WOLAŃSKI

IMPACT EVALUATION
OF URBAN MOBILITY INVESTMENT 2014-2020
IN POLAND

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ATHENS

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European Funds

Republic of Poland

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AGENDA

About us

Background and methodology

Outcomes

Recommendations and Conclusions

ABOUT US

A team of Evaluation, Transport and Urban Mobility experts

Lead and established by Michał Wolański, researcher at the Warsaw School of Economics

Using big data and measuring net effect since 2010

Also cooperating with international companies

OUR EXPERIENCE IN THIS PERSPECTIVE

Urban mobility investment evaluation studies:

- **General ex-post study for the Ministry of Development Funds and Regional Policy**
- Infrastructure and Environment Operational Programme ex-post study +
  2 pilot studies for the Centre of EU Transport Projects (implementing authority)
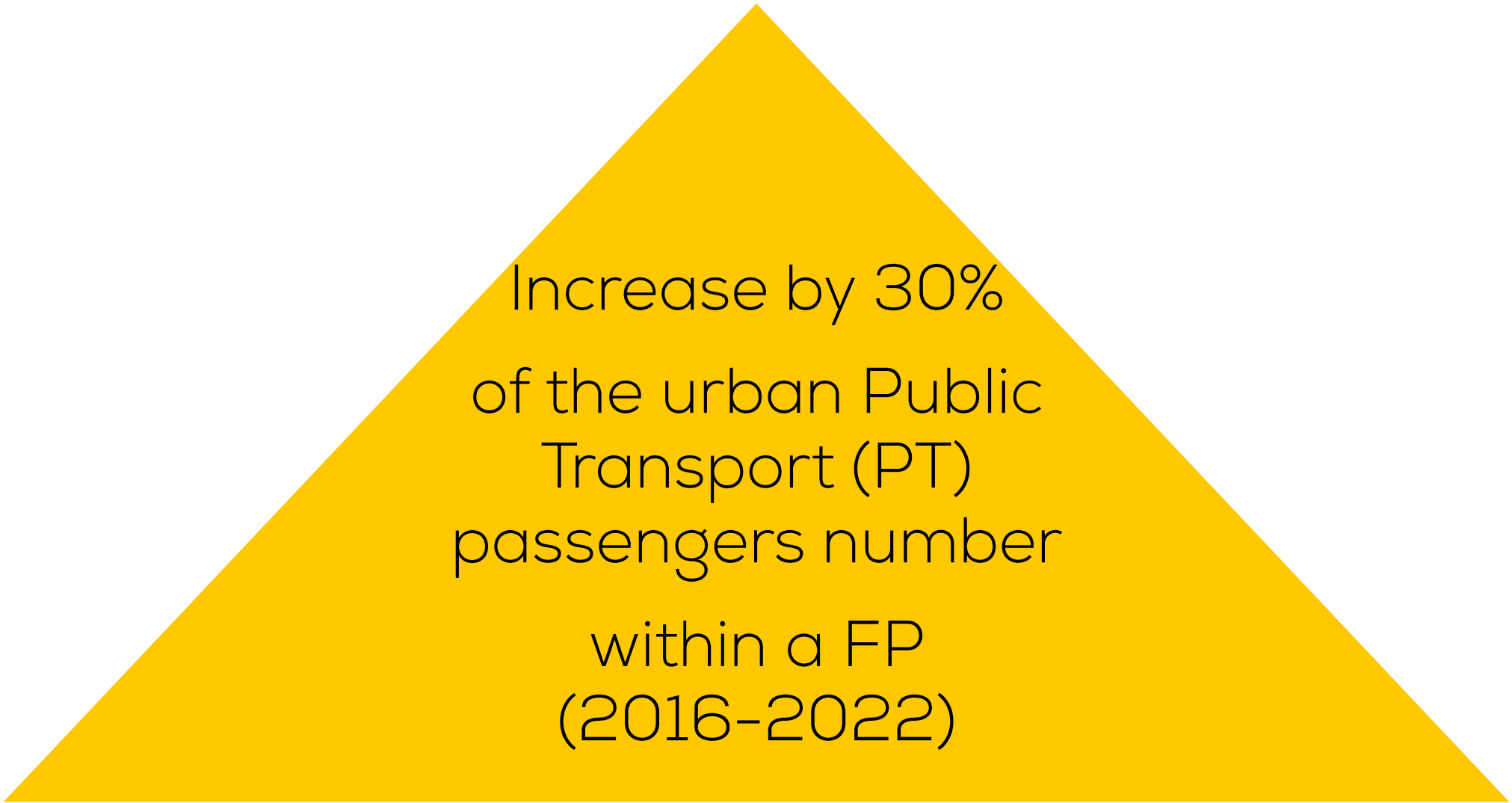- Eastern Poland OP ex-post for the Polish Agency for Enterprise Development

Regional Operational Programmes transport investment ex-post evaluation

- 5 regions

Sustainable Urban Mobility Plans support project

- Over 30 agglomerations
- Adaptation of SUMP methodology to the Polish legal and organizational conditions
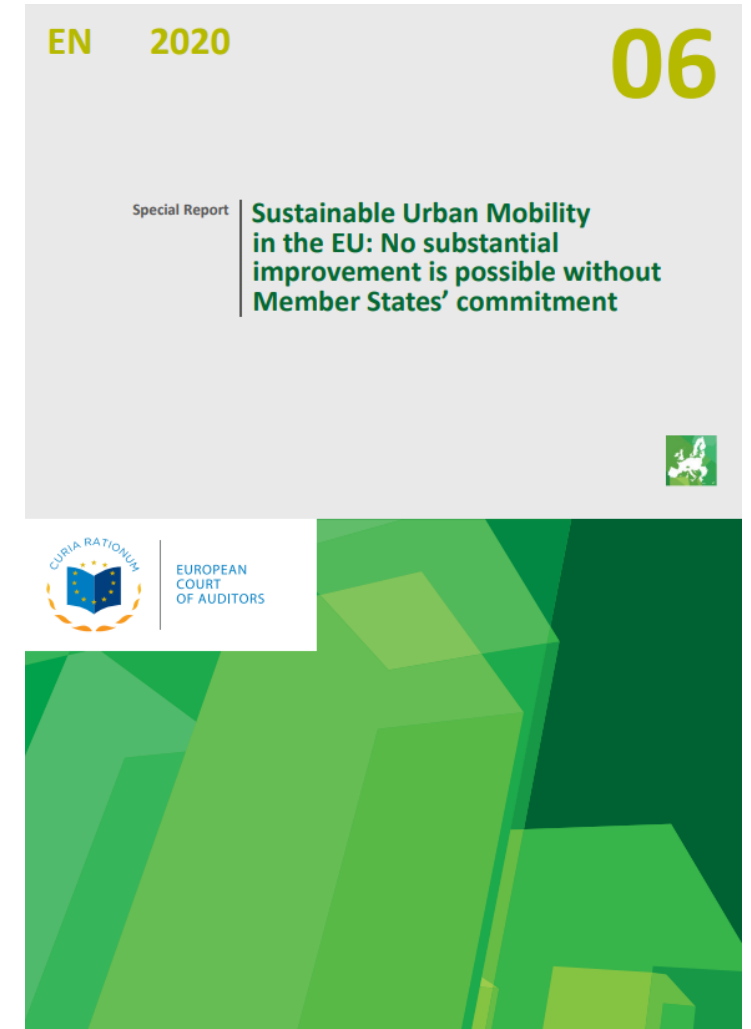
GENERAL GOAL OF THE POLISH URBAN MOBILITY POLICY

Increase by 30%

of the urban Public Transport (PT) passengers number

within a FP (2016-2022)

WHAT WE KNOW FROM THE PREVIOUS STUDIES?

European Court of Auditors (06/2020):

- The EU invests strongly in PT, but people still prefer cars
- This is because „Some Member States and cities did not complement EU funds effectively"
- SUMPs are the key to success and should be required

EN   2020   06

Special Report | **Sustainable Urban Mobility in the EU: No substantial improvement is possible without Member States' commitment**

EUROPEAN COURT OF AUDITORS

METHODOLOGY OF THE GENERAL EX-POST STUDY

Identification

1. Desk research

2. IDI/ITI – stage I

3. Statistical data analysis

4. Net effect measurement using SPSM

5. Linear regression

Exploration

6. 4 urban case studies

7. CAWI for case studies

8. Big Data analysis of road traffic

9. IDI/ITI – stage II

Synthesis

10. The panel of experts

OUR SPECIAL METHODS

Stratified Propensity Score Matching (SPSM)

- Difference-in-differences net effect modelling
- Separate models for different segments
- Allows to estimate total effect of the investment and key success factors
- Hard to communicate

Big data

- Google maps data collection via API (before and after investment)
- Also distribution analysis possible
- Mostly for road traffic at urban and interurban networks

OUTCOMES

Econometrics: It's not infrastructure (which we construct) that makes people use PT / increase ticket revenue (in the observed country and periods) / change modal split – it's the supply of the service
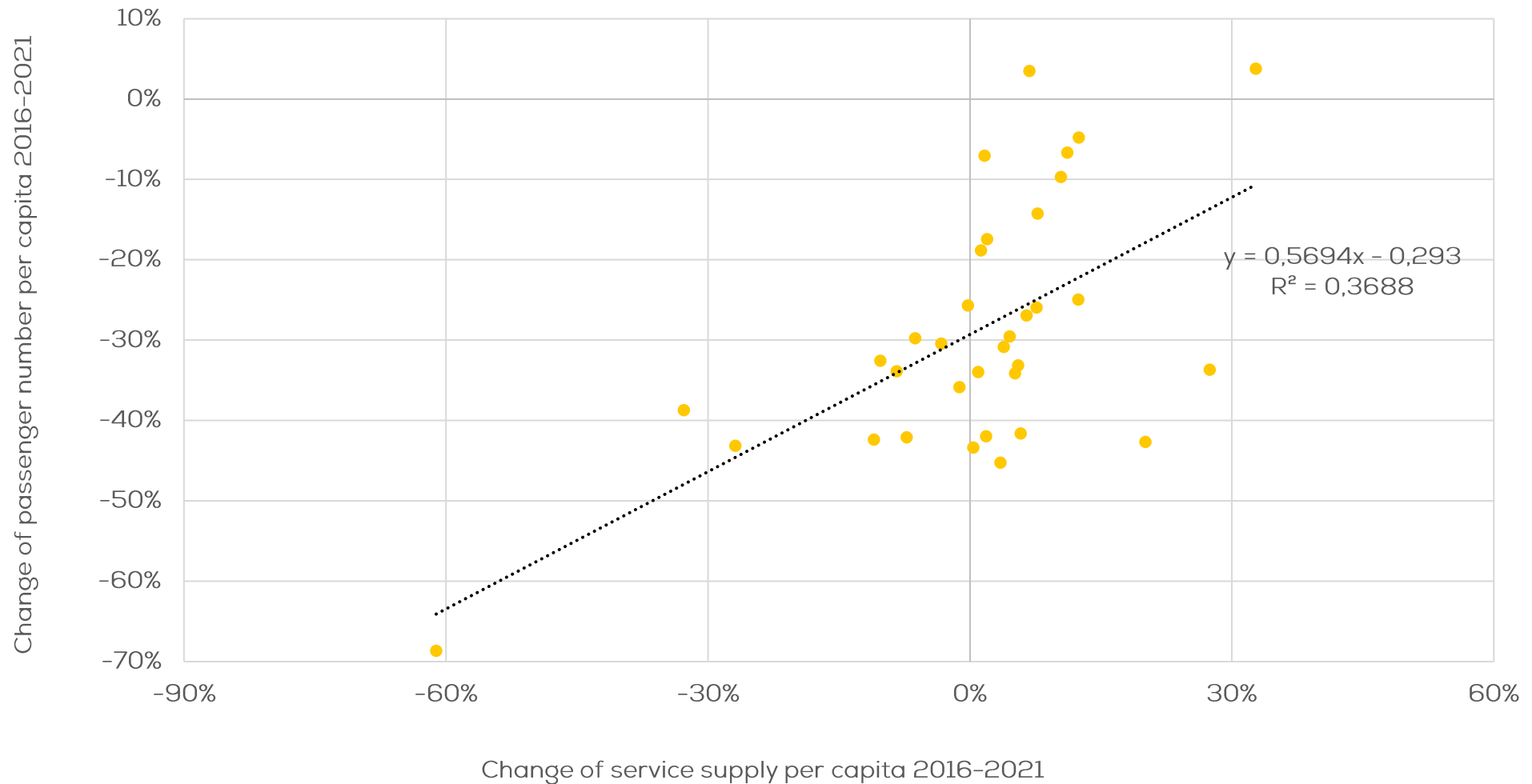
- Trace or negative net effect of PT investment
- High correlation of supply improvement and patronage

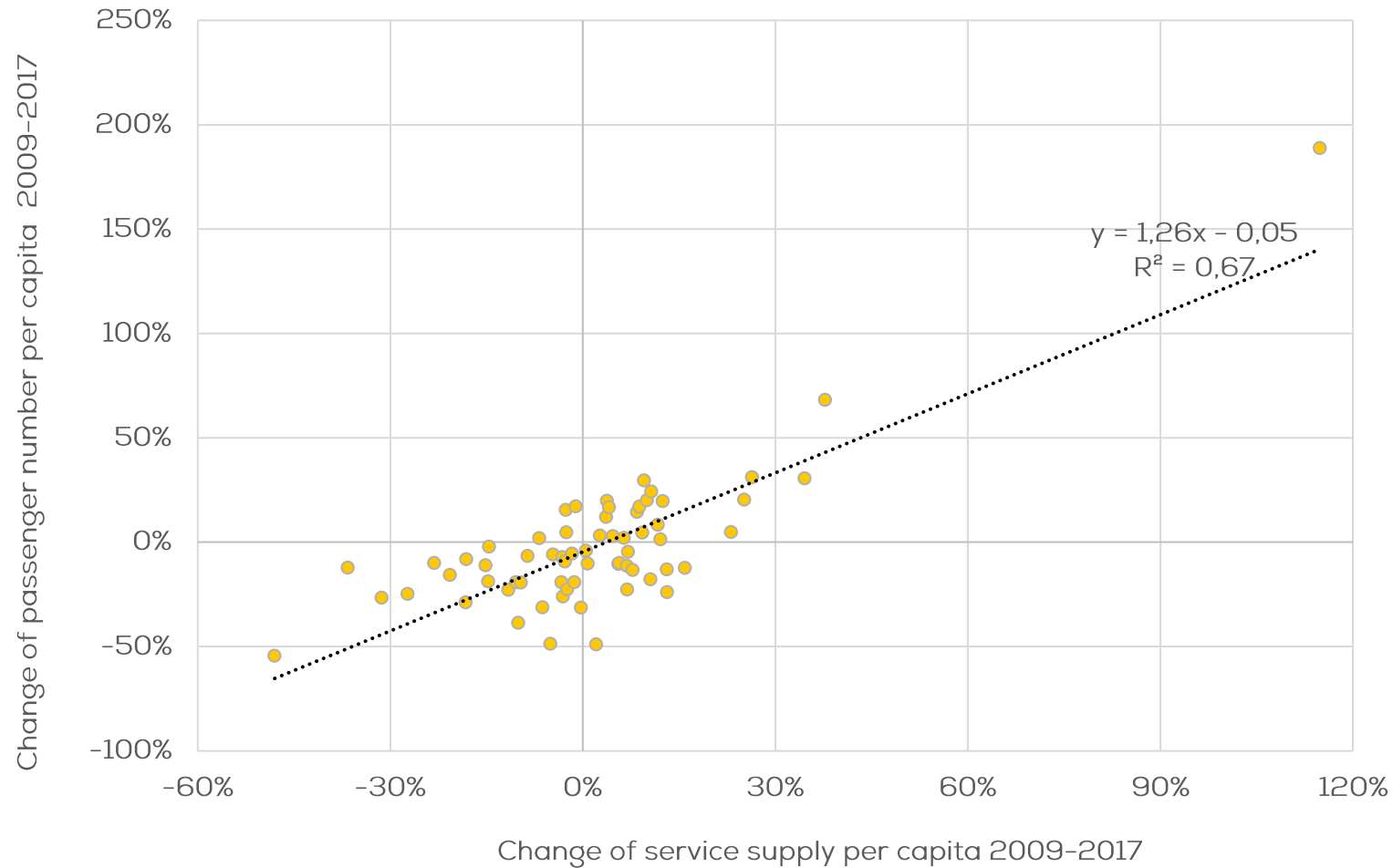Operational financing is getting weaker, investment financing is getting better

We also improve capacity of road infrastructure, but travel times do not decrease (outcomes rather from big data than econometrics)

This is known for some time already...

SERVICE SUPPLY DETERMINES PATRONAGE – 2016 –2021

y = 0,5694x − 0,293
R² = 0,3688

Change of passenger number per capita 2016–2021

Change of service supply per capita 2016–2021

SERVICE SUPPLY DETERMINES PATRONAGE – 2009 – 2017

Chart axes:
- Y-axis: Change of passenger number per capita 2009–2017
- X-axis: Change of service supply per capita 2009–2017

$$y = 1{,}26x - 0{,}05$$
$$R^2 = 0{,}67$$

FP 2007 – 2013

Investment till 2015

Impact data for 2017 (second full year after finishing)

RECOMMENDATIONS AND CONCULUSIONS – MOBILITY

Public transport recovery plan is needed –
OPEX for development, legal changes

We need less road infrastructure and more regional public transport
(legal changes needed)

SUMPs and bus electrification will not solve the problem

- SUMPs push problems to local authorities that should be solved at the policy / government level and may be another wishlists
- Bus electrification decreases funding for trams and smart management/ITS solutions

RECOMMENDATIONS AND CONCULUSIONS – EVALUATION

Quantitative modeling should be integrated, not split between the OPs

Evaluations should not be planned in the last year of OPs but according to information needs and data quality (ex. data from 2025, evaluation Q4 2026/H1 2027).

Same for many other evaluations