



## European Commission impressed by first results of 'ADVANCED-EVAL' presented at the MID-TERM WORKSHOP

On the 17 January 2008 ADVANCED-EVAL held its Mid-term workshop hosted by the Government of Schleswig-Holstein at the Hanse-Office in Brussels. Starting its activities in March 2006 ADVANCED-EVAL aims to develop innovative and quantitative methods to improve evaluation techniques applied to EU rural development programmes. Policy evaluation has become a major issue for many international organizations including the European Commission. Thus, interest in the MTR-workshop was high. Beside members of the European Commission: Dr. Hans-Joerg Lutzeyer (DG-Research), Mr. Guido Castellano (Evaluation Unit, DG-AGRI), Dr. Peter Wehrheim (Rural Development Unit, DG-AGRI) and Mr. Thierry Vard (Economic Analysis of EU agriculture, DG-AGRI) also representatives of European Investment Bank (Operations Evaluation) and specialized Agencies in EU member states responsible for evaluation of RD and structural programmes as well as academic experts in rural development and policy evaluators attended the workshop.

More information: <http://www.advanced-eval.eu/mid-term-workshop-proceedings.pdf>

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## EU-Evaluation methods are biased

Comparison of estimation results of crude evaluation methods currently applied to evaluation of RD-programmes with advanced micro-econometric methods presented by the working group *Ex-post-eval* clearly demonstrated that simple EU-methods lead in general to a biased construction of a baseline and

hence imply biased evaluation results. In principle biased EU-methods could over- and underestimate the real effect of RD-programmes.

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## Macro-econometric evaluation methods are crucial

Beyond the application of a correct micro-econometric evaluation methodology the working group *Qual-life* highlighted the importance of macro-econometric methods in evaluation of the impact of RD-programmes at regional level. In particular, to include programme impacts on both monetary and non-monetary goods a Quality of Life / Rural Development Index (RDI) has been constructed and econometrically estimated (NUTS-4 level). To identify RD-programme impacts at the regional level, rural communities have been matched (Propensity

Score Matching) based on specific factors determining quality of life / level of rural development. Programme impact was estimated econometrically by applying a combination of Difference-in-differences (DID) and Average Treatment Effects on Treated (ATT) methods, whereby the RDI Index, employment, and others were used as outcome indicators at regional level.

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## Social networks are important drivers of Rural Development

Social networks structures of individual households and companies differ significantly between high and low performing rural regions. This is a first striking result of empirical network studies presented by working group *Net-RD*. Moreover, further empirical results of Net-RD show that social networks have significant impact on economic performance of rural households and firms. For example, social net-

works determine labor market performance as well as migration decisions of rural households, while social network structures also have an impact on farm's exit and diversification decisions. Moreover, networks determine farm's transaction costs when entering regional and national markets.

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## Local Elite network structures important determinants of local government performance

Cooperation among local Elite is an important characteristic of high performing rural communities. This is a first result of comparative policy network studies undertaken by working group *Net-RD*. In particular, cooperative local Elite network structures enhance lo-

cal government performance, i.e. allow cooperative political decision-making processes that incorporate various interests of community society in a more balanced political compromise. Moreover, social networks have significant impact on voting behaviour,



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where socially more embedded voters focus their voting stronger on relevant policy issues implying *ceteris paribus* a higher accountability and thus a better performance of local government.

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## ABM-CGE an innovative model of rural development

The working group *Ex-ante-eval* has developed an innovative ABM-CGE model combining Agent-based Modeling with classical general equilibrium models to better fit specific factors deriving complex and dynamic process of rural development. The model systematically links various modules of individual behaviour of a large set of heterogeneous economic agents at the micro level, e.g. firms' investment and exit decisions, with an interregional market equilibrium model including transaction costs at the macro

level. The basic economic model can be further extended to an ABM-CGPE incorporating the economic and local political sector. Based on this approach impact of social and political networks on agents' individual beliefs, economic and political interactions and their impact on quality of life at the macro level can be simulated.

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## Further information on AdvancedEval

ADVANCED-EVAL, a European research project including well-known experts on rural development, agricultural policy, social networks and local government, has started its activities in March 2006. By developing interdisciplinary approaches to model rural development the institutes involved in ADVANCED-EVAL aim to develop innovative and quantitative methods to improve evaluation techniques applied to EU rural development programmes. Policy evaluation has become a major issue for many international organizations including the European Commission. The project investigates key factors of rural development and derives an interdisciplinary model framework of rural devel-



opment for testing various ex-post and ex-ante evaluation tools combining new econometric techniques, e.g. propensity score matching, quantitative network analysis and innovative modeling approaches, i.e. agent-based modeling. A successful completion of the proposed research will improve learning about the economic and social consequences of RD programmes and reinforce the quality of monitoring and evaluation systems and strengthen the policy design process.

Prof. Dr. Dr. Ch. Henning, Project Coordinator



## 1. Research Team:

- University of Kiel (coordinator)
- University of Bonn
- University of Sussex
- University of Utrecht
- University of Mannheim
- IRWIR
- RIAFE
- EUROPROJECTS
- IERIGZ

## 2. Project duration and Finance

- The project runs from 2006-2009 and is financed by the European Commission under the 6th Framework Programme

## 3. Working Groups

- **Ex-post-eval:** *Ex post* evaluation of RD-policies (coordinator: Jerzy Michalek, University of Kiel). The working group **Ex-post-eval** focuses on the development and application of innovative quantitative methods to the *ex post* evaluation of rural development policies. To this end the working group uses new econometric estimation techniques, i.e. propensity score matching, enabling the computation of unbiased baseline scenarios. Based on comparisons of supported units with an appropriately derived baseline, direct programme impacts (i.e. ATT, MTE, etc.), and indirect effects of RD programmes, (i.e. substitution effects, replacement effects, deadweight loss effects, etc.), are calculated applying a PSM-DID approach. **Expost-eval** is responsible for testing the applicability of the methodology to an *ex-post* evaluation of EU RD programmes and comparing results obtained from PSM-DD technique

with traditional qualitative methods used in the evaluation of EU RD programmes.

- **Qual-life:** Quality of life Index (coordinator: Jerzy Michalek, University of Kiel). The working group **Qual-life** works on the derivation of a Rural Development Index measuring the quality of life in rural regions. At the theoretical level the work of **Qual-life** corresponds to new developments in welfare theory. At the methodological level the construction of an RDI is based on a composite welfare index including various economic, environmental, and social RD components with relative weights derived from an econometric estimation of observed migration between communities. Based on empirical data for NUTS 4 and NUTS 5 regions in Poland and Slovakia the derived RDI-index is used to evaluate the overall impact of RD programmes in individual rural regions.
- **Net-RD:** The impact of networks on rural development (coordinator: Vincent Buskens, University of Utrecht). The working group **Net-RD** analyses the role of social networks in rural development. At the theoretical level new approaches in economic sociology and economics analysing the impact of networks on individual behaviour and corresponding social outcomes is applied to understand rural development. In particular, the impact of social networks on cooperation and on agents' belief formation is analysed. To facilitate an empirical application of developed network theories relevant social networks are related to economic and political performance at the micro and macro level via induced transaction costs. Empirical applications include the collection of relevant network data via the business, household, and



labour markets, and a policy network survey in selected high and low performing regions. Based on collected data a comparison of network structures in high and low performing regions are carried out. Moreover, econometric estimations assessing the role of social network structures on economic and political performance are conducted.

- **Ex-ante-eval:** *Ex ante* evaluation of RD-policies (coordinator: Christian Henning, University of Kiel). The working group **Ex-ante-eval** aims at the derivation of an adequate model framework for the *ex ante* evaluation of RD policies including social network structures. Further, the derived theoretical model is calibrated on the basis of empirical case studies of high and low performing rural communities. Based on the calibrated model various policy simulations are conducted for high and low performing rural regions in order to: (i) identify the impact of specific tangible and intangible factors in rural development, (ii) quantify the impact of specific tangible and intangible factors on the effectiveness of individual RD measures, and (iii) identify new RD mea-

asures improving local network structures. The theoretical model framework corresponds to a combination of an agent-based model with an interregional computable general political economy equilibrium model (CGPE-ABM). Based on the simulation results of the applied CGPE-ABM approach, new and interesting insights into the impact of tangible and intangible factors on the efficiency of RD policies, as well as on *ex ante* evaluations, are derived.

- **Eval-ind:** Evaluation indicators: (coordinator: Peter Kaufmann, University of Sussex). The main responsibility of the working group **Eval-ind** is to validate techniques applied in this study by comparing programme effects calculated using the quantitative methodologies described above with qualitative results obtained through interviews and surveys, and to provide policy recommendations in this respect. Based on these comparisons a set of new applicable indicators and methods for *ex post* and *ex ante* evaluations will be derived.

More information: <http://www.advanced-eval.eu>

## Activities/Upcoming Events

### 2008

**May 2008:** GAMS-workshop on ABM-CGE-modeling with application to rural development in Copenhagen, Denmark.

**May 2008:** Progress seminar on the role of social networks in economic and local government performance, Utrecht, The Netherlands.

**June 2008:** Seventh Workshop on Networks in Economics and Sociology: Dynamic Networks at Department of Sociology, Utrecht University.

**July 2008:** Progress seminar on ABM-CGE modelling of rural development, Kiel.

**October 2008:** Progress seminar on modelling quality of life and rural development, Sussex.



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**December 2008:** Workshop on quantitative methods of evaluation of rural development programmes, Kiel.

**February 2009:** Workshop seminar on the role of Networks in Economic and Government Performance, Kiel

**May 2009:** Final project workshop

2009

## Publications in 2008

### Journal articles:

- [1] Christian Henning and Jerzy Michalek. Econometric policy evaluation techniques: milestone for effective 2<sup>nd</sup> pillar policies or a pure academic exercise? *Agrarwirtschaft*, 57(3/4, forthcoming), 2008.
- [2] Christian Henning and Volker Saggau. The impact of information networks on spatial diffusion of technological knowledge and regional economic growth: An agent-based modeling approach. *Presentation at "The Institutional and Social Dynamics of Growth and Distribution"-conference in Luca (Italy)*, published in <http://growth-institutions.ec.unipi.it/pages/wages/shtml>, 2007.
- [3] Peter Kaufmann, Sigrid Stagl, Katarzyna Zawalinska, and Jerzy Michalek. Measuring Quality of Life in Rural Europe - A Review of Conceptual Foundations. *Eastern European Countryside*, 13:1–21, 2007.

### Conceptual reports:

- [4] Jerzy Michalek. Construction and the measurement of the Rural Development Index. Application to evaluation of RD policies. Part II. Conceptual Reports CR3-2, University of Kiel, 2008.

### Regional reports:

- [5] Christian Henning, Frank Arndt, Eva Krampe, Eric Linhart, Christian Melbeck, and Susumu

Shikano. Policy network structures and governmental performance in high and low performing rural communities in Poland and Slovakia. Regional Report RR4-2, University of Kiel, 2008.

- [6] Christian Henning, Vincent Buskens, Henk Flap, Sven Bäumer, Arne Henningsen, Adriana Castaldo, Andy Mc Kay, Hendrik Tietje, Geraldine Henningsen, Christian Aßmann, and Jakob Mumm. Empirical Network studies in high and low performing rural communities: Slovakia and Poland. Regional Report RR4-1, University of Kiel, 2008.
- [7] Jerzy Michalek and Nana Zarnekow. Empirical measurement of quality of life in rural areas in Slovakia using the RDI Index. Regional Report RR3-1, University of Kiel, 2008.
- [8] Jerzy Michalek, Nana Zarnekow, Zdeno Stulrajter, and Leszek Klank. Cartographic and statistical analysis of RDI in Poland and Slovakia. Regional Report RR3-2, University of Kiel, 2008.

### Working papers:

- [9] Christian Aßmann, Christian Henning, and Jakob Mumm. Social Network Estimation and Imputation. Working Paper WP4-14, University of Kiel, 2008.
- [10] Frank Arndt, Christian Henning, and Christian Melbeck. Comparing policy networks in high and low performing rural communities. Working Paper WP4-12, University of Mannheim and



- University of Kiel, 2008.
- [11] Vincent Buskens, Henk Flap, and Sven Bäumer. Comparing social network and social capital of households in rural regions of Poland and Slovakia. Working Paper WP4-4, Utrecht University, 2008.
- [12] Vincent Buskens, Henk Flap, and Sven Bäumer. Social Networks and labor market performance of households in rural regions of Poland and Slovakia. Working Paper WP4-4, Utrecht University, 2008.
- [13] Adriana Castaldo, Christian Henning, and Andy Mc Kay. Economic and Social Determinants of Migration in Rural Regions: A Micro-econometric Approach Including Social Networks - Initial Results on Slovakia. Working Paper WP4-11, University of Sussex and Christian Henning, 2008.
- [14] Christian Henning, Volker Saggau, and Christof Kluß. An agent based model of intersectoral change in rural economies. Working Paper WP5-4, University of Kiel, 2008.
- [15] Christian Henning, Volker Saggau, and Christof Kluß. An agent-based model of local land markets. Working Paper WP5-3, University of Kiel, 2008.
- [16] Arne Henningsen and Christian Henning. Off-farm Labor Supply and Social Networks: A FHM approach to Estimate the Impact of Social Networks on farms' Transaction Costs. Working Paper WP4-9, University of Kiel, 2008.
- [17] Geraldine Henningsen and Christian Henning. Estimating farm's transaction costs. Working Paper WP4-7, University of Kiel, 2008.
- [18] Peter Kaufmann, Rod Bond, and Jerzy Michalek. Derivation and empirical application of a rural development index measuring quality of life in rural areas by using a structural equation model approach. Working Paper WP3-2, University of Kiel, 2008.
- [19] Eric Linhart, Eva Krampe, and Christian Henning. Modelling Policy Networks and Local Government Performance: An empirical application to rural communities in Poland and Slovakia. Working Paper WP4-13, University of Kiel, 2008.
- [20] Susumu Shikano and Christian Henning. Regional diversity of political behaviour and local government performance : The impact of social networks. Working Paper WP4-10, University of Mannheim and University of Kiel, 2008.
- [21] Hendrik Tietje and Christian Henning. Estimating farm exits in Poland. Working Paper WP4-6, University of Kiel, 2008.
- Technical reports:**
- [22] Christian Henning, Vincent Buskens, Henk Flap, and Geraldine Henningsen. Questionnaire Households and Labor Market. Technical Report TR4-5a, University of Kiel and Utrecht University, 2008.
- [23] Christian Henning and Geraldine Henningsen. Questionnaire Farmers, Agribusiness and Business. Technical Report TR4-3a, University of Kiel, 2008.
- [24] Christian Henning, Christian Melbeck, and Christoph Böttcher. Questionnaire Policy Network Analysis. Technical Report TR4-4a, University of Mannheim and University of Kiel, 2008.
- [25] Christian Henning, Volker Saggau, and Christof Kluß. Development of a Software Prototype for the Simulation of socio-economic Networks: elaborated version. Technical Report TR5-3a, University of Kiel, 2008.
- [26] Jerzy Michalek, Christoph Wulf, and Johannes Hedtrich. Advanced Eval Database Access Client - Technical Documentation. Technical Report TR1-2, University of Kiel, 2008.
- [27] Jerzy Michalek, Christoph Wulf, and Johannes Hedtrich. On-line conversion of forms-database.



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Technical Report TR1-3, University of Kiel, 2008.

[28] Jerzy Michalek, Christoph Wulf, and Johannes Hedtrich. Webpage - Technical Documentation. Technical Report TR1-1, University of Kiel, 2008.