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## Revenues from Agritourism and their Determinants for the European Farms

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**Abstract:**

**Purpose:** The main aim of this article is to show the revenues from agritourism and their determinants for the European farms. We answer the following questions: 1. How important are revenues from agritourism in relation to agricultural area, total revenues from output, inputs and family farm income for farms from the European Union in 2004-2022? 2. Does the importance of agritourism's revenues change according to the geographical localization, economic size or type of farm production from the European Union in 2021? 3. What is the relation between agritourism's revenues and other production, economic and financial categories (e.g., area, labour, costs, taxes, cash flow, investment)?

**Methodology:** The research is based on the FADN (RICA) database. The scope of the research covers the years 2004-2022. The panel data models were used.

**Findings:** The geographical location of the farm, its economic size and type of production determined revenues for the European agritourism farms. After conducting panel regression, it turns out that the revenues from agritourism are influenced by liabilities of the farm, and then there are differences between smaller and larger farms. Also each production type of farm had different determinants of revenues from agritourism. Assets and liabilities seemed to be the most important.

**Practical Implications:** Revenues from agritourism is not a significant source of income for farms but it gives them a possibility to develop activity. It is worth knowing their importance and determinants, because farms are the main subject of the Common Agricultural Policy.

**Originality/Value:** The article shows the income from agritourism according to the official financial data of the FADN database.

**Keywords:** Agritourism, Europe, FADN, family farm, income, revenues.

**JEL codes:** G51, Q10, Q14.

**Paper Type:** Research article.

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## **1. Introduction**

Agritourism, a subset of rural tourism (Phillip *et al.*, 2010), is defined as a unique blend of agriculture and tourism, mostly referring to stays in farmhouses, and including a wide range of farm activities related directly to functions of farms and their surrounding area as well as tasting of local food (Barbieri and Mshenga, 2008; Sznajder *et al.*, 2009; Brandth and Haugen, 2011; Tew and Barbieri, 2012; Streifeneder, 2016; Chase *et al.*, 2018; Lamie *et al.*, 2021; Grillini *et al.*, 2023) has gained significant traction in various European countries (Streifeneder and Dax, 2019).

In general, agritourism integrates the top economic drivers in rural areas: agriculture and tourism (Baby and Kim, 2024) and “in which non-traditional roles of the countryside (...) make rural regions attractive for recreation and leisure, while contributing to income diversification” (Bacsi and Száltekei, 2022a, p. 152)

The growth of agritourism in Europe has been significant in recent years. Many researchers, including e.g., Streifeneder and Dax (2020), Bacsi and Száltekei (2022a) and Grillini *et al.* (2023) indicated that the number of agritourism establishments has rapidly increased in many European countries over the last decades. For example, in 2021, over twenty-five thousand operating farms participated in agritourism in Italy, with an increase of 40% between 2007 and 2020 (ISTAT, 2022).

In Austria, the nationwide organization ‘Urlaub am Bauernhof’ (‘Holiday on a farm’), which operates there, brings together around 2,200 family-run agritourism farms (and the total number of agritourism farms in Austria seems to be much higher) (Quendler, 2019; Urlaub am Bauernhof website, 2024).

In France, Gîtes de France, which is a key player in French agritourism, operates a network of about 55,000 various holiday rental accommodations, including agritourism farms (Gîtes de France, 2024). Agritourism is an important activity in many European countries’ rural areas “in which the non-traditional roles of the countryside (...) make rural regions attractive for recreation and leisure while contributing to income diversification for rural population.

Thus agritourism is expected to help improve farm performance in terms of incomes, profitability and efficiency” (Bacsi and Száltekei, 2022a, p. 152). This way agritourism activity is perceived as an alternative economic opportunity for farmers and ranchers in the context of unstable farm income and the desire to diversify revenue sources (Baby and Kim, 2024).

The main purpose of this article is to show the level and the share of revenues from agritourism in the total income of farms as well as to analyze selected determinants for agritourism revenues in the European farms in years 2004-2022.

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These issues have not been sufficiently dealt with in the international publications.

## 2. Background

One of the most compelling arguments for the importance of agritourism in Europe is its contribution to rural areas' economies and the economies of individual agritourism farms (Tew and Barbieri, 2012; Streifeneder and Dax, 2019). According to a report by the European Network for Rural Development (ENRD, 2020), agritourism has the potential to generate substantial revenue for farmers and all rural areas, which often suffer from economic decline due to urbanization (ENRD, 2020).

Agritourism not only provides an additional income stream for farmers, but also influences sustainable rural development, conserves the environment, and enhances local cultures (Ammirato *et al.*, 2020; Weyland *et al.*, 2021; Yanan *et al.*, 2024). As Europe has been facing various economic challenges, the significance of agritourism income has seemed to be increasingly prominent, especially in the context of the positive prospects for agritourism development (UNWTO, 2015) (however not everywhere e.g., the example of Greece described by Koutsouris *et al.*, 2014).

It should be added that Koutsouris *et al.* (2014) described the leakage of tourism development benefits out of the local economy. They found out that the combination of tourism and farming has not been successful in Greece and the opportunity for substantial revenue from agritourism was rather marginally captured by local farmers.

The prospect of agritourism industry development worldwide seems to be very optimistic. In 2023 the global agritourism market generated a revenue of US\$ 7,295.4 million and it's expected to reach a projected revenue of US\$ 15,781.7 million by 2030 with a compound annual growth rate of 11.7% of the agritourism industry from 2024 to 2030 (Global Agritourism Market Size & Outlook, 2023-2030).

According to the data of the other market research firms, e.g., IMARC Group or the Business Research Company, the global agritourism market size reached much more (in 2023 up to US\$ 65.6 billion by the IMARC Group and 56.92 billion by the Business Research Company and in 20224 it will grow). The IMARC Group expects the market to reach US\$ 176.6 billion by 2032 with a growth rate of 11.45% during 2024-2032, but The Business Research Company is less optimistic and is forecasting the agritourism market to grow to US\$ 79.9 billion in 2028 at a compound annual growth rate of 7.0% (IMARC, 2024; Agritourism Global Market Report 2024).

Rising focus on rural development and increasing awareness about sustainable practices are the main drivers for the agritourism market. Europe holds the largest market share, because of its rich agricultural heritage, strong rural tourism infrastructure, and widespread government support for sustainable farming and

tourism practices (IMARC, 2024). After over 50 years of development of the agritourism market in Europe, it can be seen as a strong segment of the European tourism sector (Hegarty and Przezbórska, 2005).

In some European countries like Austria, Italy, France, Germany, the United Kingdom or Spain agritourism has become a vital part of the rural economy. In Italy the ISTAT Farm Register (FR), containing data on the main economic activity, shows that the Italian agritourism sector alone is estimated to be worth at least €1.4 billion annually, offering farmers an opportunity to diversify their income sources (ISTAT, 2021).

Additionally from 2010 to 2018, the economic value of this sector increased overall significantly from €1.1 million in 2010 to €1.4 million in 2018 (Statista, 2021). In Austria, the agritourism market generated a revenue of US\$ 361.6 million in 2023 and is expected to reach a revenue of US\$ 843.0 million by 2030. A compound annual growth rate of 12.9% is expected in the agritourism market in Austria between 2024 and 2030 (Austria Agritourism Market Size & Outlook, 2023-2030).

In France, according to the research report “France Agritourism Market Overview, 2029”, published by Bonafide Research, the agritourism market is expected to reach size of more than US\$ 470 million by 2029 (Bonafide Research & Marketing PVT LTD, 2024). Nevertheless, it should be noted that there is an obvious lack of comprehensive data on agritourism farms and their revenues from agritourism activities across Europe and international comparisons of agritourism.

### **3. Research Methodology**

Research is based on the original data of farms obtained from the Farm Accountancy Data Network (FADN, RICA). The FADN data provides a detailed presentation and analysis of the main determinants of the farms’ production, economic and financial situations from the EU in the years 2004-2022, however, the year 2022 is incomplete (it ends as of October 20th, 2024). There is no information about 6 countries: Croatia, Germany, Greece, Malta, Slovenia and Spain. The United Kingdom is included in the years 2004-2020 and excluded in 2021-2022.

This database provides information, among others, about revenues, costs, and production conditions. It should be emphasized that FADN is the only database for which the data are collected according to uniform rules. Farms from this database create a statistically representative sample of commercial agricultural holdings operating in the European Union.

The FADN data is the aggregated average information calculated based on 15 farms with the obligation of data secrecy applied. This approach makes it impossible to identify individual information about a specific farm (FADN, 2024).

The research was conducted in three parts. In the first part, the analysis of agricultural area, revenues from total output, inputs, incomes and revenues from agritourism activities for the average farm from the EU was made. It should be added that receipts from agritourism includes returns from board and lodging, campsites, cottages, riding facilities, hunting and fishing.

The time range was 2004-2022. In the second part, the average share of revenues from agritourism in the family farm income was presented according to the economic size and to the type of production along with total revenues from output, inputs, family farm income and agricultural area to the separated groups in 2021. In the third part, relations between the revenues from agritourism and other production, economic and financial determinants are estimated. In this way, a panel data analysis was performed in the years 2004-2022.

The study sought to answer the following research questions:

1. How important are revenues from agritourism to agricultural area, total revenues from output, inputs and family farm income for farms from the European Union in 2004-2022?
2. Does the importance of agritourism's revenues change according to geographical localization, economic size or type of farm production in the European Union in 2021?
3. What is the relation between agritourism's revenues and other production, economic and financial categories (e.g. area, labour, costs, taxes, cash flow, investment)?

In the first and the second part of research, a descriptive, comparative analysis and basic methods of descriptive statistics were used. In the third part, a regression model was made. The panel models using the Gretl program were estimated.

The most general formulation of a panel data model may be expressed by the following equation (Baltagi, 2005):

$$y_{i,t} = \alpha_i + X'_{i,t} \beta + u_{i,t} + \varepsilon_{i,t} \quad (1)$$

with  $i$  ( $i = 1, \dots, N$ ) denoting individuals,  $t$  ( $t = 1, \dots, T$ ) denoting time periods, and  $X'_{i,t}$  denoting the observation of  $K$  explanatory variables in country  $i$  and time  $t$ . Parameter  $\alpha_i$  is time-invariant and accounts for any individual-specific effect not included in the regression equation. Two different interpretations may be given to the  $\alpha_i$ . Two different basic models may be distinguished: Fixed Effect Panel Data Model (FEM) and Random Effect Panel Data Model (REM) (Arbia and Piras, 2005).

To choose between Random and Fixed Effect Model, the Hausman test was used. The idea is that one uses the random effects estimates unless the Hausman test rejects. In practice, a failure to reject means either that the RE and FE estimates are

sufficiently close so that it does not matter which one is used, or the sampling variation is so large in the FE estimates that one cannot conclude practically significant differences are statistically significant (Wooldridge, 2013).

The main purpose of the research is to obtain the model that characterizes determinants of agritourism's revenues according to the economic size. To estimate the model, a set of variables was used:

*Y01 – Revenues from Agritourism – dependent variable and main independent variables:*

*X01 – Labour Input,*

*X02 – Utilized Agricultural Area,*

*X03 – Total Output,*

*X04 – Total Inputs,*

*X05 – Taxes,*

*X06 – Family Net Income,*

*X07 – Assets,*

*X08 – Liabilities,*

*X09 – Gross Investment,*

*X10 – Net Investment,*

*X11 – Cash Flow,*

*X12 – Balance Current Subsidies and tax*

It should be emphasized that the presented data on revenues from agritourism are invoiced data. They have a registered character. In this sector, some transactions take place in the grey market.

#### **4. Results**

In the analyzed period in the European Union, the average farm's output was between EUR 60.6 thousand in 2004 and EUR 129.3 thousand in 2022. During this time, their area has only increased from 35.1 to 40.4 hectares. Meanwhile, the farms' inputs were between EUR 53.1 thousand and EUR 104.3 thousand. From 2004 to 2022 the farm net income increased from EUR 17.9 to 41.2.

Revenues from agritourism were in the range of EUR 166 and 737, not exceeding 2.1% of total farm income (Table 1, Figure 1). It can therefore be concluded that the production and financial situation of farms improved during the period considered despite rising costs. Revenues from agritourism also increased but remained at a low level.

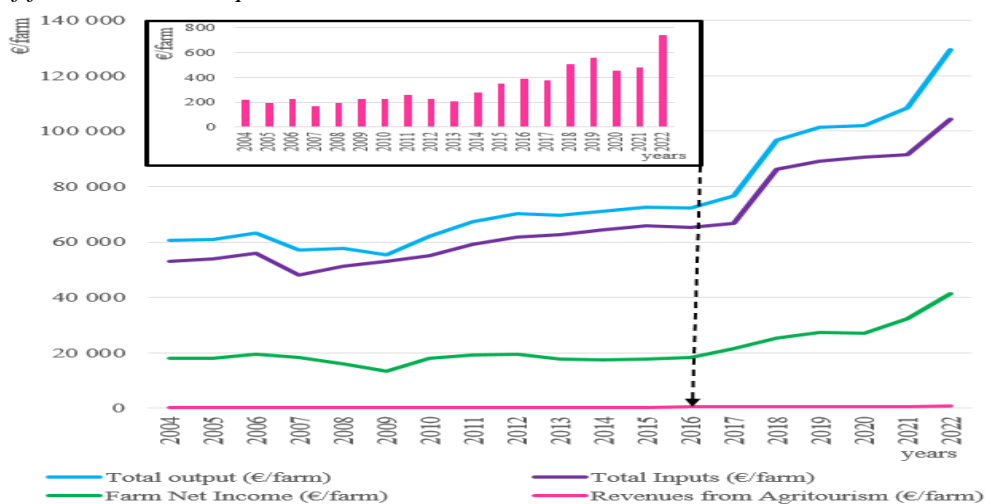
The two country rankings were prepared to highlight the countries with the highest revenues from agritourism and the highest share of agritourism in farm net income in 2021, because of the lack of data for some countries in 2022 (Table 2). Both rankings showed that revenues from agritourism depend on the geographical location of the farm.

**Table 1.** Main characteristics of the financial situation of farms in the European Union\* in 2004-2022

Years	Utilized Agricultural Area (ha/farm)	Total output (€/farm)	Revenues from Agritourism (€/farm)	Total Inputs (€/farm)	Farm Net Income (€/farm)	Revenues from Agritourism in Family Net Income (%)
2004	35.1	60 630	220	53 150	17 940	1.23
2005	35.6	60 754	195	53 940	17 870	1.09
2006	36.0	63 253	225	55 834	19 589	1.15
2007	29.4	57 067	166	48 103	18 362	0.90
2008	29.9	57 635	196	51 379	15 983	1.23
2009	32.4	55 446	228	53 030	13 220	1.72
2010	32.5	62 080	230	55 030	18 129	1.27
2011	32.5	67 236	258	59 151	19 138	1.35
2012	33.0	70 286	226	61 713	19 401	1.17
2013	33.1	69 517	210	62 666	17 673	1.19
2014	33.9	70 960	277	64 362	17 452	1.59
2015	34.4	72 545	349	65 849	17 619	1.98
2016	34.6	72 216	386	65 271	18 362	2.10
2017	35.1	76 539	375	66 661	21 613	1.74
2018	43.4	96 848	507	86 295	25 373	2.00
2019	43.4	101 463	555	89 283	27 289	2.03
2020	43.4	101 999	453	90 597	27 071	1.67
2021	40.3	108 370	481	91 408	32 176	1.50
2022	40.4	129 341	737	104 325	41 214	1.79

**Note:** \* in years 2004-2020 – EU-28; in 2021 – EU-27, without the United Kingdom; in 2022 – EU-21, without Croatia, Germany, Greece, Malta, Slovenia, Spain and United Kingdom.

**Source:** Own work based on FADN 2024.

**Figure 1.** Total output, inputs, family net income towards revenues from agritourism of farms in the European Union\* in 2004-2022

**Note:** The same as in Table 1. **Source:** Own preparation based on Table 1.

Nine out of 27 European countries (33%) can be distinguished as the most interested in agritourism. These are (in alphabetical order): Austria, Belgium, the Czech Republic, Finland, Italy, Netherlands, Slovakia, Slovenia and Sweden. In contrast, 5 countries (18.5%) do not conduct this activity significantly. These are as follows Bulgaria, Cyprus, Lithuania, Malta and Romania (Table 2).

**Table 2.** Rankings of the European\* farms according to the revenues from agritourism and its share in family net income in 2021

Place in the ranking	Member State	Revenues from Agritourism (€/farm)	Place in the ranking	Member State	Share of Revenues from Agritourism in Family Net Income (%)
1	Netherlands	10705	1	Slovenia	10,24
2	Austria	3318	2	Netherlands	8,74
3	Czech Republic	2000	3	Austria	8,09
4	Finland	1693	4	Finland	4,85
5	Italy	1354	5	Czech Republic	3,50
6	Slovakia	1339	6	Italy	3,35
7	Belgium	1188	7	Slovakia	2,14
8	Slovenia	861	8	Belgium	1,57
9	Sweden	330	9	Sweden	0,82
10	Denmark	326	10	Estonia	0,59
11	Luxembourg	316	11	Luxembourg	0,55
12	Germany	248	12	Germany	0,43
13	Estonia	162	13	Ireland	0,42
14	Ireland	149	14	Portugal	0,40
15	France	80	15	Denmark	0,33
16	Portugal	78	16	Latvia	0,32
17	Hungary	73	17	Greece	0,23
18	Spain	53	18	Hungary	0,22
19	Latvia	51	19	Poland	0,21
20	Poland	33	20	Croatia	0,18
21	Greece	29	21	France	0,14
22	Croatia	24	22	Spain	0,13
23	Lithuania	4	23	Lithuania	0,02
24	Bulgaria	0	24	Bulgaria	0,00
25	Cyprus	0	25	Cyprus	0,00
26	Malta	0	26	Malta	0,00
27	Romania	0	27	Romania	0,00

**Note:** \* EU-27, without the United Kingdom.

**Source:** Own work based on FADN 2024.



The economic size used as one of the criteria to classify agricultural farms in FADN had an impact on the values studied. Medium and large farms earned the most on agritourism, but for smaller ones revenues from agritourism activity were more important in their budgets (Table 3).

**Table 3.** Revenues from agritourism and other characteristics of farms according to the farm economic size in the European Union\* in 2021

Details	Classes of Economic Size					
	1 2 000 ≤ 8 000 € Very Small	2 8 000 ≤ 25 000 € Small	3 25 000 ≤ 50 000 € Medium- Low	4 50 000 ≤ 100 000 € Medium- Large	5 100 000 ≤ 500 000 € Large	6 ≥ 500 000 € Very Large
Utilized Agricultural Area (ha/farm)	6.0	13.9	27.2	48.1	97.9	252.8
Total output (€/farm)	8 474	20 730	44 781	85 175	251 093	1 265 074
Total Inputs (€/farm)	7 268	15 231	35 878	67 698	209 852	1 125 294
Farm Net Income (€/farm)	2 839	10 456	19 778	35 709	77 660	240 939
Revenues from Agritourism (€/farm)	36	252	704	418	1 241	860
Revenues from Agritourism in Family Net Income (%)	1.27	2.41	3.56	1.17	1.60	0.36

**Note:** \* EU-27, without the United Kingdom.

**Source:** Own work based on FADN 2024.

**Table 4.** Revenues from agritourism and other characteristics of farms according to the type of production of farms in the European Union\* in 2021

Details	Type of production							
	Field-crops	Horti-culture	Wine	Other permanent crops	Milk	Other grazing live-stock	Grani-vores	Mixed
Utilized Agricultural Area (ha/farm)	52.7	7.3	16.4	13.8	49.7	53.3	43.0	40.7
Total output (€/farm)	84 278	242 889	104 567	47 848	192 509	66 967	490 316	88 654
Total Inputs (€/farm)	68 617	188 288	72 553	31 899	166 710	64 460	448 381	84 079
Farm Net Income (€/farm)	30 966	60 608	40 534	22 722	48 693	24 258	70 249	19 477
Revenues from Agritourism (€/farm)	285	209	949	409	638	330	299	1 036
Revenues from Agritourism in Family Net Income (%)	0.92	0.34	2.34	1.80	1.31	1.36	0.43	5.32

**Note:** \* EU-27, without the United Kingdom.

**Source:** Own work based on FADN 2024.

The type of production carried out by farms also affected their revenues from agritourism. Farms running vineyards, having dairy cows and mixed types of agricultural production were more interested in agritourism activities than the others. In addition, for mixed farms a significant improvement in income was observed (Table 4).

Therefore, panel regression models were built where the dependent variable was revenues from agritourism. Using the Gretl Program the FE and RE models were obtained (Table 5-6). In the estimated models all variables are characterized by a level of significance below 0.05.

For models by economic size, it turned out that in 5 out of 6 classes, revenues from agritourism depended on the liabilities of the farm, and then there were differences between smaller and larger farms. For smaller farms (classes 1-3), revenues from agritourism depended on the labour input, utilized agricultural area or output or net income or taxes. For larger farms (classes 4-6) the revenues from agritourism depended on assets (Table 5).

**Table 5.** Panel models for revenues from agritourism of the European\* farms according to the economic size in 2014-2022

Details**	Classes of Economic Size					
	1 2 000 ≤ 8 000 € Very Small	2 8 000 ≤ 25 000 € Small	3 25 000 ≤ 50 000 € Medium-Low	4 50 000 ≤ 100 000 € Medium-Large	5 100 000 ≤ 500 000€ Large	6 ≥ 500 000 € Very Large
Number of Farms	249	407	500	509	509	388
Type of model	FEM	REM	FEM	FEM	REM	REM
LSDV R2/Theta	0.3046	0.9079	0.5789	0.3375	0.7543	0.7582
Within R2/ corr(y,yhat)^2	0.1595	0.0578	0.1046	0.0288	0.1202	0.0046
Const	7.4759 (0.9584)	361.6360 (0.0729)	-1 244.720 (0.0465)	-260.7670 (0.1648)	-1 161.220 (0.0002)	4.2770 (0.9895)
X01 – Labour Input	-359.1580 (0.0009)	-277,1890 (0.0002)	1 471.850 (0.0000)	-	-	-
X02 – Utilized Agricultural Area	-	-	-43.2591 (0.0032)	-	-	-
X03 – Total Output	0.0528 (0.0000)	-	-	-	-	-
X05 – Taxes	-	0.5428 (0.0004)	-	-	-	-
X06 – Family Net Income	-	-0.0161 (0.0000)	0.0390 (0.0164)	-	-	-
X07 – Assets	-	-	-	0.0014 (0.0002)	0.0025 (0.0000)	-

X08 - Liabilities	0.0298 (0.0396)	0.0091 (0.0000)	0.0235 (0.0000)	-	-0.0034 (0.0000)	0.0006 (0.0000)
Hausman Test	$\chi^2$ (3) = 6.2430 (0.1004)	$\chi^2$ (4) = 15.1694 (0.0044)	$\chi^2$ (4) = 4.9592 (0.2915)	$\chi^2$ (1) = 0.7312 (0.3925)	$\chi^2$ (2) = 9.6420 (0.0081)	$\chi^2$ (1) = 3.9927 (0.0457)

**Note:** \* in years 2004-2020 – EU-28; in 2021 – EU-27, without the United Kingdom; in 2022 – EU-21, without Croatia, Germany, Greece, Malta, Slovenia, Spain and United Kingdom.

\*\*The level of significance is in parentheses.

**Source:** Own calculation based on FADN 2024.

For models by type of production, it turned out that every type of farm had different determinants of revenues from agritourism. Assets and liabilities were found to be the most important, while labour inputs, taxes and cash flow were found to be less important. Area and net income occurred once each (Table 6).

**Table 6.** Panel models for revenues from agritourism of the European\* farms according to the type of production in 2014-2022

Details**	Type of production							
	Field-crops	Horticulture	Wine	Other permanent crops	Milk	Other grazing livestock	Grainivores	Mixed
Number of Observations	500	390	262	373	476	506	416	500
Type of model	REM	REM	REM	FEM	REM	FEM	REM	REM
LSDV R2/Theta	0.8565	0.7541	0.8710	0.6702	0.8678	0.5508	0.7478	0.7629
Within R2/corr(y,yhat)^2	0.3735	0.0968	0.0221	0.1326	0.0539	0.0468	0.0251	0.1499
const	51.3265 (0.7823)	-643.631 (0.0003)	-1 856.4 (0.0385)	-113.771 (0.2917)	97.1736 (0.6400)	879.397 (0.0004)	207.570 (0.0573)	-4 512.2 (0.0347)
X01 – Labour Input	-182.656 (0.0030)	155.366 (0.0000)	-	-	-113.672 (0.0000)	-	-	-
X02 – Utilized Agricultural Area	-	-	-	-	-	-	-	-49.972 (0.0000)
X05 – Taxes	-	0.1647 (0.0022)	-	-	-	-	-0.0557 (0.0000)	1.1774 (0.0383)
X06 – Family Net Income	-	-	-	-0.0284 (0.0000)	-	-	-	-
X07 – Assets	0.0014 (0.0000)	-	-	-	0.0009 (0.0000)	-0.0018 (0.0134)	0.0001 (0.0069)	0.0124 (0.0000)
X08 - Liabilities	-0.0018 (0.0000)	-	0.0301 (0.0000)	-	-0.0005 (0.0123)	0.0082 (0.0000)	-	-
X11 – Cash Flow	-	-	0.0354 (0.0006)	0.0384 (0.0000)	-	-	-	-

Hausman Test	$\chi^2(3) = 13.5537$ (0.0036)	$\chi^2(2) = 12.3943$ (0.0020)	$\chi^2(2) = 9.3166$ (0.0095)	$\chi^2(2) = 2.9746$ (0.2260)	$\chi^2(3) = 14.4891$ (0.0023)	$\chi^2(2) = 5.9001$ (0.0523)	$\chi^2(2) = 14.8903$ (0.0006)	$\chi^2(3) = 15.2961$ (0.0016)
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**Note:** \* in years 2004-2020 – EU-28; in 2021 – EU-27, without the United Kingdom; in 2022 – EU-21, without Croatia, Germany, Greece, Malta, Slovenia, Spain and United Kingdom.  
\*\*The level of significance is in parentheses.

**Source:** Own calculation based on FADN 2024.

Summing up this part of the research, it can be concluded that revenues from agritourism were increasing from year to year, being not an important source of income. Farmers in such countries as Austria, Belgium, the Czech Republic, Finland, Italy, the Netherlands, Slovakia, Slovenia and Sweden were more interested in the development of agritourism activity. The size of the farm and the type of production impacted the farm's involvement in agritourism, but many other factors were also analyzed.

## 5. Discussion

In scientific publications, agritourism usually has been described as increasingly significant in many countries, generating additional revenues for agricultural farms and alleviating the economic burden imposed by current market conditions. Agritourism was also perceived by its critical role in sustaining farm operations and positively impacting farm profits (LaPan and Barbieri, 2013).

We found that farmers in some European countries, including Austria, Belgium, the Czech Republic, Finland, Italy, the Netherlands, Slovakia, Slovenia and Sweden were more interested in the development of agritourism activity. In general, the EU-28 showed an increased tendency in agritourism development and development of revenues from agritourism, excluding Poland and Hungary which had rather low values (Bacsi and Száltekei, 2022b).

Bacsi and Száltekei (2022b) noticed that agritourism revenues were significant in the Czech Republic and in Slovakia, especially after 2015. Zegar (2014) noted some farms were forced to undertake non-agricultural activity based on the farm (e.g., agritourism), because agricultural income lags behind wages and, in general, non-agricultural income.

We found that revenues from agritourism depended on the farm's liabilities, and there were differences between smaller and larger farms. For smaller farms revenues from agritourism depended on the labour input, utilized agricultural area or output or net income or taxes. For larger farms the revenues from agritourism depended on assets. It can be concluded this way: if liabilities were well-managed, they might fund expansions or enhancements, like installing attractions, which could increase agritourism revenue.

Barbieri and Mshenga (2008) analyzing agritourism farms in the USA, found that annual income and profitability are positively influenced by larger tangible assets, more employees, longer business experience and more financial resources, especially for larger farms. However the relationship between farm liabilities and agritourism revenues seems to be complex

On the other hand, excessive debt obligations can strain resources, making it challenging for farms to allocate enough funds for agritourism needs. Bacsı and Száltelegi (2022a), analyzing relationship between farm profitability and agritourism in the EU countries, also observed differences between small and large farms, however in the other context. In general farms with smaller land areas, and less farm capital tend to be involved more in agritourism than better equipped ones.

Schilling *et al.* (2014) found that agritourism has statistically significant and positive effects on farm profitability. Profit impacts are highest among small farms operated by individuals primarily engaged in farming and profit effects among larger farms were not statistically significant. In general, it may be concluded that there are still insufficient surveys and publications on the impacts of agritourism on farm profitability and determinants of the revenue from agritourism are poorly analyzed and understood.

## 6. Conclusion

The geographical location of the farm, its economic size and type of production appeared to be determinants of the revenues for the European agritourism farms. The panel regression turned out that the revenues from agritourism were influenced by various factors. Revenues from agritourism were not a significant source of income for farms but it gave them a possibility to develop activity. It is worth knowing their importance and determinants, because farms are the main subject of the Common Agricultural Policy.

Three research questions which were asked at the beginning of this study have been answered and the problems were solved, The study can be concluded as follows:

How important are revenues from agritourism in relation to agricultural area, total revenues from output, inputs and family farm income for farms from the European Union between 2004 and 2022?

Revenues from agritourism increased in the analyzed period, but remained at a low level, not exceeding 2.1% of total farm income. The overall production and financial situation of farms improved during the period considered despite rising costs, in values much higher and at a faster rate than revenues from agritourism.

Does the importance of agritourism's revenues changes according to the to the geographical localization, economic size or type of production of farm from the European Union in 2021?

One third of the European Union countries are more involved in the development of agritourism, so the geographical location is important for agritourism income. Smaller farms are more interested in agritourism, although in absolute terms larger farms earn more. There are more vineyards and farms with mixed production involved in agritourism than the other types of farms.

What is the relation between agritourism's revenues and other production, economic and financial categories (e.g.: area, labor, costs, taxes, cash flow, investment)?

The answer to the third question is not entirely satisfactory. The economic size of the farm and type of production had an impact on the values studied. Revenues from agritourism depend on the liabilities of the farm and on smaller farms revenues from agritourism depend on the labour input, utilised agricultural area or output or net income or taxes In larger farms the revenues from agritourism depend on assets.

Each production type of farm had different determinants of revenues from agritourism. Assets and liabilities turned out to be the most important, but labour inputs, taxes and cash flow less often. Area and net income occurred once.

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