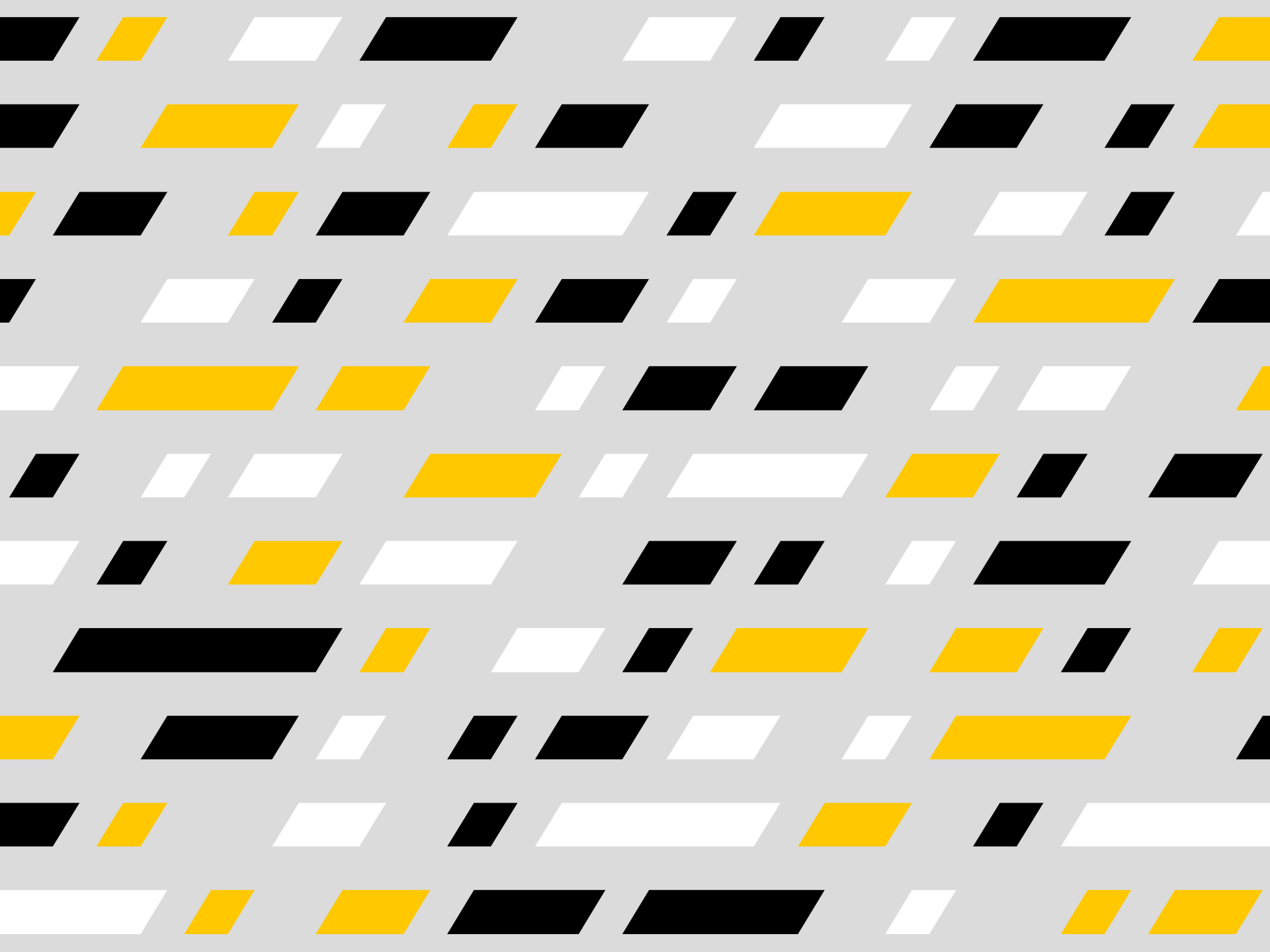


WOLAŃSKI

ego Lider Ewaluacji 2014

TRANSPORT EFFECTS OF INTERVENTIONS SUPPORTED UNDER NSRF 2007-2013

European Funds

MINISTRY OF INVESTMENT AND ECONOMIC DEVELOPMENT

European Union
European Structural and Investment Funds

THE SCOPE OF THE STUDY

- Assessment of the impact of the cohesion policy on transport development in the years 2007-2013
- Assessment of the impact of transport projects on the economic growth
- The subject matter of the study - the intervention under the NSRF 2007-2013 (financed under both the Cohesion Fund and the Structural Funds)
- The methodology of the study - desk research analysis, analysis of the existing data, case studies, interviews, an expert panel, GIS analyses, a CAWI survey, site inspections and econometric modelling using the SPSM method

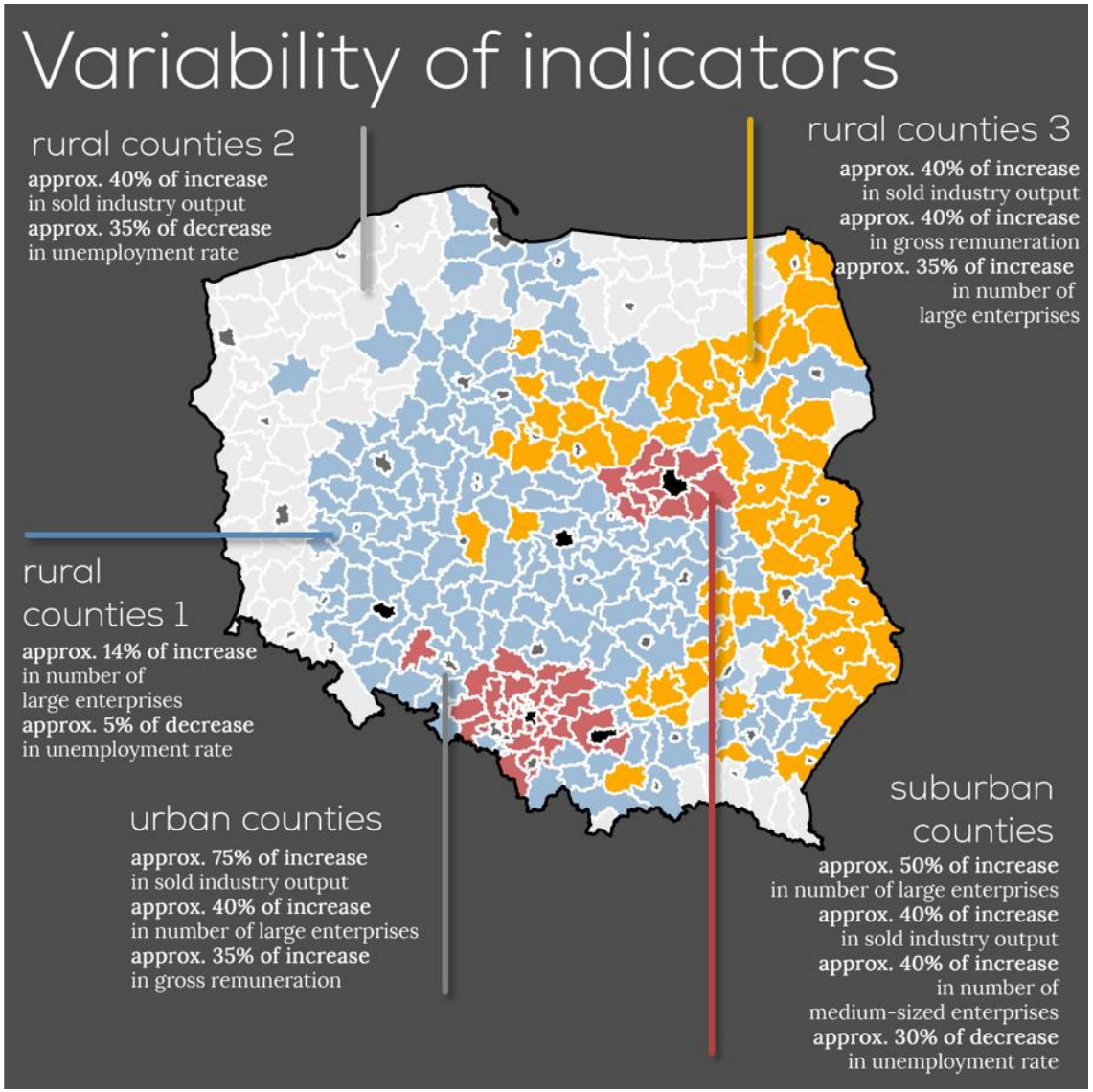
GENERAL CONCLUSIONS

- Transport projects generated great benefits for the Polish transport system, including time savings and transport cost savings, which generally shows that the intervention was needed and justified on a macro scale
- For future interventions, however, there is a risk that such benefits will marginally decrease together with the building of the basic transport network components
- The positive impact on traffic safety indicators and the use of environmentally friendly means of transport are relatively low; the reason for this is weak management of complementary activities - not in terms of other projects but steps aimed at security, public transport offer or real reduction of public transport travel time

STRATIFIED PROPENSITY SCORE MATCHING MODELLING

- **Goal: Measuring of transport investments' impact on economic development**
- **Challenge: How to measure net effect if every item is subject to very complex intervention and has its own development specification?**
- Describing 380 counties of Poland with:
  - 5 indicators of socio-economic development;
  - complex database of transport and non-transport investments, as well as other development determinants;
  - 8 factors describing over 100 explanatory variables.
- Stratification of counties into 6 groups based on the values of the indicators before the intervention – Ward's method of hierarchical cluster analysis
- Finding the most similar counties in every group and creating pairs – discriminant analysis
- Choosing the most characteristic pairs and estimating the net effect of the intervention – counterfactual analysis
- Identifying the external factors affecting the development of the counties – case studies

Figure 1. **Variability of indicators in different groups of counties.**




Broader regression analysis
Selection of case studies
Further conclusions from the study

Further analysis of regression confirmed the majority of conclusions from the primary study:

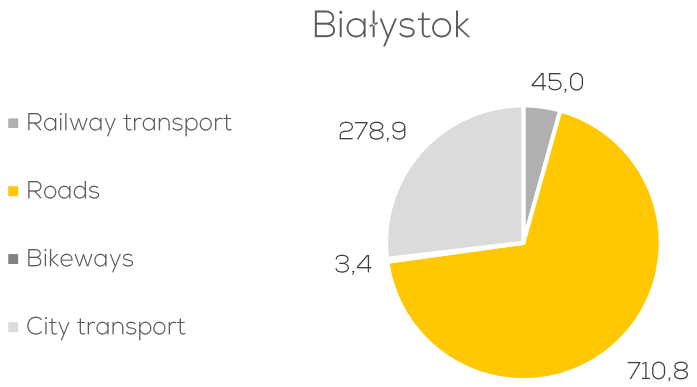
- In urban counties, the importance of public transport investments had relatively higher results than other transport projects
- In suburban counties local road investments contributed more to the local development than expressways. Smaller impact of railways was a surprise
- In rural counties 1 (central Poland), the impact of transport investments on development was poor – their accessibility was good and it's improvement wasn't key success factor
- In rural counties 2 (north-west Poland) investments in infrastructure have contributed to the growth of economic indicators, and the rolling stock - also to social ones. Complex actions connecting the both gave complex development
- In rural counties 3 (eastern Poland) it was confirmed that local roads were the key development factor

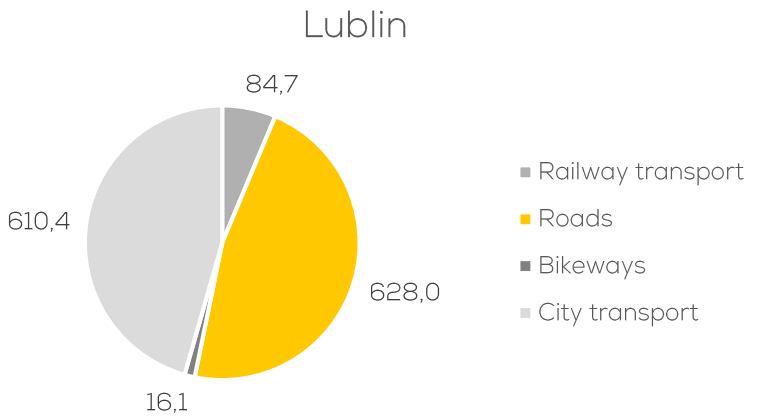
CASE STUDIES – SELECTION

- Further conclusions from the original study presented with specific examples
- Identification of the specificity of selected counties and external factors for development
- Selection based on conclusions from broader regression analysis
- Case studies from each county segment
- Various types of transport investments
- The largest socio-economic net effects
- Good and bad practices

- Very comparable cities – eastern Poland, similar inhabitants number and area
- Similar values of the indicators before the intervention – similar chances for development
- Higher values of the indicators in Lublin after intervention:
  - Higher increase in sold industry output
  - Higher decrease in unemployment rate
  - Higher increase in gross remuneration
  - Higher increase in number of medium-sized and large enterprises
- What's specific in both cities?
  Transport investment priorities and complexity of actions.

CASE STUDY EXAMPLE
URBAN COUNTIES – BIAŁYSTOK AND LUBLIN





- 126 new buses,
- introduction of e-ticket,
- new info point for passengers,
- modernisation of bus depot,
- intelligent transport system (traffic management),
- modernisation of roads and crossroads

32% lower average age of the fleet,
93% of the fleet - low-floor,
8% increase in the number of passengers

- 200 new buses and trolleybuses,
- extension of trolleybus network,
- modernisation of trolleybus infrastructure, public transport stops, new trolleybus depot,
- intelligent transport system (dynamic passenger information),
- modernisation of roads and crossroads

Complementary actions:
- optimisation of public transport network,
- 25% more frequent services than in 2007

57% lower average age of the fleet,
97% of the fleet - low-floor,
66% increase in the number of passengers

- Gdańsk and Szczecin
  - both cities are key Polish harbours
  - the Port of Gdańsk was a subject to much more complex improvement, including landside connections down to the southern border
  - this resulted in much better economic performance of Gdańsk
- Działdowo and Pleszew counties
  - both counties are located ca. 1,5 h rail journey from metropolises and are rather peripheral with poor road connections
  - railway line to Działdowo was subject to complex upgrade, whereas railway line to Pleszew – subject to slight improvements
  - nevertheless performance of Pleszew was much better – a reason for that could be more regular and frequent train services and better conditions for freight railway

MAIN RECOMMENDATIONS

- Further investments in the transport network of Poland should not be limited to specific type or location-related transport investments or to the general improving of transport accessibility of the territory of Poland, but to investments which are promising on the basis of the analysis results:
    - costs and benefits analysis at the stage of investment selection (formulating the equivalents of the transport development strategy implementation document or branch programs) – especially in case of marginally decreasing efficiency in the future
    - logic of a specific intervention (e. g. a connection necessary for the development of a specific branch of industry in a specific location, implementation of spatially focused development strategies rather than transport, connection of a metropolis with an area of unemployment, etc.)
- Focus on non-infrastructure complementary activities (higher frequency, decreased fares, priority for public transport, driving trainings, enforcement of traffic laws, changes in road planning standards)
- Strengthen the process of planning and management of transport infrastructure and all engaged institutions (state and local government, clusters) - with a focus on comprehensive managing of cargo flows, supporting specific economic policy intentions and further use of infrastructure