)

15.8%
mean annual occupancy of agritourist houses (hotels 36.6%)

≈ 2/3
of cross-county occupancy differences arise outside July-August

Stays rose from 0.55 to 2.10 million (2010-2025), but capacity grew from 4.3 to 13.7 million places-days and stays open in winter (77% of peak level), so occupancy fell from 20.4% (2019) to 15.4% (2025) (Fig. 1).

H1 supported. Nationally agritourism looks less seasonal than hotels (Gini 0.223 vs 0.246, due to Black Sea resorts), but within the same county-year it is more seasonal in 72% of cases. August alone holds 16.9% of stays (Fig. 2).

H2 weakly supported. Gini fell by only 0.0034 per year ($p = 0.005$); the July-August share did not change.

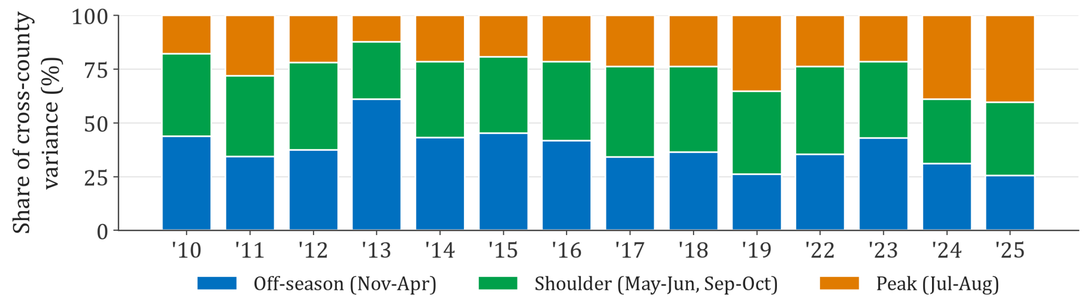


Figure 3. *Contribution of each season to the cross-county variance of annual occupancy, agritourist boarding houses*

H3 partly supported. Off-season months explain 38%, shoulder 36% and peak 25% of the variance: well-used counties (Suceava, Bihor) sell rooms outside summer; Maramureș uses only 9.5% of its capacity (Fig. 4).

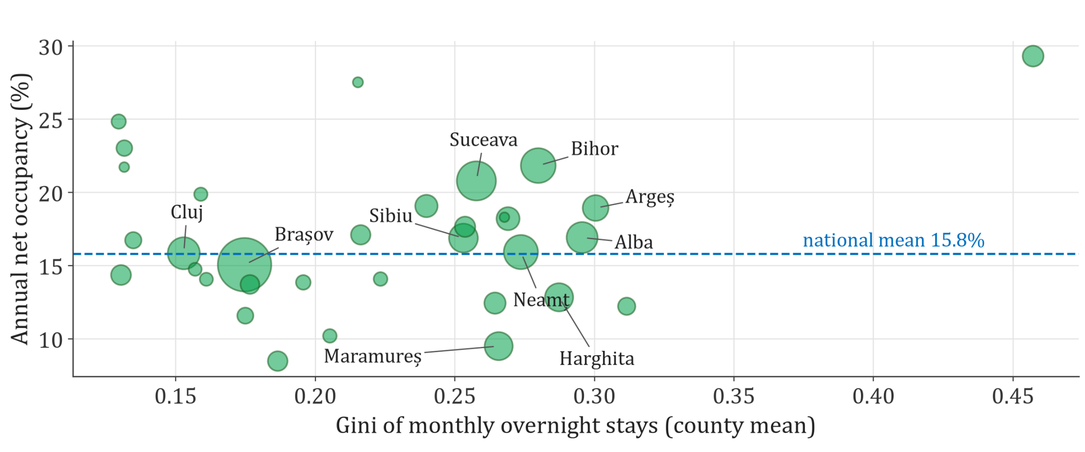


Figure 4. *Seasonal concentration and annual occupancy by county (bubble size = share of national stays)*

• Conclusions

- Within each county, agritourist boarding houses are the most **summer-dependent** form of accommodation.
- Seasonality decreased only slightly; the July-August share of stays remained stable.
- Occupancy stays low because **capacity grew almost as fast as demand** and stays open in the low season.
- The practical lever is **off-season demand** (short breaks, events, gastronomy, school and business groups), not more peak capacity.