



EUROPEAN CONFERENCE ON QUALITY IN OFFICIAL STATISTICS 2024 ESTORIL - PORTUGAL



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Improving the knowledge of the agritourist sector through integration between survey and administrative data

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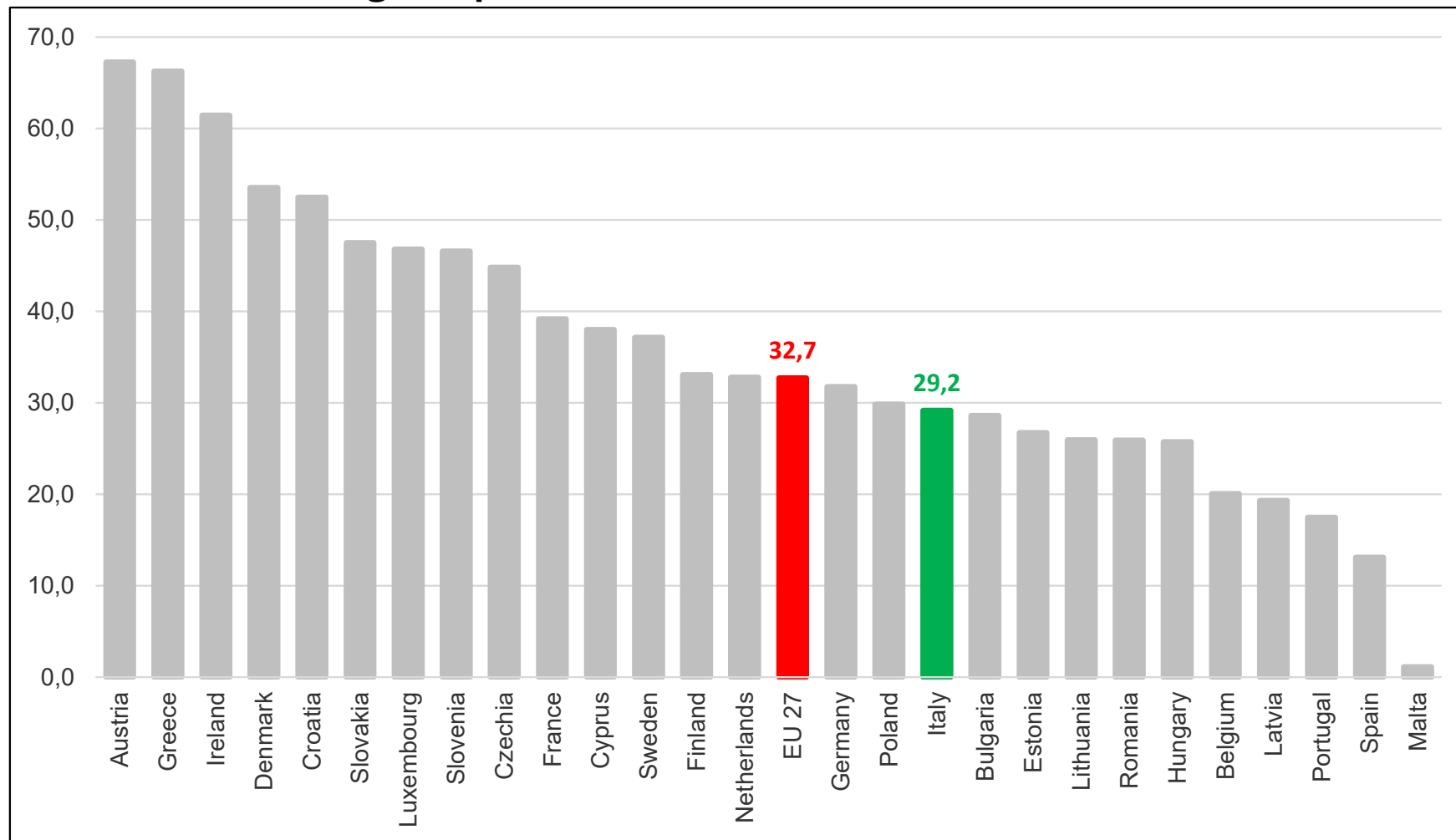


1. Why agritourism is important?

- ❑ Rural tourism is based on **agritourism and farm stays**. It is a tourist activity in which the visitors can appreciate a wide range of products linked to nature-based activities, agriculture, rural lifestyle, angling and sightseeing
- ❑ in Italy, in 2022 arrivals in agritourism facilities have exceeded **4 million**: 3,4% of tourists choose agritourisms to spend their holidays
- ❑ The nights spent exceed **15,5 million**; 58% are due to foreign agritourists
- ❑ In 2022, the current value of agritourism production was equal to **1,5 billion euros**, with an average annual growth compared to 2004 equal to **+4,2%**
- ❑ For comparison, in the same period the average annual growth rate of the Italian agricultural sector was only **+0,5%**



% share of tourist nights spent in rural areas of the EU – Year 2022



Source: elaboration on EUROSTAT data



2.1 The ISTAT survey on agritourism

- This yearly survey is carried out since **2004**
- The data collection is based on **administrative** information concerning all farms authorized to carry out one or more types of agritourist activities
- In Italy, agritourism is regulated by the **Law 20 February 2006**, n.96 which defines agritourism as reception and hospitality activities carried out by agricultural entrepreneurs
- The information contained in the administrative archives comes mainly from the **Municipalities**, which issue authorizations for agritourist activities. Data are elaborated and transmitted to ISTAT by the Italian **Regions**
- No data** about features of the farm manager or economic results are available



2.2 The ISTAT census of agriculture

- ❑ The seventh general census of agriculture found its regulatory basis, at the European level, in **Regulation (EU) 2018/1091**
- ❑ The agriculture census was **mandatory**, was carried out by all the European Union (EU) Member States, and was referred to the date of 1 October 2020
- ❑ The census collected data about the **farm's other gainful activities** beyond basic agricultural production
- ❑ **Agritourism**, care farming, and educational farming were the additional farm activities more oriented to the public as measured by the census. They showed the **highest growth with** respect to 2010 after renewable energy production
- ❑ The census collected data on the **features of farm manager**



2.3 The Extended Farm Register (EFR)

- ❑ The Extended Farm Register (**EFR**) expands the information content of the standard Farm and as regards 2020 incorporates the Agriculture Census data
- ❑ The EFR **main indicators** are labor inputs and costs, incomes, changes in stocks, value of production, cost of goods and services, value-added, and the gross operating surplus (GOS) due to the agricultural activity for each farm
- ❑ The EFR is based on these **sources**: 1) Statistical Business Registers; 2) Social Security (self-employed agricultural workers and employees); 3) Tax declarations; 5) VAT returns; 6) Financial statements of corporate companies; 7) ISTAT foreign trade; 8) ISTAT Structural Business Statistics
- ❑ The **integration procedure** was carried out based on data harmonization procedures, control of anomalous values, and missing data imputation



3. Comparison between the survey and the EFR

- ❑ In this context, **the EFR incorporates the census results as well**
- ❑ The merge between the ISTAT surveys and the EFR led to the identification of **29.632 agritourisms**, which in this framework represent 100% of the whole theoretical reference population

**Comparison between the ISTAT survey on agritourisms and the EFR – Absolute and percent figures.
The year 2022 (Yes = the farm is an agritourism)**

	EFR	ABSOLUTE FIGURES			% FIGURES (TOTAL=100)		
		NO	YES	Total	NO	YES	Total
SURVEY	NO	-	3.783	3.783	-	12,8	12,8
	YES	5.595	20.254	25.849	18,9	68,3	87,2
	Total	5.595	24.037	29.632	18,9	81,1	100,0

Source: elaboration on ISTAT data



3. Two basic reasons that can explain the lack of matching

1. **Discrepancies** occurring when survey data and administrative data are compared

- The respondents may declare a situation **not consistent** with the administrative process
- The **date of reference** of the administrative sources is not the same as the survey
- Administrative sources may count as agritourism farms that in practice did not start their agritourist activities yet, but that started the **authorization phase** only

2. Problems related to the **unit identifiers**

- Identifiers may be not complete or wrong
- They may refer to different household persons than the farm manager; more than one farm may be associated with the same identifier

The **Unique Identifier Project** promoted by EUROSTAT may lead to improvements



4. Additional indicators derived from the Extended Farm Register

Number of agritourist farms (yearly survey) by KAU. The year 2022

Kind of Activity Unit (KAU)	Agritourist farms		Units in the EFR	
	Absolute figures	% figures	Absolute figures	% figures
Agricultural enterprises	14.551	56,3	397.624	33,3
With secondary agricultural activity	8.758	33,9	63.563	5,3
Partially active farms or no profit	2.340	9,1	468.480	39,2
Mainly for self-consumption	200	0.8	265.966	22,2
Total	25.849	100,0	1.195.633	100,0

Source: elaboration on ISTAT data



4. Additional indicators derived from the Extended Farm Register

Economic indicators of agritourist farms by size classes. The year 2022

Employees	Units	Workers per unit	Turnover per worker (000€)	Value added per worker (000€)	Unit Labour Cost (000€)	Gross profitability %	Foreign turnover %
1	11.355	1,0	46,8	18,1	21,1	-16,6	1,0
2	6.149	2,0	39,8	22,6	22,0	2,8	2,2
3-4	5.929	3,5	50,4	27,6	23,7	14,3	4,6
5-9	1.460	6,8	66,3	35,7	24,9	30,2	8,5
10-19	635	12,8	90,7	41,1	25,9	36,9	12,5
> 19	321	43,9	119,1	52,8	25,2	52,3	39,4
Total	25.849	3,0	67,2	32,6	24,7	24,3	17,0

Source: elaboration on ISTAT data



5. The logistic model

- ❑ Logistic regression is used for modeling the probability of an event (dependent variable **Y**) through a series of explanatory **X**-variables
- ❑ In this context, the **Y** binary variable is equal to 1 if the farm is **classified as agritourism by both sources**, and is equal to 0 otherwise
- ❑ If p is the probability that **Y** takes the value 1 in the presence of a given vector **X** of explanatory variables, the ratio between the probabilities p and $(1-p)$ is called **odds ratio** and is equal to 1 if and only if $p=0,5$
- ❑ The explicative factors with odds ratios quite **higher (lower)** than one concern features of the farm that **increase (decrease)** the probability that the farm is present as agritourism in both sources



5. The logistic model

Structural farm features:

- Legal status
- Territory (by regions: Tuscany used as benchmark)
- Size (UAA, ALU, AWU)

Farm manager features:

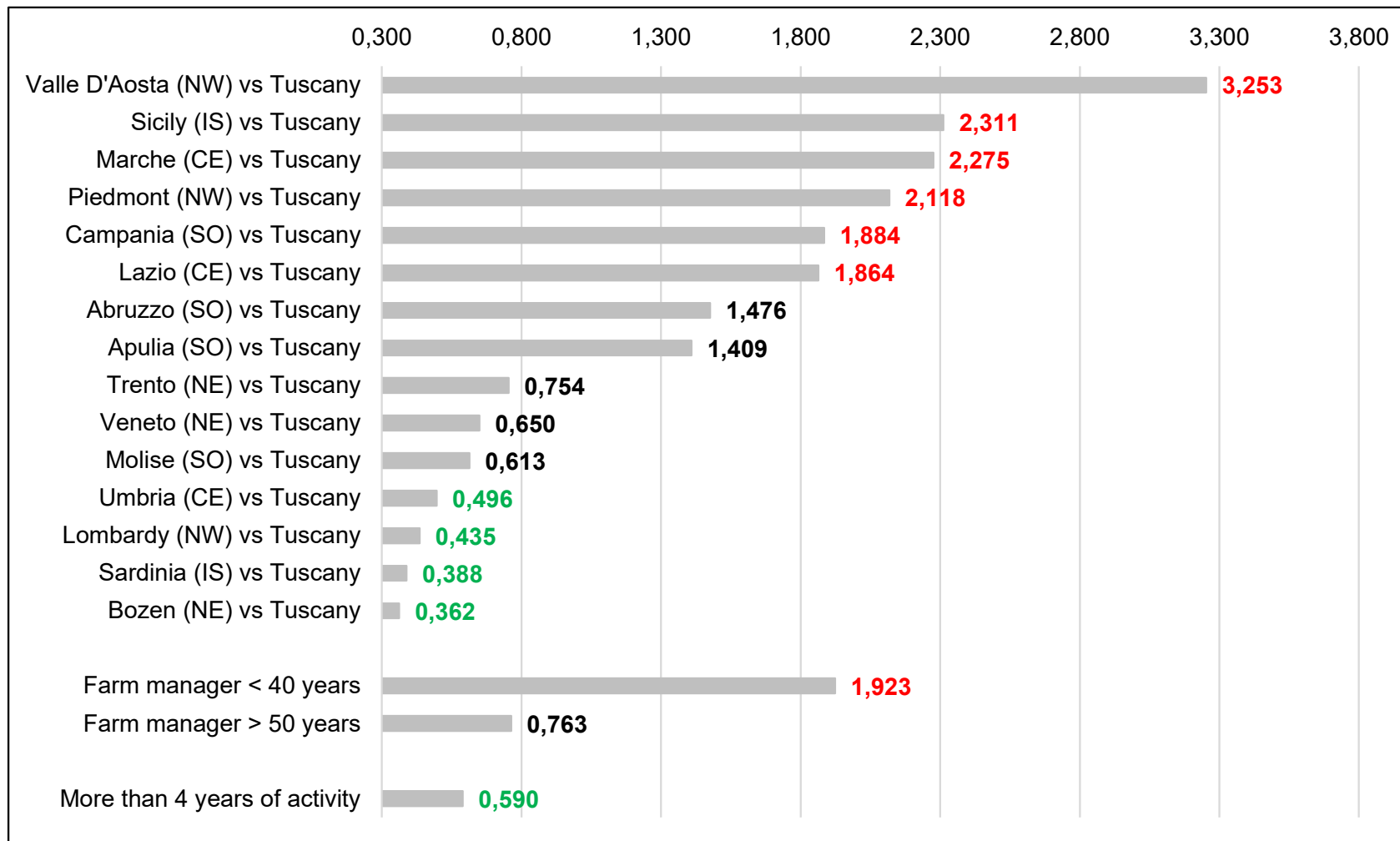
- Age
- Gender
- Education

Modernization:

- Innovation (investments in the last 3 years)
- Digitalization
- Other gainful activities



Odds ratios derived from the logistic model. The most significant variables



Source: elaboration on ISTAT data



7. Main conclusions

- ❑ We must continue **comparing sources** on agritourism and removing obstacles that prevent their convergence
- ❑ It is more and more important to access the **administrative databases** from a micro perspective through record linkage
- ❑ The informative value added (**additional indicators** not available from surveys) is huge and users may benefit from the additional statistical indicators available
- ❑ The same exercise may be replied as regards **other gainful activities** carried out by farms beyond agritourist services, such as the production of energy from renewable sources for instance



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THANK YOU!

