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Impacts of the Austrian Programme of Rural Development

AT-RDP 07-13

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MIT UNTERSTÜTZUNG VON BUND UND EUROPÄISCHER UNION

Europäischer Landwirtschaftsfonds für die Entwicklung des ländlichen Raums: Hier investiert Europa in die ländlichen Gebiete.

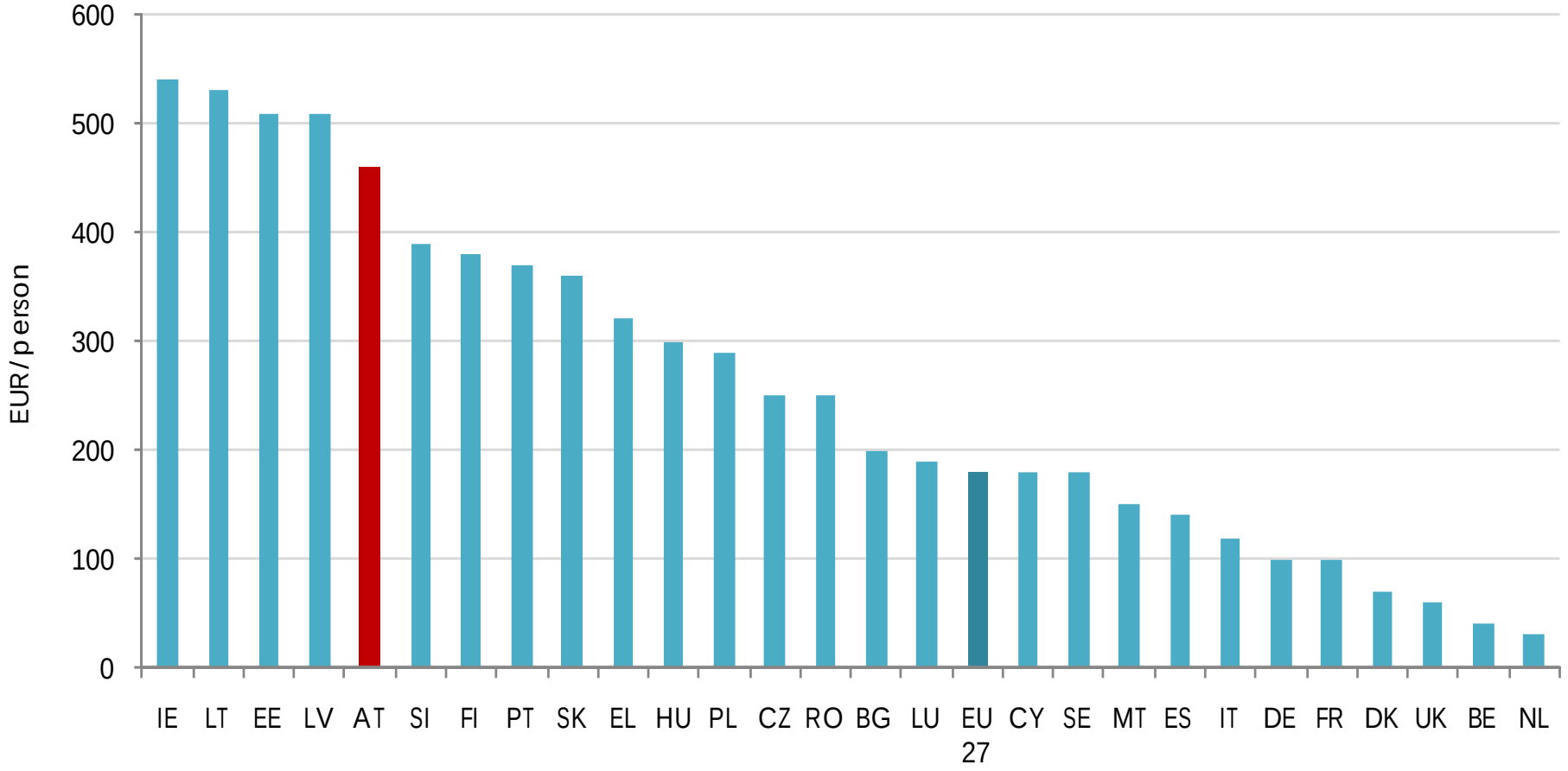
LE 07-13

lebensministerium.at

evaluation of AT-RDP 07-13
presentation outline

- the programme
- evaluation questions
- choice of methods
- impact analysis
- discussion / lessons learned

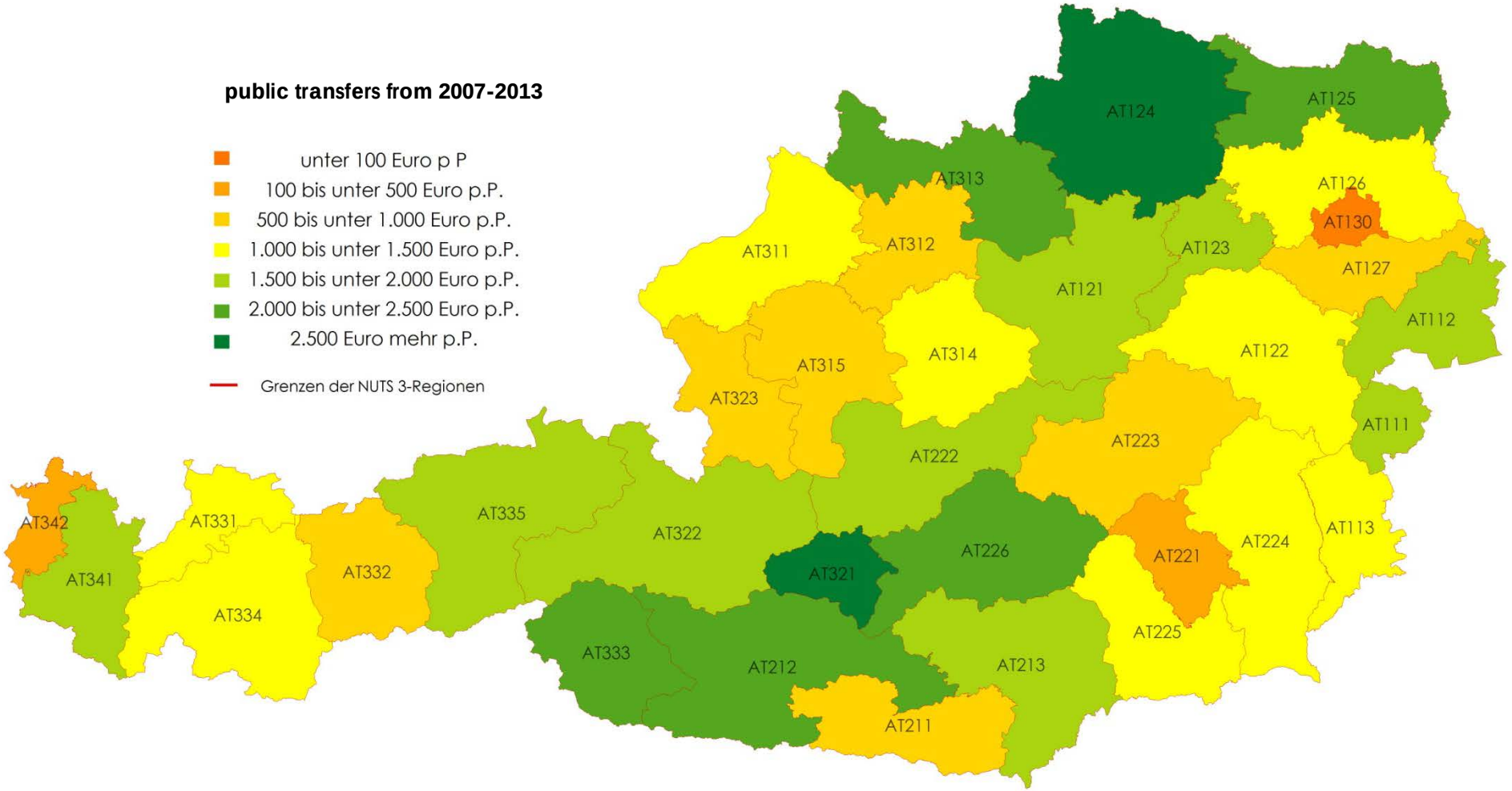
AT-RDP 07-13
EU-support per inhabitant 2007



Q: EC, European Commission, Budget, Financial Report 2014 (http://ec.europa.eu/budget/financialreport/2014/foreword/index_en.html).

06.07.2016

regional distribution of public support (EU, federal gvnmt, Länder) per inhabitant



BMLFUW, 2015, elektronisch übermittelt am 7.12.2015.

evaluation questions: to what extent has the RDP contributed to …

- the growth of the whole rural economy
- employment creation
- protect and enhance natural resources and landscape including, biodiversity and HNV farming and forestry
- the supply of renewable energy
- improving the competitiveness of the agricultural and forestry sector
- climate change mitigation and adaptation
- improvement of water management (quality, use and quantity)
- improving the quality of life in rural areas and encouraging diversification of the rural economy

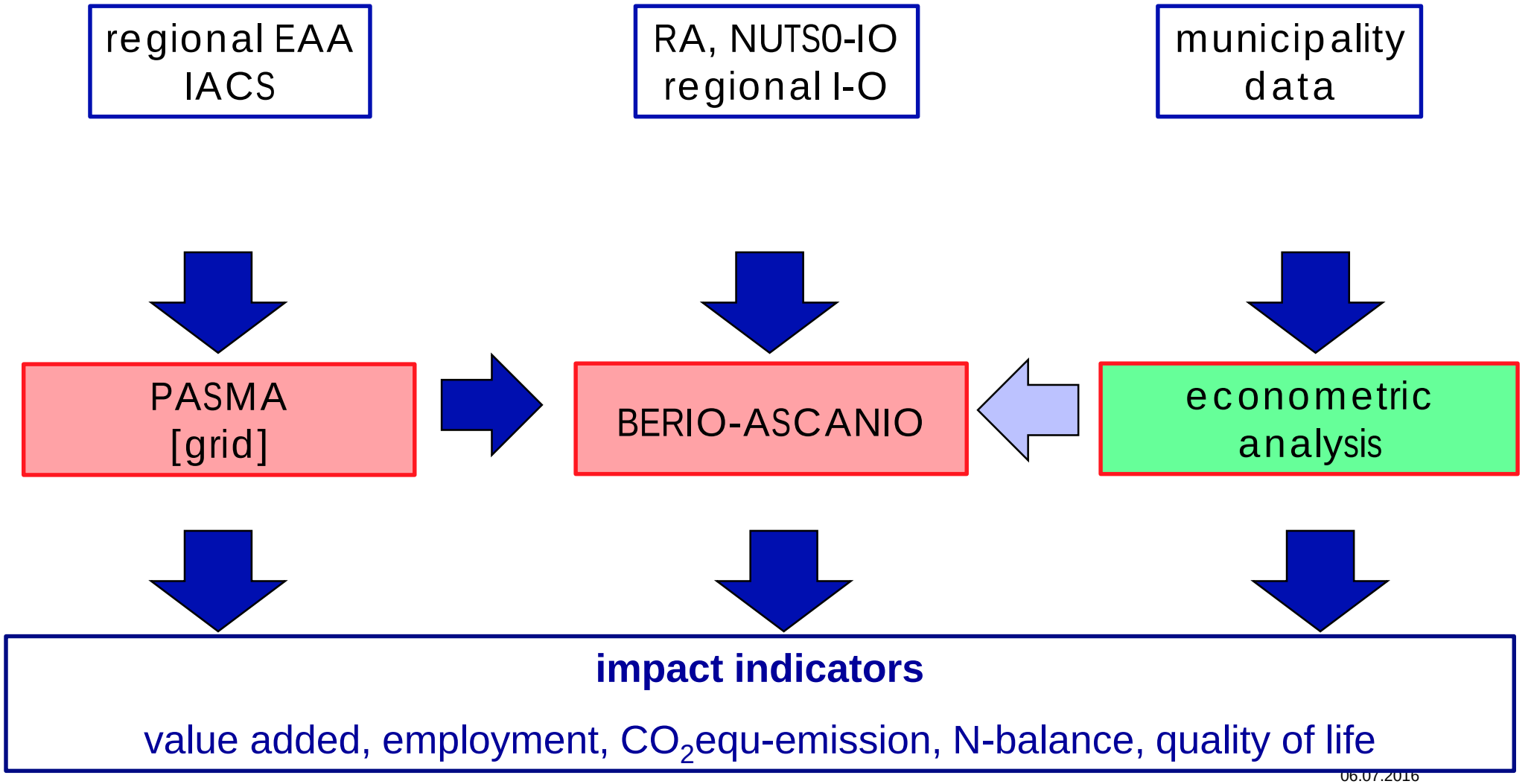
Source: European Evaluation network of Rural Development, 2014, The ex post evaluation of Rural Development Programmes 2007 - 2013. Rural Evaluation News N°13, Brussels

evaluation of AT-RDP

counterfactual analysis:

methods and approaches

ex-post evaluation of impacts of AT-PRD a multi method approach



impacts on

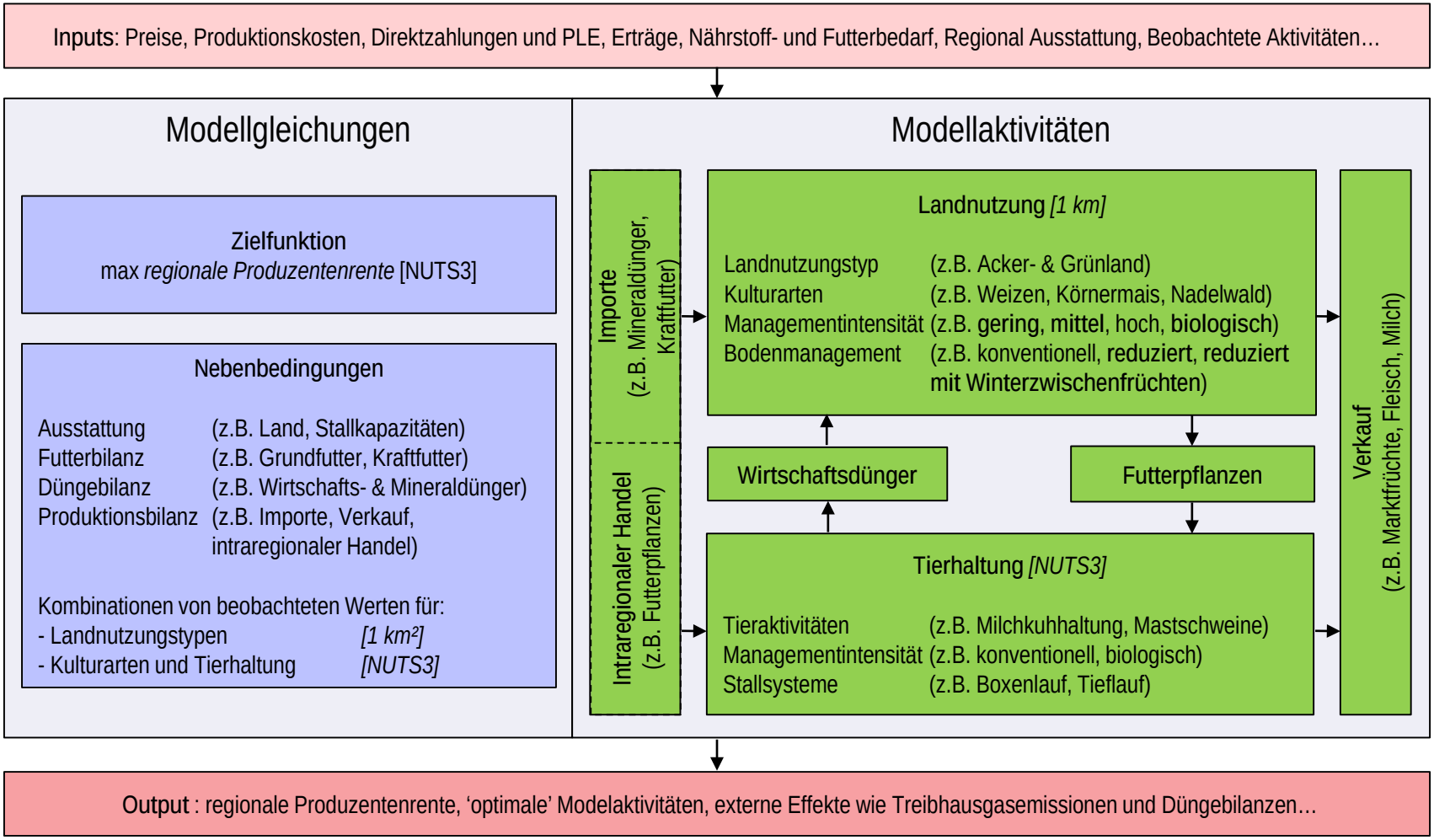
agriculture

PASMA[grid]

axis 2 0,8 bn Euro p.a.

agri-environment and compensatory payments

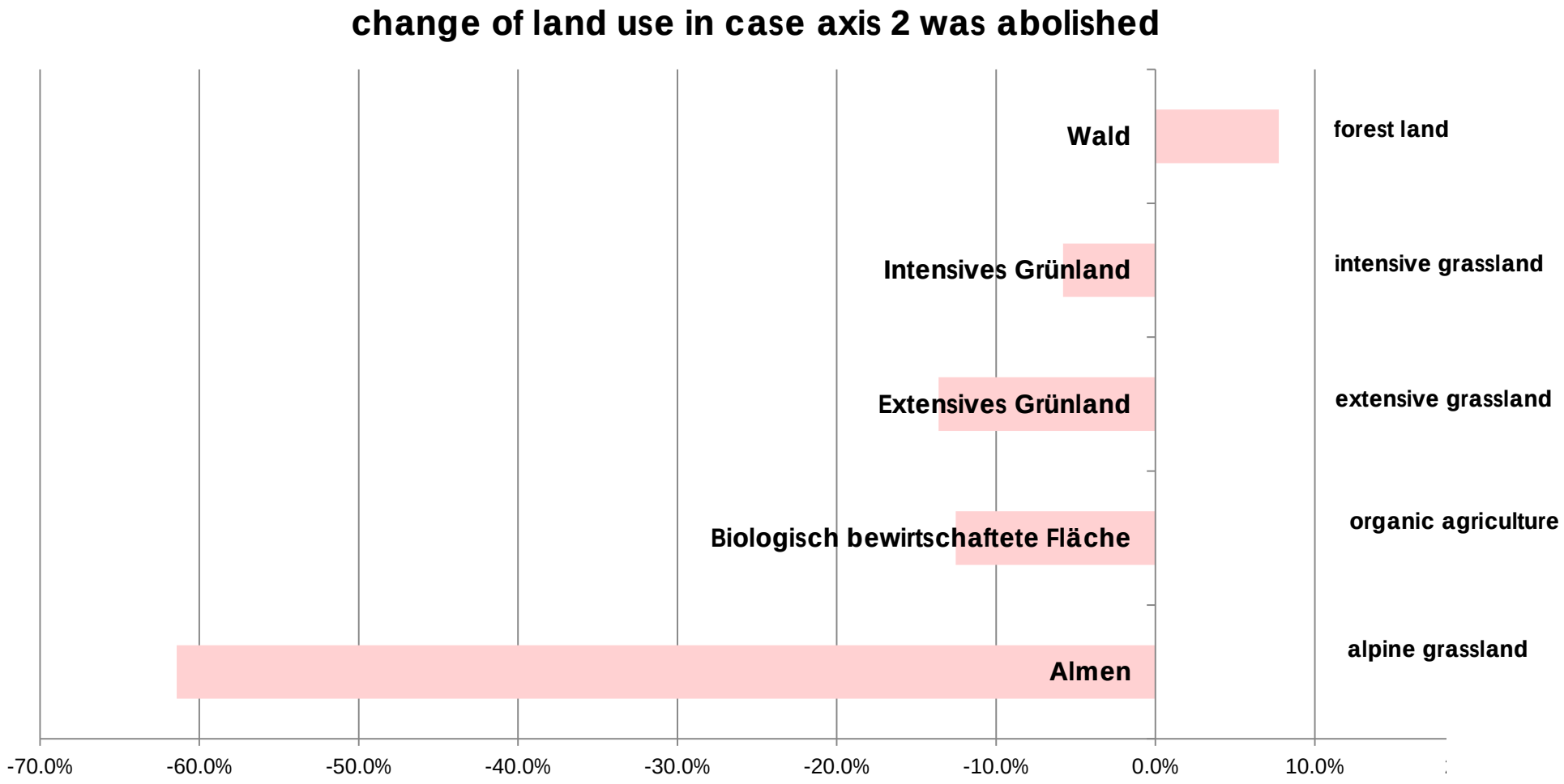
ex-post-evaluation PASMA[grid]
representative farms at km² level



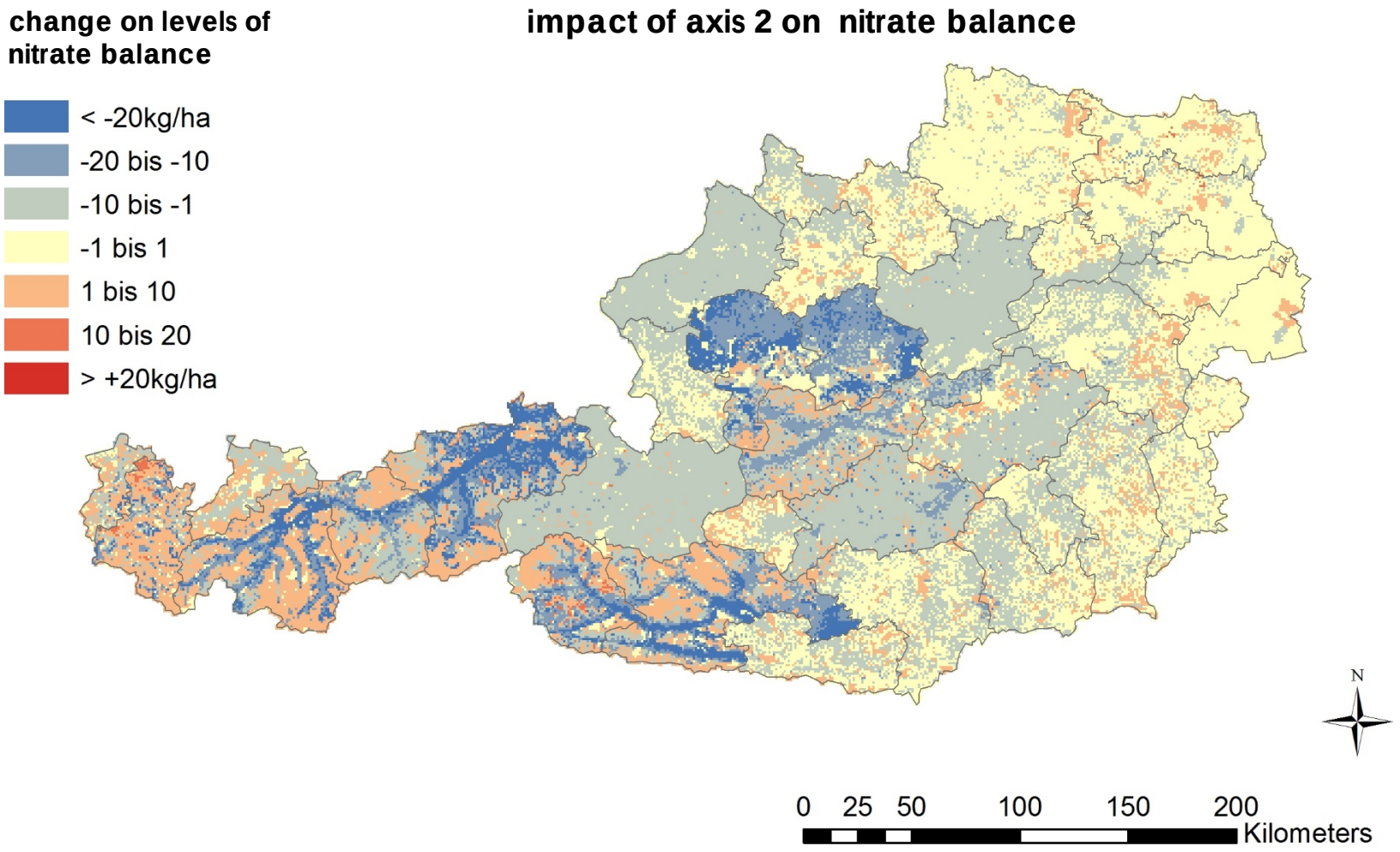
impact of axis 2
based on agricultural sector model

- **economic effects**
  - **more jobs in agriculture (+4%: 6.700 jobs, = 4.900 AWU)**
  - **lower gross-value added (-5%)**
    - result is in conflict with programme goal
    - to be explained: high cost for ecological measures which are part of GVA-calculation whereas benefits are not
  - **higher incomes in agriculture (+15%)**
- **environmental indicators**
  - **reduction of N-surplus (-16%)**
  - **reduction of GHG emission (-3%)**

impact of axis 2
land use effects



impact of axis 2 on nitrate balance based on agricultural sector model



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impact on the

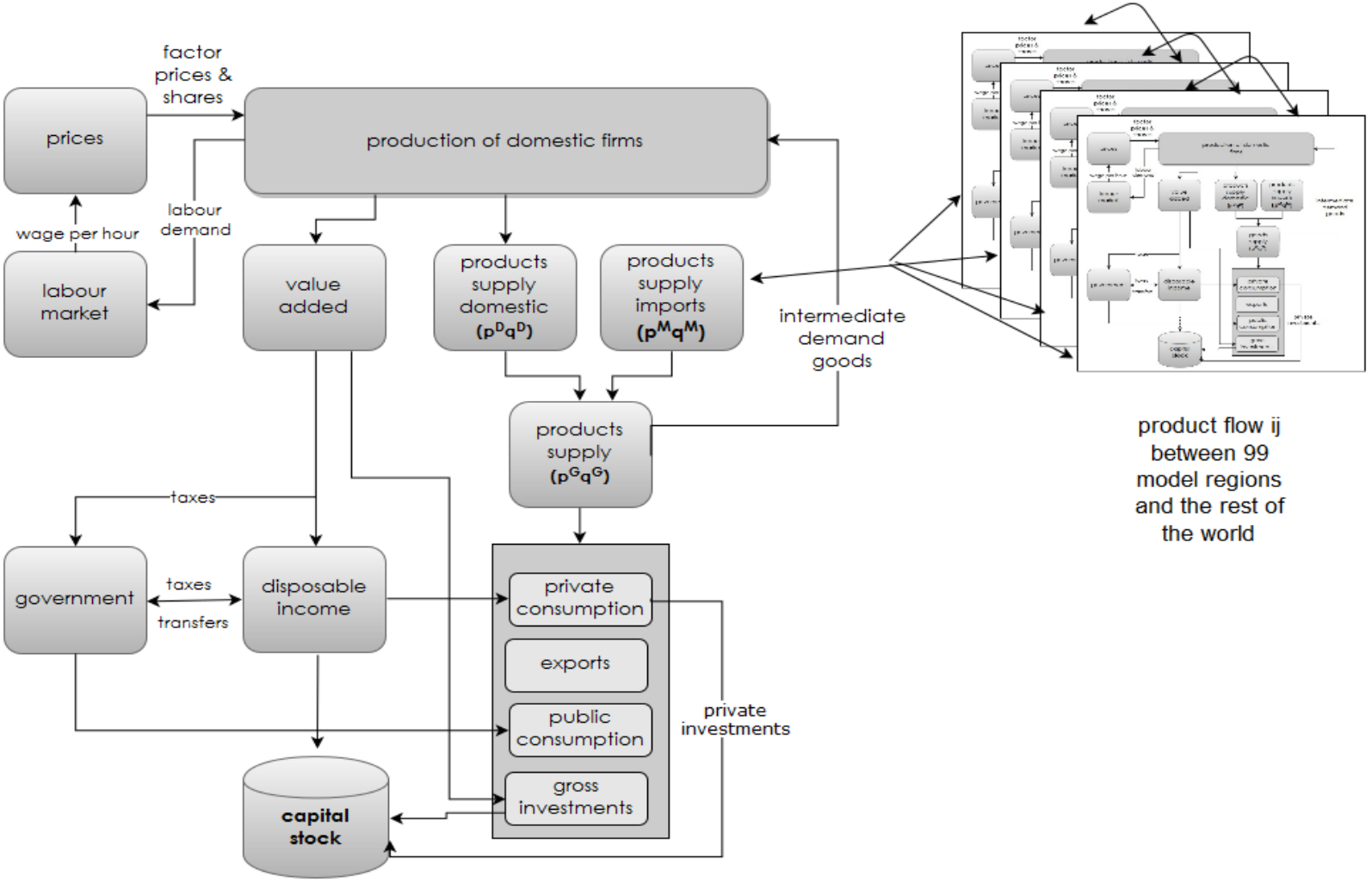
whole rural / regional economy

BERIO-ASCANIO

all measures

1,1 bn Euro p.a.

BERIO-ASCANIO
I-O type model at district level

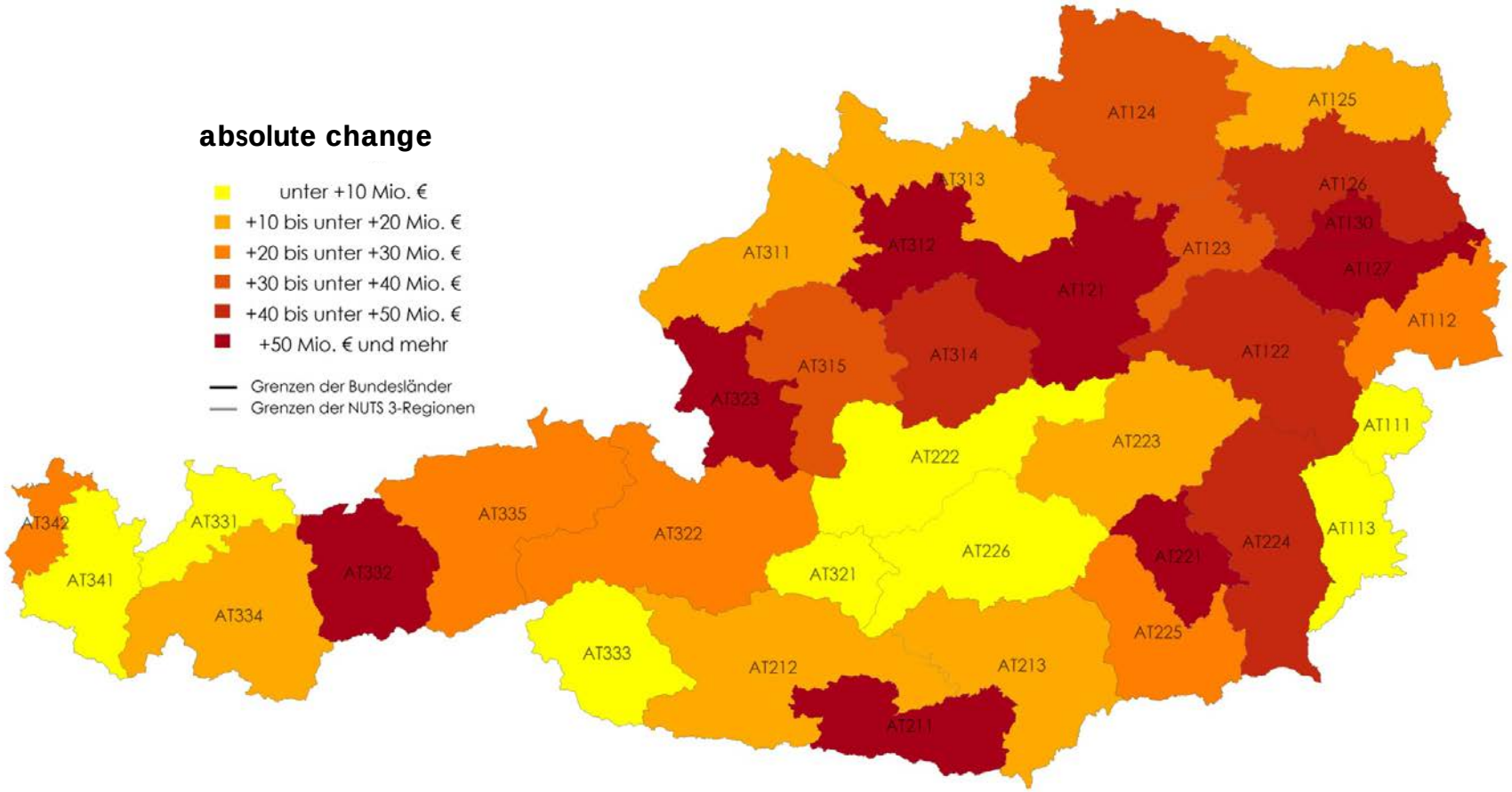


AT RDP 07-13: impact on the economy gross value added and labour market

- **method**
  - **input-output-model, relations between all sctors of the economy, government, households, foreign trade**
  - **econmic relations between regions (district level ~NUTS4)**
  - **direct, indirect and induced effects**
- **GVA effect: +1,6 bn Euro**
- **employment effect**
  - **in total 30,300 jobs = 25.600 FTE (incl. agriculture)**

AT RDP 07-13: impact on the economy regional gross value added change

change of gross value added: +1.6 bn Euro



Q: WIFO-Berechnungen mit dem Modell ASCANIO.

AT RDP 07-13: impact on the economy gross value added and labour market

- **sensitivity scenarios**
  - (1) **add private leverage (as reported in files)**

    programme volume increases to 1,6 instead of 1,1 bn € p.a.
  - (2) **alternative use of public funds in Austria**

    programme volume 1,1 bn € p.a. and simultaneously public consumption is reduced by 0,5 bn € p.a. (proportionally)
- **results of sensitivity scenarios**
  - (1) **proportionally stronger impact of programme**

    GVA: +2.6 bn € and FTE: +37,900
  - (2) **negative impact**

    GVA: -1.4 bn € and FTE: -14,100

impact on indicators of quality of life

in municipalities

econometric analysis

all measures:

1,1 bn Euro p.a.

AT RDP 07-13: impact on quality of life fixed-effects model with municipality data

- **method**
  - **quality of life is hard to measure directly – survey necessary to ask individuals about their well-being**
  - **approach: use indicators related to quality of life**
  - **statistically (significant) *relationship* between quality of life indicator and public support and indicators of**
  - **basis public data available for each municipality (ca. 2,200) in Austria**
  - **econometric approach: fixed-effects (controlling for unobserved heterogeneity, when heterogenity is constant over time)**

AT RDP 07-13
public transfers (mn Euros)

Jahr / axis	2007	2008	2009	2010	2011	2012	2013	total
1: competitiveness	101.59	239.52	249.96	215.95	186.63	158.71	129.45	1,281.81
2: environment	788.89	812.66	842.97	839.89	830.93	810.12	788.03	5,713.48
3: quality of life, diversification	93.16	110.51	112.44	136.95	138.25	116.05	105.74	813.10
4: LEADER	0.00	2.04	15.19	24.95	24.05	23.01	27.46	116.69
511: technical assist.	18.44	27.46	33.45	37.13	39.45	40.21	3.37	199.51
total	1,002.07	1,192.19	1,254.02	1,254.87	1,219.31	1,148.10	1,054.04	8,124.59

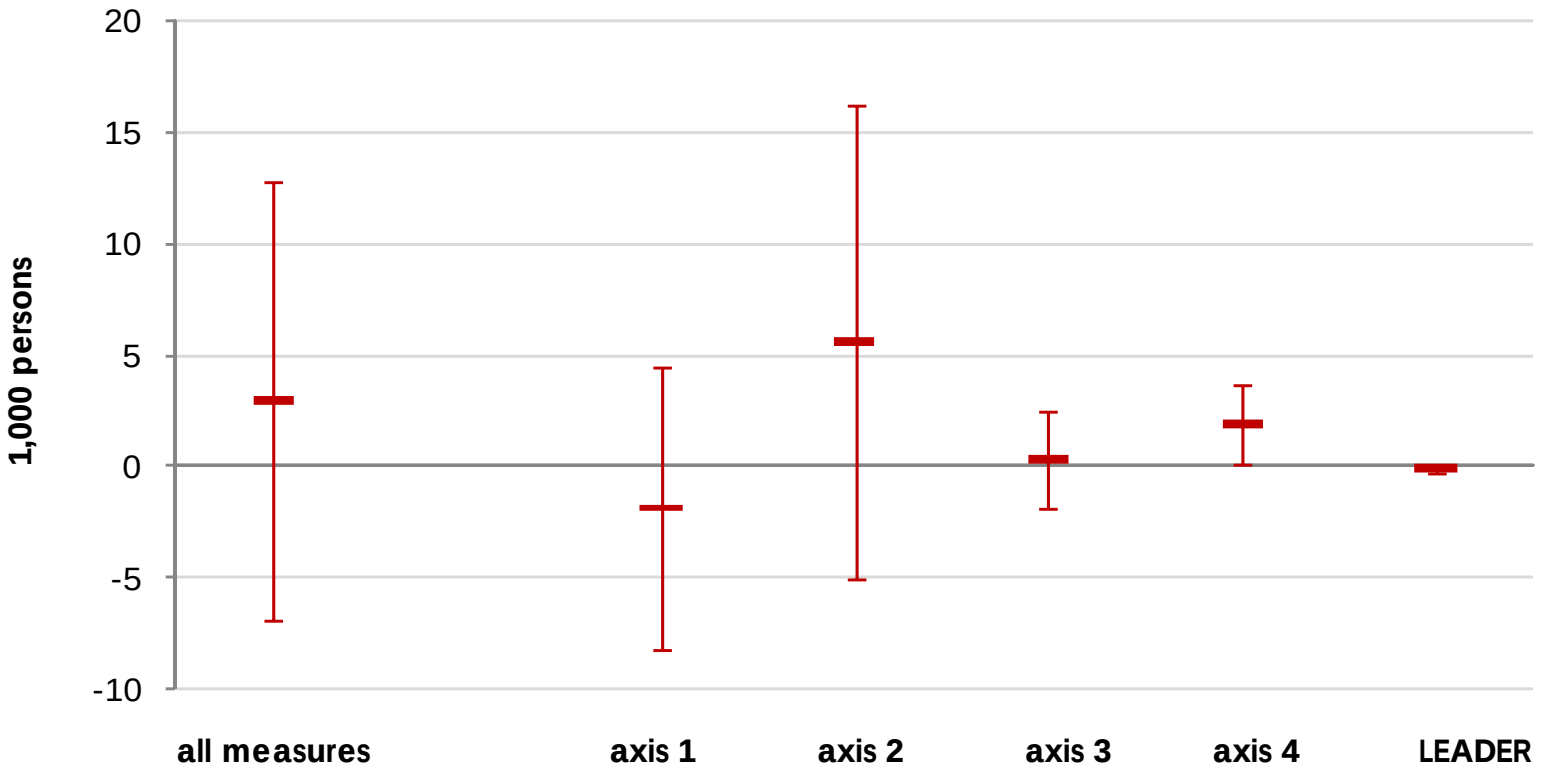
beneficiaries of AT-RDP 07-13 (transfers in Euro per capita)

Variable	coeff.	coeff.	coeff.
unemployment rate (2001; in Prozent)	-186.35***	-248.30***	-256.80***
income (2006; in Euro per capita)	-0.13***	-0.16***	-0.22***
municipality tax (in Euro; 2005)	-1.15***	-0.64**	-0.30
income of women (2006; in % of men)	37.72***	27.99***	21.85***
population density (2006; in primary res. per ha)	22.51	49.77	64.06*
primary residence (2006)	-0.07***	-0.06***	-0.06***
area (in ha)	0.08***	0.05***	0.02**
altitude (average; in m)	2.21***	3.55***	3.85***
motorway (length in m)	-0.05***	-0.03	0.00
railway (length in m)	-0.05***	-0.05***	-0.03***
express road (Länge in m)	-0.06*	-0.09***	-0.05
Intercept	1,029.58*	1,980.36***	1,593.05**
Regional-Dummys	no	land (8)	district (94)

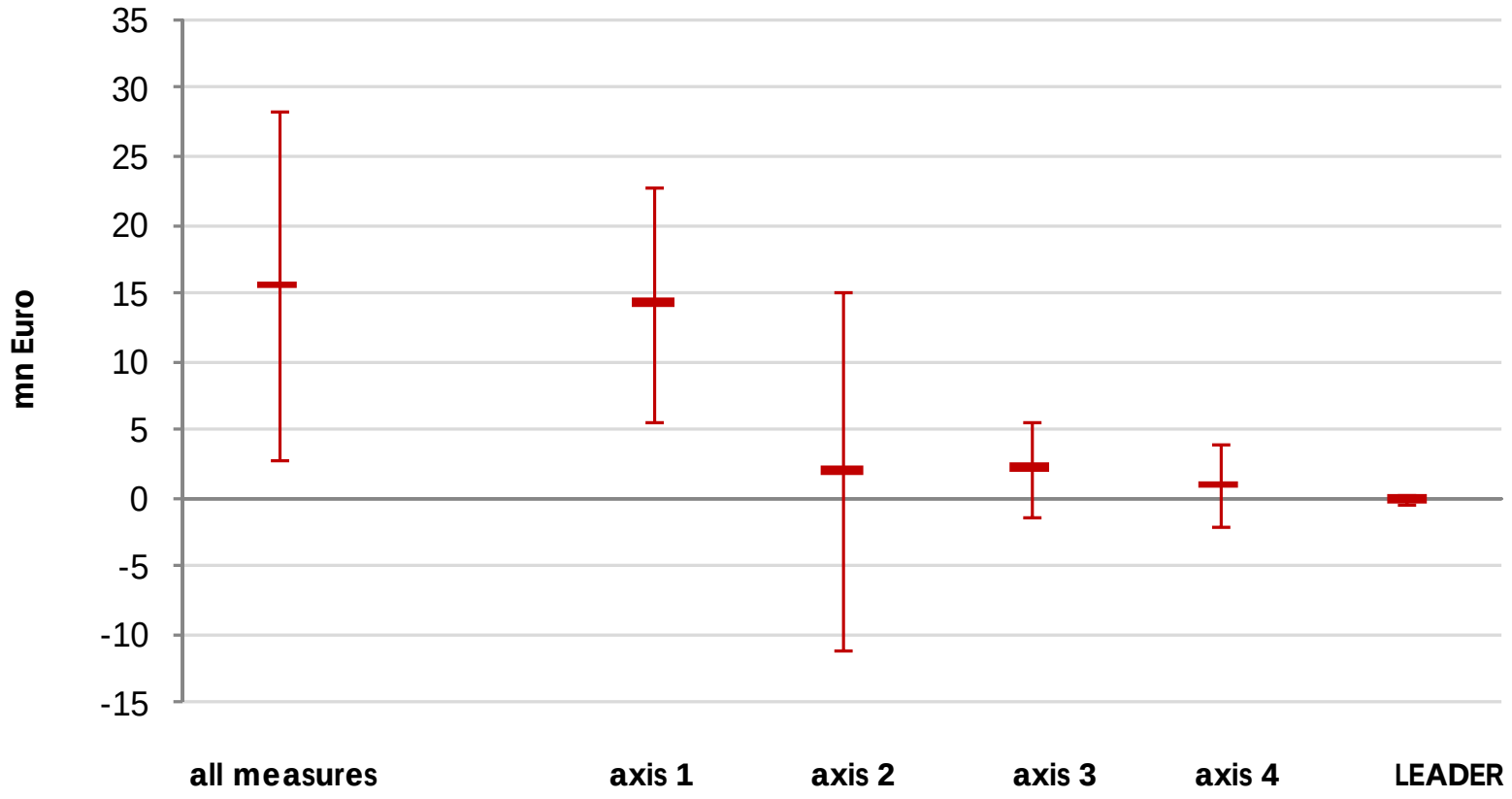
beneficiaries of AT-RDP 07-13 (transfers in Euro per capita)

variable	coeff.	coeff.	coeff.
urban land use	-22.00***	-17.88**	-18.28**
industrial areas, traffic areas	76.13***	54.03***	20.27
mining regions, construction sites	-0.43	13.23	-26.74
artificial regions	-46.87	-54.67	-78.01**
arable land	22.67***	24.96***	18.14***
permanent crops, orchards, vineyards	36.63***	31.90***	14.70**
grassland	25.28***	35.16***	31.85***
heterogeneous agricultural land	3.57	11.61***	13.06***
mining regions, construction sites	3.75	22.83***	29.11***
regional dummies	no	province (8)	district (94)

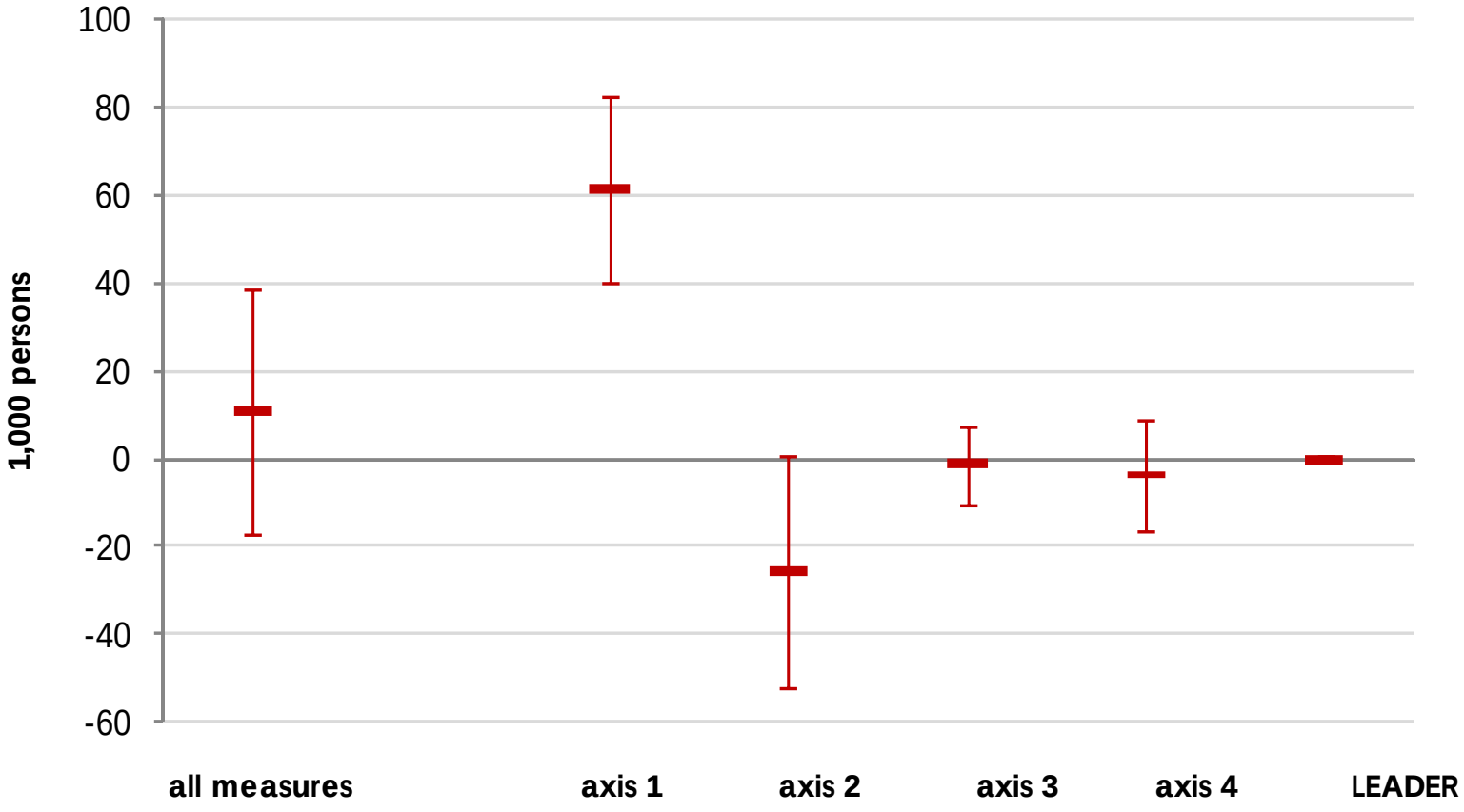
AT-RDP 07-13: relationship between transfers and population growth



AT-RDP 07-13: relationship transfers and revenues from municipality tax



AT-RDP 07-13: relationship transfers and change of employment outside agr.



lessons learned 1/3: effects on quality of life indicators

- **results of evaluation:**
  - **the program has significant effects over many target dimensions**
  - **not only receipients benefit but many other groups in the rural econmy (most money goes to farmers)**
  - **econometric results are in general consistent with model results; RDP is stimulating positive structural change outside agriculture**
- **limitations**
  - **non market goods and important non economic variables have not been measured**
  - **social costs of public funds are generally no concern in EU programme evaluations but should be**

lessons learned 2/3: assessment of methodologies

- **computational models**
  - multi-model approach allows to evaluate a broad range of measures / indicators
  - even very detailed models rest on crucial assumptions
- **econometric analysis**
  - limitations: non market goods and important non economic variables have not been measured
  - causality: would require (slightly) different programme implementation, additional monitoring data; other model
- **benefits of multi-method approach**
  - computational models: well suited for ex-ante mid-term and ex-post
  - econometric models: usefull to corroborate / challenge results of computational models
  - micro data for effects on firms / inhabitants would be more helpful

lessons learned 3/3: strength and weaknesses

multi-method and multi-model approach in evaluation

- **weaknesses**
  - more data and resource intensive
  - researchers and clients must be convinced that there is not "THE" method but that each approach has (dis-)advantages
  - inconsistent results raise more questions than can be answered
- **strengths**
  - same questen can be answered from more than one angle
  - when data and approach is well integrated: complementary aspects can be identified
  - validity of the results can be evaluated
  - idiosyncratic limitations of methods can be overcome
  - necessary precondition to improve the current state of knowledge

thank you for your attention!