

A COMPARATIVE ANALYSIS OF AGRITOURISM DEVELOPMENT IN ROMANIA'S WEST AND NORTH-WEST REGIONS: TRENDS, CHALLENGES, AND OPPORTUNITIES

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RESEARCH ARTICLE

Abstract

This paper presents a quantitative comparative analysis of agritourism development in Romania's West and North-West regions, focusing on three key indicators: arrivals, stays, and accommodation units. The study uses regional statistical data to conduct a descriptive analysis to highlight differences in agritourism performance. Results demonstrate that the North-West region scores significantly better than the West region across indicators, suggesting a more effective integration of agritourism into local development strategies. The analysis discusses potential factors that may contribute to these differences, such as regional infrastructure and investment variations. Based on the findings, the paper recommends that policymakers replicate the successful models observed in the North-West region to foster balanced and sustainable agritourism growth across Romania.

Keywords: agritourism; Romanian rural tourism; tourism comparative analysis; tourism developmen

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INTRODUCTION

Agritourism has emerged as an increasingly significant segment of rural tourism, contributing substantially to local economies, environmental sustainability, and socio-cultural preservation in rural areas (Barbieri 2020; LaPan and Barbieri 2014). Agritourism is increasingly recognized within the European Union as a key mechanism for stimulating rural economies, preserving cultural heritage, and promoting environmental sustainability. Romania exemplifies both the potential and the challenges in this domain. The Common Agricultural Policy (CAP) has played a central role in this development by providing financial subsidies that encourage farm diversification and help mitigate rural depopulation (Galluzzo 2020, 2021).

Romania, endowed with substantial agricultural resources and diverse rural landscapes, has considerable potential for agritourism development, yet its performance remains uneven across various regions. As such, despite Romania's rich agricultural and natural resources, regional disparities remain pronounced due to uneven infrastructure, investment, and policy support. Romania possesses comparative strength in natural and cultural tourism assets, but also needs improved infrastructure to match EU peers (Foris 2020). Success stories are correlated with public-private partnerships, multilevel governance, and targeted EU investments, as is the case of

successful tourism development in South Bukovina, Romania (Lequeux-Dincă and Teodorescu 2024).

Furthermore, previous studies have underscored the disparity in agritourism development among Romanian regions, attributing differences primarily to infrastructure availability, investment levels, and local policy support (Adamov, Ciolac, Iancu, Brad, Peț, Popescu, and Șmuleac 2020; Adamov, Iancu, Mateoc-Sîrb, Pîrvulescu, Sălășan, Ciolac, Șuba, and Firu-Nigoescu 2021; Ciolac, Adamov, Iancu, Popescu, Lile, Rujescu, and Marin 2019; Ciolac, Iancu, Popescu, Adamov, Feher, and Stanciu 2022; Popescu, Popescu, Iancu, Brad, Peț, Adamov, and Ciolac 2022; Popescu and Badita 2011).

Despite existing literature addressing general agritourism trends and regional rural development, comprehensive comparative analyses specifically between Romania's West and Northwest regions remain relatively scarce, with studies focusing on particular regions (Albu, Drăghici, and Necula 2016; Bacter, Gherdan, Dodu, Ciolac, Iancu, Pîrvulescu, Brata, Ungureanu, Bolohan, and Chebeleu 2024; Gherdan, Bacter, Ciolac, Iancu, Maerescu, Dodu, Chereji, Herman, Ungureanu, and Bacter 2025; Marin and Godja 2017; Pascariu, Gordan, Iosim, Adamov, and Iancu 2022). Therefore, this study seeks to fill this research gap through a detailed quantitative comparative analysis, evaluating agritourism development based on three critical

indicators: arrivals, stays, and accommodation units. This study aims to investigate and compare agritourism development trends in these two Romanian regions, identify key challenges hindering balanced development, and propose opportunities for policy improvement.

MATERIAL AND METHOD

This comparative analysis focuses on agritourism activities in two Romanian regions: the West region (comprising the counties of Arad, Caraş-Severin, Hunedoara, and Timiş) and the North-West region (consisting of Bihor, Bistriţa-Năsăud, Cluj, Maramureş, Satu Mare, and Sălaj counties), as shown in Figure 1. These regions were selected due to their distinct geographical characteristics, development patterns, and significant rural tourism potential, providing a suitable basis for comparative analysis.

Data used for this research were gathered from official sources provided by Romania's National Institute of Statistics (INSSE). Secondary data were obtained for the period between 2015 and 2024, covering three main agritourism performance indicators: number of tourist arrivals, number of overnight stays, and the number of agritourism accommodation units. The Year-on-Year Growth Rates (YoYGR) and the Compound Annual Growth Rate (CAGR) were used to analyze and compare agritourism performance between the West and North-West

regions, highlighting trends over time and illustrating regional disparities.

The YoYGR formula is the following:

$$YOYGR = \frac{V_n}{V_{n-1}} * 100 - 100$$

, where:

YoYGR – Year-on-Year Growth Rate

V_n – Value in current year

V_{n-1} – Value in previous year.

The CAGR formula is the following:

$$CAGR = \left(\frac{V_{final}}{V_{initial}} \right)^{\frac{1}{no. \text{ years}}} - 1$$

, where:

CAGR – compound annual growth rate

V_{final} – final value in time series

V_{initial} – initial value in time series

no. years – number of years in time series.

The usage of the CAGR is particularly suitable for this study as it effectively smooths out annual fluctuations, offering clear insights into sustained trends in agritourism development. This method allows for meaningful comparisons between regions, irrespective of initial differences in scale, which aligns closely with the comparative objectives of the analysis (Gill and Singh 2013; Kulendran and Wong 2009).

The CAGR for the number of accommodation units, arrivals and stays for the studied region was compared to the national CAGR rate of each indicator, indicating overall performance above or below the national average.

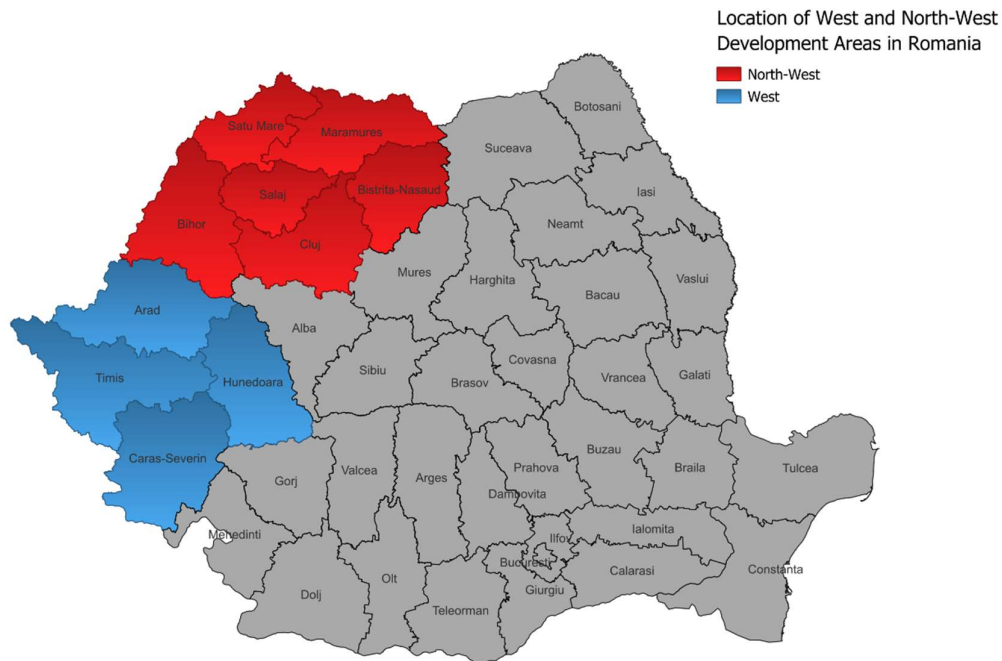


Figure 1 Location of studied areas (counties in the West and North-West Development Region, respectively) in Romania

RESULTS AND DISCUSSIONS

Table 1 presents the Compound Annual Growth Rate (CAGR) of agritouristic accommodation units in Romania's North-West and West regions from 2015 to 2024. A comparative examination reveals substantial regional disparities and inconsistent growth patterns.

The North-West Region generally demonstrated robust and positive YoYGR, particularly noticeable in the years 2017 (29.95%) and 2016 (9.71%). Within this region, counties displayed considerable variation: Bistrița-Năsăud and Satu Mare experienced extreme fluctuations, including remarkable peaks (673.96% in 2017 for Bistrița-Năsăud, 439.63% in 2018 for Satu Mare), and sharp declines in other years. Maramureș and Cluj counties showed more stable, albeit moderate, positive growth patterns, indicating sustained agritourism development. Conversely, Bihor and Sălaj counties recorded irregular growth with significant volatility, reflecting instability in local investment or policy support.

In contrast, the West Region exhibited less consistent performance, although the average YoYGR was marginally higher. Hunedoara county consistently outperformed other counties in the region, showing notable peaks in growth (49.83% in 2017, 29.36% in 2020), suggesting better local management or successful tourism initiatives. Timis experienced significant volatility, with drastic declines (e.g., -41.45% in 2016, -29.12% in 2018) followed by

recovery (24.99% in 2024). Arad and Caraș-Severin counties showed predominantly negative or weak growth patterns, indicative of structural or strategic challenges.

Overall, the West region reported negative YoYGR compared to the national average in 46% of cases, while the North-West region did in 35% of cases studied. However, the average YoYGR for the North-West region was lower than the one reported in the West region, at 10.10% and 11.50%, respectively.

Figure 2 visually represents the compound annual growth rates (CAGR) for the number of agritouristic accommodation units in Romania's West and North-West regions. Here's a summary of the insights it offers:

Bistrița-Năsăud stands out with the highest CAGR range (24.9–28.1%), indicating a significant and sustained increase in agritourism development, consistent with the large spikes observed in the data. Bihor also shows strong performance, falling into the 18.6–21.7% range. Counties like Sălaj, Hunedoara, and Cluj fall in the mid-range (15.4–18.6%), reflecting moderate but steady growth. Timis, Arad, Caraș-Severin, and Satu Mare show the lowest growth rates (6–12.3%), indicating slower development or stagnation in agritourism activities. This evidence supports the conclusion that the North-West Region has been more successful in developing agritourism compared to the West Region, from the perspective of the number of accommodation units.

Table 1
Comparison of year on year growth for number of agritouristic accommodation units with the national average

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
North-West Region	-6.35	9.71	29.95	7.01	4.21	6.57	7.26	6.77	3.20	2.14
Bihor	7.03	-4.44	-10.65	34.08	-1.56	5.46	-17.97	36.00	2.23	3.35
Bistrita-Nasaud	-27.70	-20.02	673.96	4.22	4.38	20.14	3.31	27.21	-6.77	4.51
Cluj	-23.01	6.13	57.30	10.29	13.07	-6.71	7.80	7.68	2.78	-1.85
Maramures	-3.93	25.91	15.31	-12.41	2.83	17.92	28.21	-14.71	11.49	5.19
Satu Mare	-48.53	-5.74	-76.04	439.63	9.84	42.07	-14.49	-11.80	-31.65	-20.47
Salaj	27.66	24.26	8.58	-13.22	-8.08	-11.15	18.84	6.81	4.25	-0.06
West Region	12.39	-4.38	-2.04	-3.38	6.77	5.34	-5.29	8.50	1.00	1.87
Arad	-19.04	-9.74	-38.54	56.30	12.17	-10.49	-6.60	21.26	3.60	-17.67
Caras-Severin	9.37	5.53	-22.24	-0.61	-3.70	0.21	-10.19	7.55	-2.31	-5.20
Hunedoara	34.80	15.10	49.83	-16.25	23.66	29.36	2.79	11.94	4.27	12.89
Timis	49.51	-41.45	51.74	-29.12	4.59	-7.93	-10.79	-18.55	-4.75	24.99

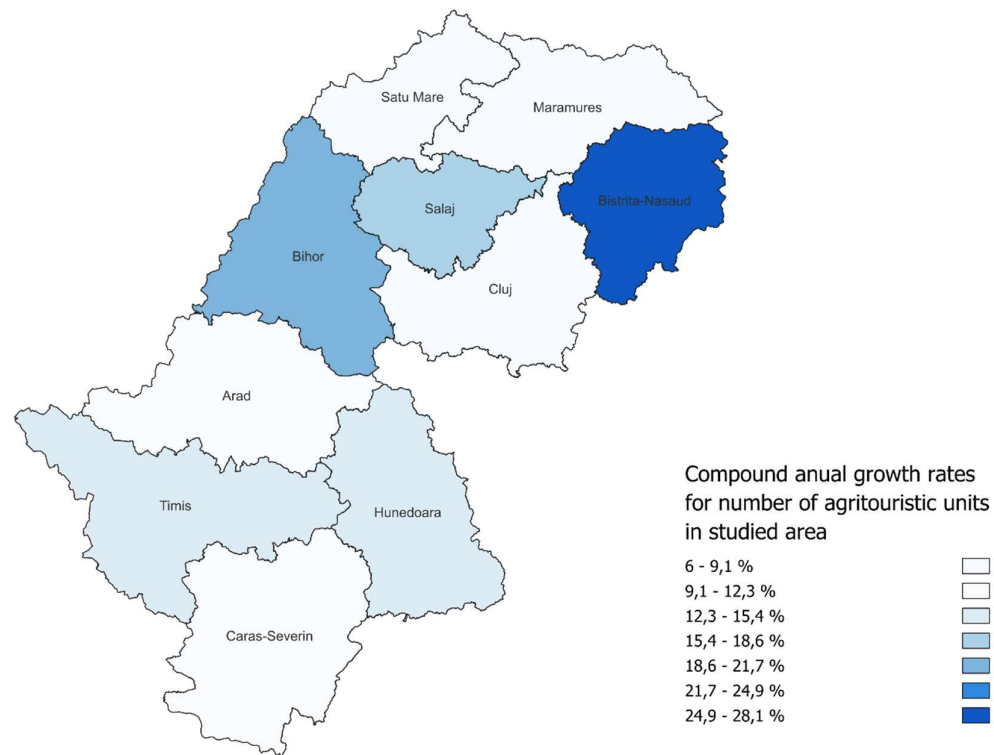


Figure 2 **Distribution of compound annual growth rates for number of accommodation units specialising in agritourism in the studied areas**

Table 2 shows the comparison of year on year growth between the studied areas and the national average for arrivals to agritouristic accommodation units. The North-West Region, through counties such as Bistrița-Năsăud, Cluj, and Maramureș, not only attracted more agritourism arrivals over time but also demonstrated a stronger alignment with national growth patterns, especially in post-2016 years. This suggests that the region benefitted from more coherent strategies, better infrastructure, and possibly stronger public-private partnerships in the tourism sector.

In contrast, the West Region's performance, although showing early momentum in 2014–2015 (especially in Hunedoara), failed to maintain a steady trajectory. The negative deviations in most years—particularly in Timiș and Caraș-Severin—may point to underinvestment, limited promotion of agritourism, or lack of institutional support.

Figure 3 visualizes the compound annual growth rates (CAGR) for tourist arrivals in agritouristic units across Romania's West and North-West regions, highlighting the spatial distribution of performance from 2014 to 2023.

Bistrița-Năsăud once again leads the region with the highest CAGR range (19.7–22.6%), confirming its role as a major agritourism growth hub. This aligns with earlier data showing large spikes in arrivals in certain years, signaling strong local development strategies and possibly successful marketing efforts.

Hunedoara and Maramureș follow in the 16.9–19.7% and 14–16.9% ranges respectively, reflecting their consistent positive performance in attracting tourists and integrating agritourism into local offerings.

Counties such as Cluj, Bihor, and Satu Mare fall within the 8.4–14% range, indicating moderate growth—supportive but not leading. These counties may benefit from scaling up infrastructure, diversification of services, or promotional efforts.

The weakest performers are primarily in the West Region, particularly Timiș, Caraș-Severin, and Arad, which are in the 2.7–5.5% and 5.5–8.4% ranges.

Table 2

Comparison of year on year growth for arrivals to agritouristic accommodation units with the national average

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
North-West Region	-0.71	-0.71	13.14	27.72	3.61	-8.31	-4.06	7.35	13.52	-2.31
Bihor	-5.04	-5.04	1.11	19.83	20.31	-21.23	1.71	-16.37	22.36	-7.36
Bistrița-Năsăud	-27.41	-27.41	142.56	67.30	11.09	1.85	0.90	-34.96	9.80	31.01
Cluj	2.79	2.79	8.60	37.94	-6.19	-9.25	-5.88	26.26	8.05	-9.53
Maramureș	10.98	10.98	61.05	12.39	0.09	4.24	-11.82	47.02	9.84	-2.45
Satu Mare	-11.72	-11.72	-40.65	50.94	-13.89	28.15	5.97	-34.69	17.45	29.24
Salaj	10.39	10.39	-31.36	12.15	-16.62	-15.22	-20.52	89.69	25.11	-4.40
West Region	23.32	23.32	-10.75	-7.18	3.05	-3.63	0.23	-13.17	-9.61	-6.77
Arad	26.40	26.40	-7.49	-19.90	54.09	6.06	-19.59	20.14	20.35	-14.51
Caras-Severin	38.30	38.30	-0.99	-14.65	-8.34	-10.57	12.78	-27.37	-35.41	6.63
Hunedoara	154.33	154.33	-45.15	31.80	11.55	-5.38	-0.08	-9.23	-10.42	-9.77
Timis	-25.57	-25.57	-8.69	2.59	-25.32	-3.71	11.10	-20.95	-1.33	-9.24

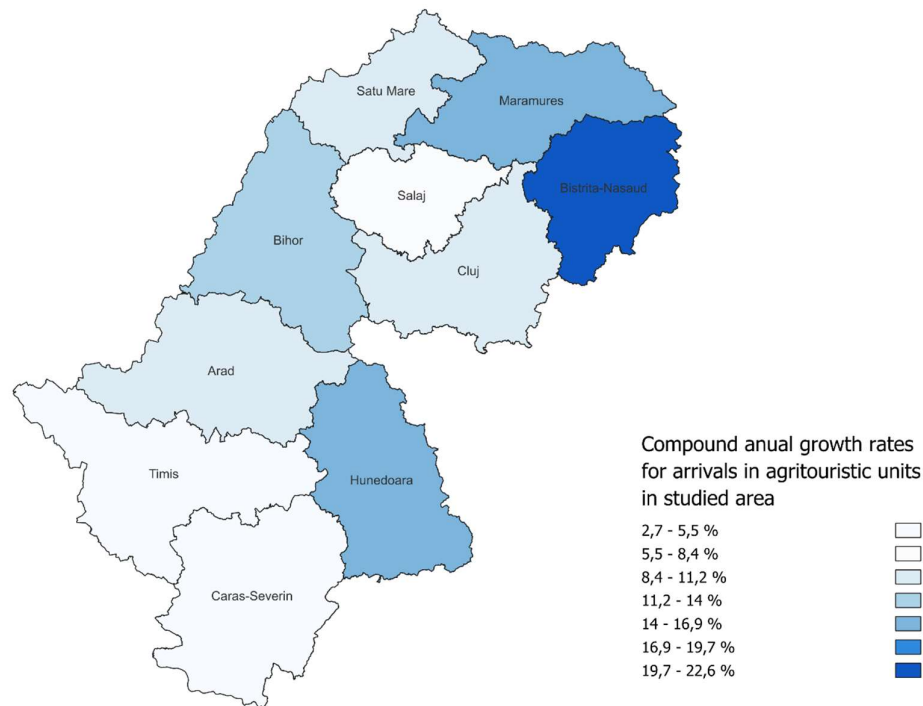
**Figure 3 Distribution of compound annual growth rates for arrivals to accommodation units specialising in agritourism in the studied area**

Table 3 shows the results for the number of stays. In the North-West region, growth trends were mixed but showed several periods of strong performance. The region experienced notable increases in 2017, and again during the post-pandemic recovery in 2021 and 2022, although growth slowed or turned negative in 2019, 2020, and 2023. Bistrița-Năsăud exhibited some of the most extreme variations, with exceptionally high growth in 2016 and 2017, followed by significant declines, particularly in 2021. Cluj and Maramureș displayed more stable trajectories, registering consistent growth in most years and strong rebounds during the

recovery phase. Sălaj and Satu Mare were highly volatile but posted notable increases in stays during 2021 and 2022, suggesting the presence of localized drivers of growth during this period.

In the West region, the overall pattern was less consistent. Although the region began with strong performance in 2015, subsequent years showed less stability. Hunedoara experienced a particularly sharp spike in 2015, followed by several years of stagnation or decline. Arad recorded a few high-growth years, especially in 2018 and 2021, but this was offset by contractions in other periods. Meanwhile, Caraș-Severin and Timiș generally underperformed

throughout the timeline, with repeated negative growth values and limited signs of sustained recovery. While both regions experienced fluctuations, the North-West showed stronger signs of recovery and expansion in certain counties, whereas the West region's growth was more fragmented and concentrated in shorter periods.

Figure 3 shows the CAGR for stays in the studied areas. Bistrița-Năsăud and Maramureș recorded the highest CAGR ranges, indicating strong and sustained growth in overnight stays. This suggests these counties may have benefited from favorable local policies, appealing tourism offerings, or effective promotion

Cluj also ranked relatively high, reflecting consistent expansion in agritourism demand

Counties such as Bihor, Hunedoara, and Sălaj showed moderate growth, falling into mid-tier ranges. Their performance may reflect mixed development strategies or variable investment levels

The lowest growth rates were observed in Arad, Timiș, and Caraș-Severin, suggesting slower agritourism development. These areas may face challenges such as limited infrastructure, weak promotional efforts, or lower prioritization of rural tourism in local planning

Overall, the map reveals a concentration of higher growth in the North-West, especially in the north-eastern counties, while the West Region lags behind.

Table 3

Comparison of year on year growth for arrivals to agritouristic accommodation units with the national average

	2015	2016	2017	2018	2019	2020	2021	2022	2023
North-West Region	5.62	6.91	27.53	5.86	-8.02	-4.24	7.08	13.50	-4.88
Bihor	-1.91	1.14	5.55	19.56	-19.01	4.79	-8.85	20.59	-10.85
Bistrita-Nasaud	-43.35	81.20	160.70	15.80	12.76	7.85	-44.19	19.40	19.78
Cluj	23.27	2.35	46.83	-5.20	-12.32	-7.70	20.13	8.67	-8.33
Maramures	18.93	51.13	17.48	7.57	8.68	-15.71	46.49	7.09	-3.49
Satu Mare	-22.35	-44.72	35.86	-20.03	18.64	5.05	-26.41	17.01	29.44
Salaj	1.77	-34.41	5.04	-13.49	-25.37	-21.40	95.72	23.09	-8.38
West Region	56.17	-21.47	-17.80	-1.95	-6.29	1.79	-17.60	-16.22	-6.33
Arad	14.17	-13.54	-20.50	47.66	-11.55	-22.49	40.20	15.29	-16.35
Caras-Severin	94.14	-17.94	-22.67	-10.12	-5.06	12.33	-30.32	-32.88	2.99
Hunedoara	228.05	-54.00	-1.29	3.92	5.50	-5.82	3.96	-20.30	-10.33
Timis	-16.65	-11.53	-10.32	-20.58	-11.02	6.93	-31.13	3.36	-10.75

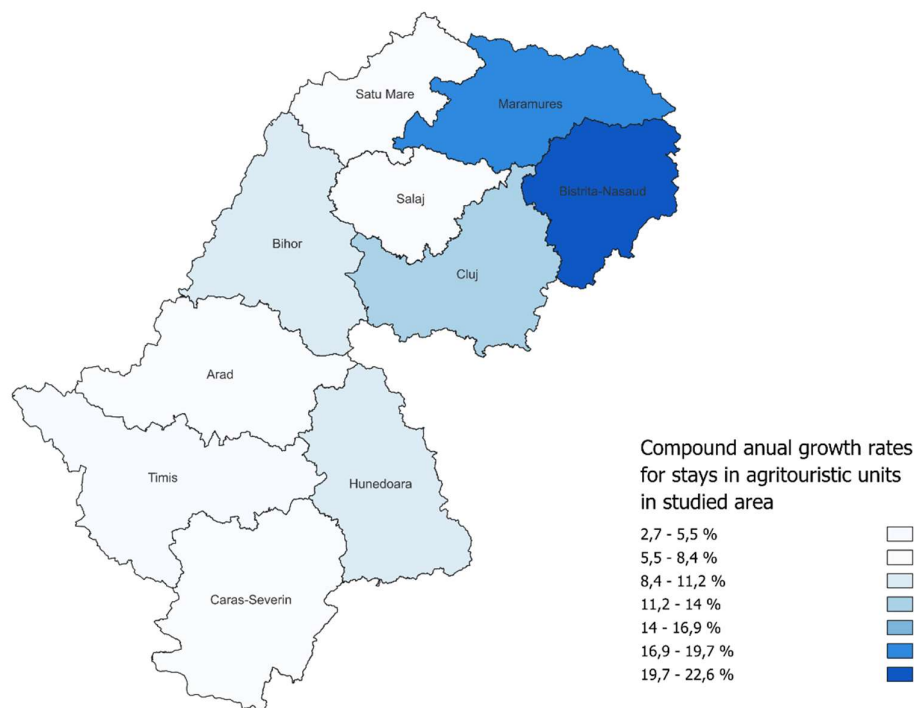


Figure 4 **Distribution of compound annual growth rates for stays in accommodation units specialising in agritourism in the studied areas**

CONCLUSIONS

The North-West Region recorded more consistent and higher compound annual growth rates in terms of accommodation units and tourist arrivals, particularly in counties such as Bistrița-Năsăud, Maramureș, and Cluj, which emerged as strong contributors to regional agritourism growth.

Despite some fluctuations, the North-West Region demonstrated more stable and positive long-term trends in agritourism development, with performance aligning more closely with national growth patterns, especially in the post-2016 period.

The West Region showed uneven growth with marked volatility across counties. Although Hunedoara and Arad occasionally posted strong results, the region overall was characterized by frequent negative year-on-year growth and less alignment with national trends.

In terms of overnight stays, the North-West Region again showed stronger recovery and expansion in certain counties, while the West Region's growth remained fragmented and concentrated in short periods with limited sustained progress. The spatial distribution of growth confirmed a concentration of higher performance in the North-West Region.

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