

Performance audit report 7/2022:

Promoting the growth and competitiveness of regional trade and industry - the case of EU-funded regional tourism project in the Cap of the North

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This session in a nutshell

- We present one of the audit cases in closer detail
- Question: did the *Visit Arctic Europe* project succeed in increasing the number of foreign tourists in the Cap of the North area?
- Data? Methods? Results?

1. Results of the audit

1. Results of the audit (1/2)

- We observed:
 - Significant fluctuations in the national regional development funding
 - Inadequate effectiveness indicators
- Both hamper the long-term targeting of regional development activities and the monitoring of policy effectiveness

1. Results of the audit (2/2)

- There were regional and sectoral variations in the business development aid granted to the tourism industries due to the Covid-19 epidemic
- The documents of Business Finland revealed cases where similar or even identical support applications had been processed differently in different regions
- No reliable evidence was found that the *Visit Arctic Europe* project increased the number of overnight stays of foreign tourists in the Cap of the North area => **Topic of this session**

2. Audit methods

2. Audit methods (1/5)

- The *Visit Arctic Europe (VAE)* project, 2015-2022, was funded from the European Territorial Cooperation programme
- The aim was to increase the number of overnight stays of foreign tourists by **10%** in the Cap of the North area (see map)
- Total budget: 13 million €

Map © Karttakeskus



2. Audit methods (2/5)

- Sound basis for evaluation: clear, measurable objective & high-quality tourism statistics from Finland, Sweden, and Norway
- Mandatory guest registration in hotels and other types of accommodation: name, date of birth, country of origin, etc.
- Data easily downloadable from the Internet
- Due to Covid-pandemic we omitted the years from 2020 onwards

2. Audit methods (3/5)

- We collected monthly foreign visitor data from Finland, Sweden, and Norway – before and after the VAE project
- Data was obtained at the regional level; i.e. we had month & region panel data sets from each country (= several thousand observations)
- In Finland, we also had access to municipality level visitor data, yielding over 15,000 observations

2. Audit methods (4/5)

- Using standard panel data methods, we compared the time series of the participating regions to those of the non-participating regions
- Dependent variable is natural log. of foreign guest nights
- Control variables include year & month dummies and regions' fixed effects
- Treatment dummy =1 if the region participated in the VAE project, =0 otherwise

Audit methods (5/5)

- Were there any changes in the no. of guest nights in the participating regions after the project started?
- We used Stata's `xtscc` command in the estimations
- Standard errors in `xtscc` are robust to heteroscedasticity, autocorrelation, and cross-sectional correlation

3. Advantages of the approach

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- Much more accurate and objective estimates when compared to “old-school” audit methodology of stakeholder interviews or surveys
- Open data sources: anyone can replicate the analyses if desired
- Can easily control for differing seasons (with month dummies) and economic fluctuations (with year dummies)
- Using fixed effects regression, we can also control for region-specific tourist attractions, like landscapes, which remain fixed over time

4. Difficulties

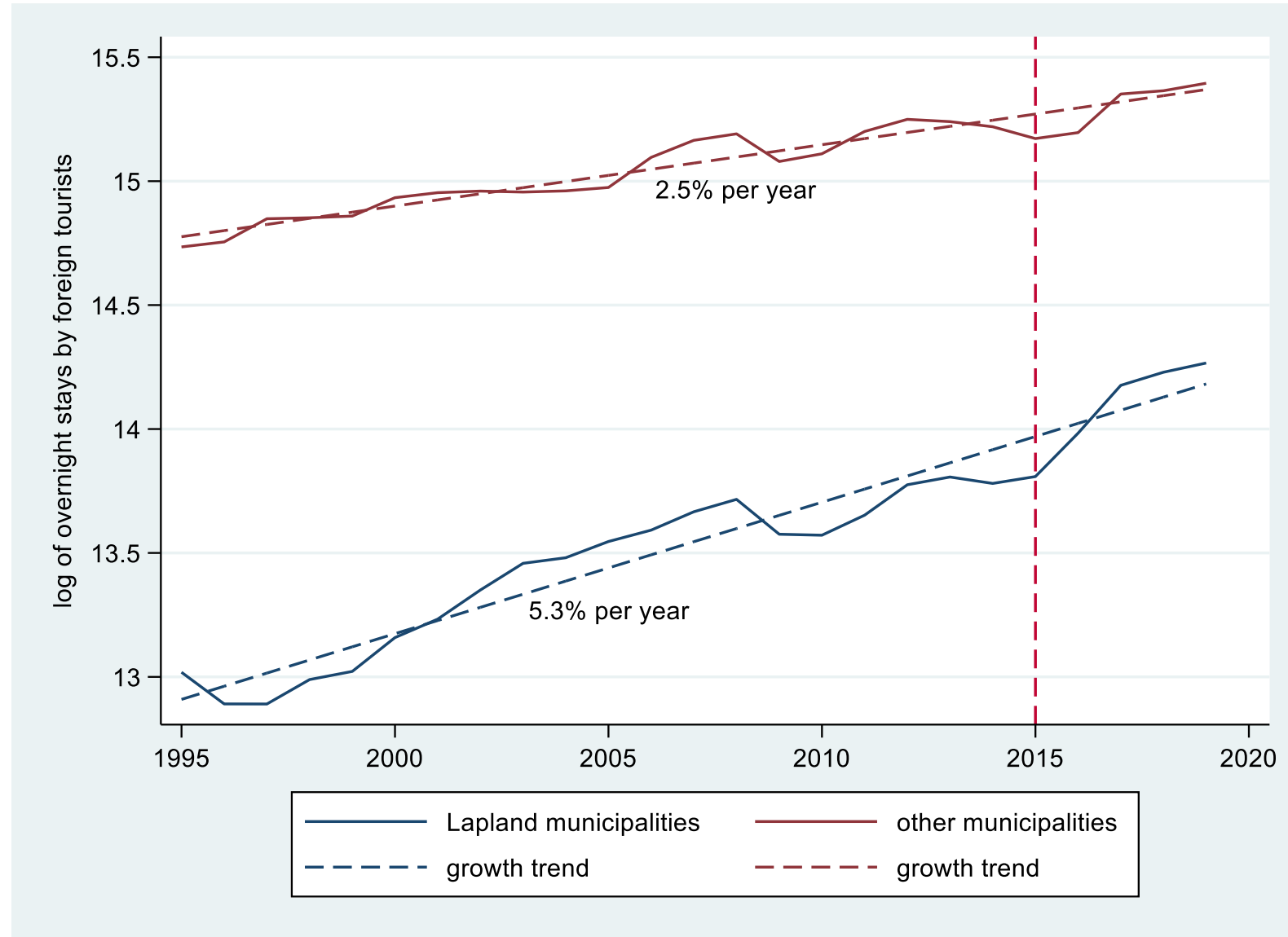
4. Difficulties (1/3)

- Need of advanced statistical skills – maybe not a job for your average auditor...
- Outside expert commentary before publication is almost essential – in this case, our report was reviewed by an economics professor at the University of Helsinki

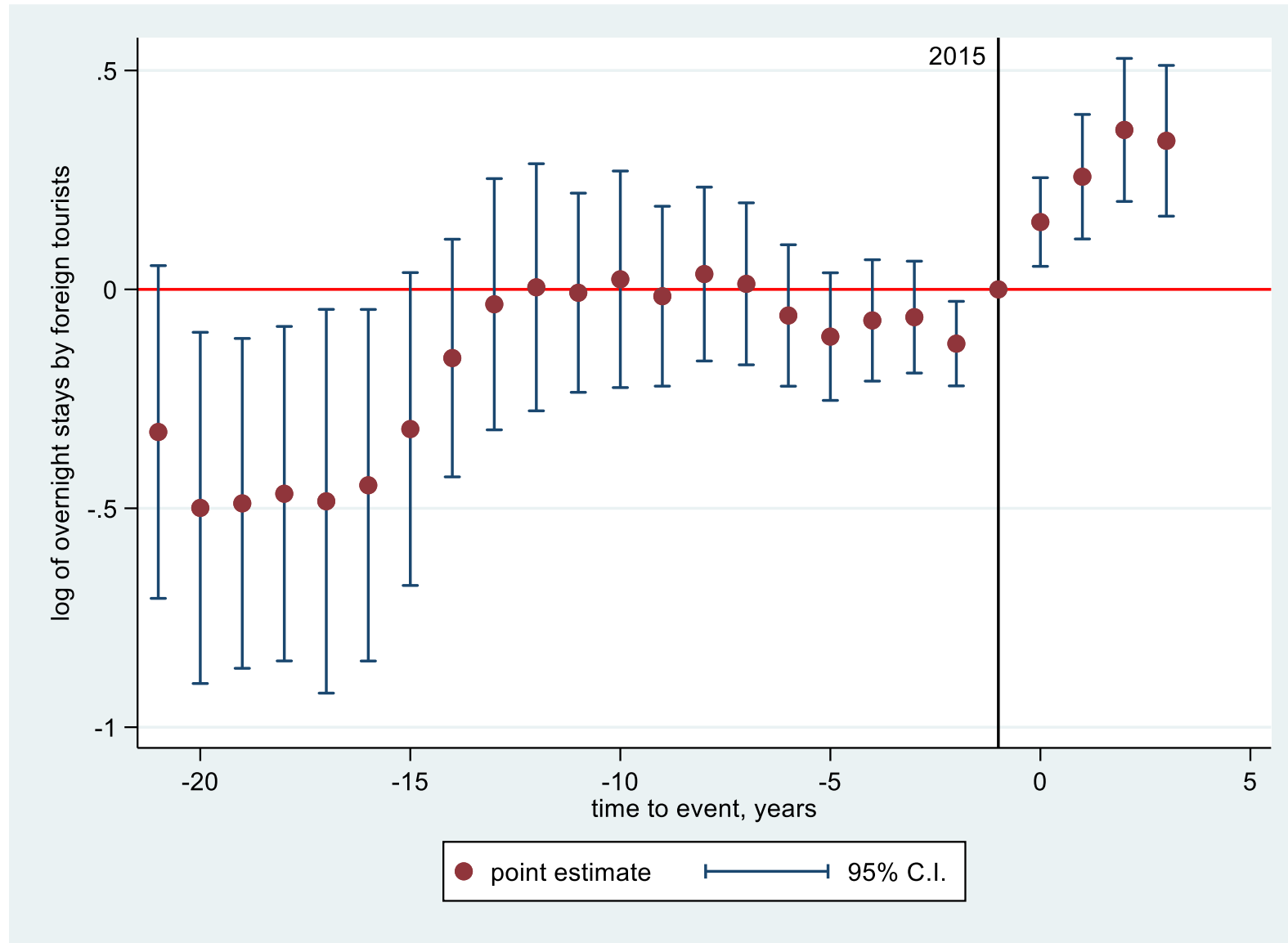
4. Difficulties (2/3)

- Lots of statistical complications, from choosing the right standard errors to model specification
- Necessary conditions for causal inference are not always fulfilled
- In this case, **parallel trends before the project started** are essential in order to make valid claims for causality
- Unfortunately, none of the countries fulfil this condition: trends were diverging even before the VAE project started!

Yearly trends from Finnish municipality-level data



Event study graph, Finnish municipalities 1995-2019



4. Difficulties (3/3)

- Because of non-parallel trends ex ante, we were unable to find reliable econometric evidence of the project's effectiveness
- If we control for the differing trends (by using year*Lapland interactions), VAE-project dummy is not statistically significant

5. Lessons learned

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- Sometimes, data just does not behave the way we would like it to behave
- Parallel trends is a necessary condition in diff-in-diffs type models, but we can not do much, if it fails!
- In this case, we could not find credible evidence of positive policy effects
- Regions are simply not comparable.

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Thank



You!