

DELIVERABLE 10.2

"Structural Change in Agriculture and Rural Livelihoods: Policy Recommendations"

Detailed Report

Csaba Csaki, Attila Jambor, Gertrud Buchenrieder, Judith Möllers, Alfons Balmann, Luka Juvančič, Sophia Davidova, Lena Fredriksson, Alastair Bailey, Johan Swinnen, Kristine van Herck, Carmen Hubbard, Matthew Gorton, Cosmin Salasan and Dominika Milczarek¹

WP leader for this deliverable	CUB
Partners involved	IAMO, K.U.Leuven, UNWE, WUDES, USAMWB, UL, UNIKENT, UNEW
Document status:	Final Version
Due date of deliverable:	31 May 2010
Date:	August 2010

Dissemination level (see DoW p. 27-30)		
PU	Public	<input checked="" type="checkbox"/>
PP	Restricted to other programme participants (including the Commission Services)	<input type="checkbox"/>
RE	Restricted to a group specified by the consortium (including the Commission Services)	<input type="checkbox"/>
CO	Confidential, only for members of the consortium (including the Commission Services)	<input type="checkbox"/>

¹ The authors gratefully acknowledge financial participation from the European Community under the Sixth Framework Programme for Research, Technological Development and Demonstration Activities, for the Specific Targeted Research Project "SCARLED" SSPE-CT-2006-044201.

The views expressed in this publication are the sole responsibility of the authors and do not necessarily reflect the views of the European Commission.

This deliverable was internally reviewed by Gertrud Buchenrieder, Martin-Luther-University Halle-Wittenberg.

Abstract

Deliverable 10.2 is a detailed report on the results of SCARLED project. It also identifies and synthesises the policy implications of the results of the analyses for the NMS and for established Member States. After demonstrating the project objectives and organisation of work, key characteristics and recent trends in NMS rural areas are presented together with an in-depth analysis of rural livelihoods. Lessons and best practices of selected EU-15 study areas are also summarised. On the basis of project results, the final chapter summarizes policy conclusions and recommendations.

Our results suggest that the transition and the EU accession has made a visible positive impact on all aspects of the rural life in NMS, however, rural-urban gaps have widened and rural poverty has increased and became apparent. It also became apparent that agriculture was still a rather important economic sector in most of the rural areas; however, it was not the major source of income in most of rural families. Moreover, SCARLED has brought up a large analytical evidence regarding the operation and motivation of subsistence and semi-subsistence farms. Currently, CAP provides almost nothing to these farms and the change of this situation with a policy package focused on small farms is highly needed.

Rural employment and the development of rural labour markets have also been deeply discussed by SCARLED as a crucial factor of future development. The study highlights the critical important actions needed to increase and diversify rural employment and income earning possibilities. Furthermore, our results show that there are a number of impediments limiting the competitiveness of farms in the region such as problems of land ownership, capital and financial markets, fragmented farming structures and complex public processes.

Lessons of EU-15 suggest that there is no unique model for managing rural development as well as there is no single determining factor of a region's economic trajectory. Therefore, rural policies are required to enhance local capacity and actors' participation, to mobilize initial resources and cope with the external forces, best meeting local needs.

The study has also brought up three lessons for consideration for future CAP reform. First, it is evident that a fully uniform CAP only partially addresses the needs of NMS. Second, the region's agriculture is not ready for a CAP, which operates mainly by provision of public goods, competitiveness enhancement payments seem to be still needed. Third, the inclusion of small farms in the region in the CAP should be achieved. On the whole, rural related policies should be managed through an integrated way.

The study highlights the increased rural poverty in the region during the process of structural change as well. It can also be concluded that a complex approach and a high profile programme is needed to alleviate rural poverty in the region.

On the whole, SCARLED project demonstrates the potential values of a complex research on ongoing changes in rural areas of NMS. Further investigations are highly recommended.

Executive summary

Deliverable 10.2 is a detailed report on the results of SCARLED project. Also, it identifies and synthesises the policy implications of the results of the analyses for the NMS and for established Member States.

The Deliverable starts with presenting the framework and the background of the research project. A brief summary is provided on project objectives and organisation of work together with achievements and clients of SCARLED. The third chapter gives a full picture on the key characteristics and recent trends experienced in rural areas of NMS. In order to do so, a typology of rural areas is presented here together with the main trends and drivers of socio-economic changes. The fourth chapter presents an in-depth analysis of rural livelihoods, containing rural labour adjustments, subsistence and poverty issues as well as market integration and farming problems. After presenting our analyses and results from the NMS, the fifth chapter summarizes the lessons and best practices learned from EU-15 study areas. On the basis of the project results, chapter six summarizes policy conclusions and recommendations. This chapter is divided into five parts, containing the hidden bias problem of small farms, the development of labour markets, competitiveness enhancement problems, critical issues for rural related policies and a section on overall policy lessons.

The multifaceted complex nature of SCARLED has led to a broad range of policy conclusions. In the following, the major lessons are summarized.

1. The transition of the 1990s and 2000s as well as the EU accession has made significant impact upon the structure and the status of rural livelihoods in the region. The integration into the EU has made a visible positive impact on all aspects of the rural life. At the same time, rural-urban gaps have widened and rural poverty has increased and became apparent.
2. Agriculture is still a rather important economic sector in most of the rural areas; however, it is not the major source of income in most of rural families.
3. The large number of subsistence and semi-subsistence farms is a special characteristic of NMS. SCARLED has brought up a large analytical evidence regarding the operation and motivation of these farms. These farms are hardly comparable to any segments of EU-15 farming sector and require special attention and policies. Currently, CAP provides almost nothing to these farms and the change of this situation with a policy package focused on small farms is highly needed.
4. Rural employment and the development of rural labour markets have been deeply discussed by SCARLED as a crucial factor of future development. The study highlights the critical important actions needed to increase and diversify rural employment and income earning possibilities.
5. The region has rather significant potential for agricultural production, however, this potential is still underutilized. Nevertheless, as indicated by our study, there are a number of impediments limiting the competitiveness of farms in the region. In NMS, the fragmented land ownership and the lack of effective farm consolidation together with restrictions on land ownership and land markets are such serious impediments. Many of these countries suffer from the failures of capital and financial markets as well as from the inadequate adaptation to changing market structures. Moreover, fragmented farming structures and complex public processes have also played a crucial role in limiting regional competitiveness.

6. Rural development policies have always played a crucial role in shaping rural livelihoods. The lessons of EU-15 suggest that there is no unique model for managing rural development as well as there is no single determining factor of a region's economic trajectory. Therefore, rural policies are required to enhance local capacity and actors' participation, to mobilize initial resources and cope with the external forces, best meeting local needs.

7. The CAP plays a crucial role in agriculture and rural development in the NMS. The study brought up three lessons for consideration for future CAP reform. First, it is evident that a fully uniform CAP only partially addresses the needs of NMS. Second, the region's agriculture is not ready for a CAP which operates mainly by provision of public goods, competitiveness enhancement payments seems to be still needed. Third, the inclusion of small farms in the region in the CAP should be achieved.

8. Currently, rural sector related policies including support are pursued by different instruments. One major source of support is under CAP (Pillar 2), which is supplemented by structural and cohesion funds as well as national budget funds. Unfortunately, these different avenues are managed by different ministries and institutions and have never been integrated under rural label. SCARLED project as a whole calls for an integrated treatment of rural livelihoods. Accordingly, these funds should be managed through an integrated way.

9. The study highlights the increased rural poverty in the region during the process of structural change. This phenomenon has to be fully recognized both on EU and national levels. It can also be concluded that a complex approach and a high profile programme is needed to alleviate rural poverty in the region. This approach, however, needs to be broader than agricultural and traditional rural development efforts, including the issues of rural non-farm economy and improving education as well as rural-urban linkages.

10. SCARLED project demonstrates the potential values of a complex research on ongoing changes in rural areas of NMS. Further investigations are highly recommended.

SCARLED Consortium

This document is part of a research project funded by the 6th Framework Programme of the European Commission. The project coordinator is IAMO, represented by Gertrud Buchenrieder, whose new affiliation is the Martin-Luther-University Halle-Wittenberg since May 2010 (Gertrud.buchenrieder@landw.uni-halle.de).

**Leibniz Institute of Agricultural Development
in Central and Eastern Europe (IAMO) -
Coordinator**

Theodor-Lieser Str. 2
06120 Halle (Saale)
Germany

Contact person: Judith Möllers
E-mail: scarled@iamo.de

**University of National and World Economy
(UNWE)**

St. Town "Chr. Botev"
1700 Sofia
Bulgaria

Contact person : Plamen Mishev
E-mail: mishevp@intech.bg

**Research Institute for Agricultural Economics
(AKI)**

Zsil u. 3/5
1093 Budapest
Hungary

Contact person: József Popp
E-mail: poppj@akii.hu

**Banat's University of Agricultural Sciences and
Veterinary Medicine Timisoara (USAMVB)**

Calea Aradului 119
300645 Timisoara
Romania

Contact person: Cosmin Salasan
E-mail: cosminsalasan@xnet.ro

**The University of Kent, Kent Business School
(UNIKENT)**

Canterbury
Kent CT2 7NZ
United Kingdom

Contact person: Sophia Davidova
E-mail: s.davidova@imperial.ac.uk

Catholic University Leuven (KU Leuven)

LICOS Centre for Institutions and Economic
Performance & Department of Economics
Deberiotstraat 34
3000 Leuven.
Belgium

Contact person: Johan Swinnen
E-mail: jo.swinnen@econ.kuleuven.be

Corvinus University Budapest (CUB)

Department of Agricultural Economics and Rural
Development
Fövám tér 8
1093 Budapest
Hungary

Contact person: Csaba Csáki
E-mail: csaba.csaki@uni-corvinus.hu

**Warsaw University, Department of Economic
Sciences (WUDES)**

Długa 44/50
00-241 Warsaw
Poland

Contact person: Anna Dominika Milczarek
E-mail: milczarek@wne.uw.edu.pl

University of Ljubljana (UL)

Groblje 3
1230 Domzale
Slovenia

Contact person: Luka Juvančič
E-mail: luka.juvancic@bfro.uni-lj.si

**University of Newcastle upon Tyne, Centre for
Rural Economy (UNEW)**

Newcastle upon Tyne NE1 7RU
United Kingdom

Contact person: Neil Ward
E-mail: neil.ward@newcastle.ac.uk

CONTENT

ABSTRACT	I
EXECUTIVE SUMMARY	II
LIST OF TABLES	VII
LIST OF FIGURES	VII
LIST OF MAPS	VII
LIST OF ABBREVIATIONS	VIII
1 INTRODUCTION	1
2 UNDERSTANDING THE EVOLUTION OF RURAL LIVELIHOODS	2
2.1 Project objectives.....	2
2.2 Project organisation with regional maps	3
2.3 Targeted audience of SCARLED.....	4
3 KEY CHARACTERISTICS AND RECENT TRENDS IN RURAL AREAS	6
3.1 Typology of rural areas.....	6
3.2 Main trends	11
3.2.1 Declining population and fertility	11
3.2.2 Increased rural poverty.....	13
3.2.3 Lower migration in CEE than in EU-15	15
3.2.4 Labour market indicators: high unemployment impedes rural development.....	16
3.2.5 Agriculture is still important	18
3.2.6 Dual farm structure and consequences	19
3.2.7 Limited competitiveness in agriculture.....	20
3.3 Drivers of changes.....	21
3.3.1 Completion of transition/macroeconomic framework	21
3.3.2 Impacts of EU membership	22
3.3.2.1 CAP introduction	22
3.3.2.2 Increased competitive pressure.....	24
3.3.2.3 Increased farmers' income	24
3.3.2.4 Increased food safety and quality requirements	24

3.3.3	Fundamental changes on markets for agricultural products	25
3.3.4	Technology and innovation in agri-food chain	25
3.3.5	Changes in rural economies.....	26
3.3.6	Increased awareness of sustainability.....	26
4	IN-DEPTH ANALYSIS OF RURAL LIVELIHOODS IN NMS.....	28
4.1	Rural labour adjustments.....	28
4.1.1	Employment diversification of farm households	28
4.1.2	Comparative analysis of rural labour markets in selected EU-15 and NMS.....	31
4.1.3	Rural labour adjustment in Romania	33
4.1.4	Employment and structural change in Hungary	34
4.2	Subsistence and poverty	36
4.3	Market integration and farming	40
4.3.1	Typology of market integrated households	40
4.3.2	Facilitators and barriers to commercialisation	42
4.3.3	The role of social capital and cooperation in Poland.....	44
5	LESSONS FROM EU-15.....	46
6	POLICY CONCLUSIONS AND RECOMMENDATIONS	50
6.1	Hidden bias against small farms	50
6.1.1	Definition of the problem	50
6.1.2	EU-level actions	51
6.1.3	National level priorities	53
6.2	Development of labour markets.....	54
6.2.1	Definition of the problem	54
6.2.2	EU-level actions and national priorities	55
6.3	Competitiveness enhancement.....	59
6.3.1	Definition of the problem	59
6.3.2	Improved land policies	60
6.3.3	More effective capital and financial markets.....	60
6.3.4	Farmer-friendly market structures	61
6.3.5	Creating a more efficient farming structure.....	61
6.3.6	Public processes and implementation (administration).....	62
6.4	Better integrated and targeted rural policies	62
6.4.1	CAP Reform Conducive for NMS	63
6.4.2	Better coordination of all rural related policies	64
6.4.3	Targeted policies for subsistence farms	65
6.4.4	Actions needed to alleviate significant rural poverty	65
6.5	Policy highlights	66
	LIST OF REFERENCES.....	68

LIST OF TABLES

Table 1	SCARLED participants	4
Table 2	Annual average change rate of population (%) by NMS and OECD categories, 2000-2005	12
Table 3	GDP per head (NUTS 3 level 2004, national average = 100)	14
Table 4	Total unemployment rate by NMS and OECD categories, 2005.....	17
Table 5	EU labour market indicators (percentage change 2000-2005; NUTS2-level).....	17
Table 6	Number and percentage of households with a non-farm diversification potential.....	30
Table 7	Number and share of subsistence and semi-subsistence farms in CEE-10	38
Table 8	Household distribution below the poverty line by country with and without the value of subsistence production (%).....	38
Table 9	Subsistence production contribution to total household income by group of households and by country (%)	39
Table 10	Policy and Administrative Lessons drawn from each case study.....	49

LIST OF FIGURES

Figure 1	Graphical presentation of the components showing their interdependencies ...	5
Figure 2	Share of regions and population in rural and urban regions (OECD categories) in the NMS12 and EU-15.....	7
Figure 3	Total fertility rate (TFR) in the NMS, 1989-2006	13
Figure 4	An integrated framework for the analysis of non-farm rural employment.....	29
Figure 5	Change in agricultural employment in the NMS since the start of the reforms .	32
Figure 6	Agricultural employment in NMS and EU-15 in 2008	33
Figure 7	Evolution of land rents in selected NMS	56
Figure 8	Age Structure of the Agricultural Workforce in NMS and EU-15 in 2007.....	58
Figure 9	Education Structure of the Agricultural Workforce in NMS and EU-15 in 2005 ..	59

LIST OF MAPS

Map 1	Classification of NUTS3 regions in the NMS according to OECD definition	8
Map 2	Farm employment and per capita income in NUTS3 regions of the EU12.....	10
Map 3	Regional rural typology, 175 rural NUTS3 regions in the EU12.....	10
Map 4	Net migration rate per 1000 inhabitants in NUTS2 of the NMS, 2000-2005	15
Map 5	Employment in agriculture (% of total employment), 2007	18
Map 6	Agriculture, value added (% of GDP), 2007.....	18
Map 7	Share of agricultural holdings of size ≤4 ESU, 2007	20
Map 8	Agriculture value added per worker (constant 2000 US\$), 2007.....	21

LIST OF ABBREVIATIONS

AKI	Research Institute for Agricultural Economics
AWU	Agricultural working unit
BG	Bulgaria
CBR	Crude birth rate
CDR	Crude death rate
CEE	Central and Eastern European
CEEC	Central and Eastern European countries
CoM	Centre of maxima
CUB	Corvinus University Budapest, Department of Agricultural Economics and Rural Development
EC	European Commission
ESU	European Size Unit
EU	European Union
HU	Hungary
IAMO	Leibniz Institute of Agricultural Development in Central and Eastern Europe
KU Leuven	Catholic University Leuven
LAU	Local administrative unit
MoM	Mean of maxima
NFRE	Non-farm rural employment
NMS	New Member States
NUTS	<i>Nomenclature des unités territoriales statistiques</i> (Nomenclature of Territorial Units for Statistics)
OECD	Organization for Economic Cooperation and Development
PL	Poland
PPP	Purchasing power parity
PR	Predominantly rural regions
PU	Predominantly urban regions
RO	Romania
SCARLED	Structural change in agriculture and rural livelihoods
SL	Slovenia
SLF	Sustainable livelihood framework
SR	Significantly rural regions
TFR	Total fertility rate
UAA	Utilized agricultural area
UL	University of Ljubljana
UNEW	University of Newcastle upon Tyne, Centre for Rural Economy
UNIKENT	University of Kent, Kent Business School
UNWE	University of National and World Economy
USAMVB	Banat's University of Agricultural Sciences and Veterinary Medicine Timisoara
WUDES	Warsaw University, Department of Economic Sciences

1 INTRODUCTION

Csaba Csaki & Attila Jambor

Deliverable 10.2 is a detailed report on the results of SCARLED project. It also identifies and synthesises the policy implications of the results of the analyses for the NMS and for established Member States.

The Deliverable starts with presenting the framework and the background of the research project. A brief summary is provided on project objectives and organisation of work together with achievements and clients of SCARLED. The third chapter gives a full picture on the key characteristics and recent trends experienced in rural areas of NMS. In order to do so, a typology of rural areas is presented here together with the main trends and drivers of socio-economic changes. The fourth chapter presents an in-depth analysis of rural livelihoods, containing rural labour adjustments, subsistence and poverty issues as well as market integration and farming problems. After presenting our analyses and results from the NMS, the fifth chapter summarizes the lessons and best practices learned from EU-15 study areas.

On the basis of the project results, chapter six summarizes policy conclusions and recommendations. This chapter is divided into five parts, containing the hidden bias problem of small farms, the development of labour markets, competitiveness enhancement problems, critical issues for rural related policies and a section on overall policy lessons.

2 UNDERSTANDING THE EVOLUTION OF RURAL LIVELIHOODS

Gertrud Buchenrieder & Judith Möllers

The New Member States (NMS) have undergone substantial sector restructuring and socio-economic transformation during the past 20 years. These changes are analysed by the SCARLED research project, objectives of which are discussed in this chapter together with the organisation of work and the description of targeted audience.

2.1 Project objectives

Since 2004, the European Union (EU) has undergone an unprecedented enlargement, reuniting the Western and Eastern parts of the continent. Subsequently, the share of rural areas and of those employed in agriculture grew notably in the EU27. The NMS in Central and Eastern Europe (CEE) have already undergone substantial sector restructuring and socio-economic transformation. Nevertheless, as regards the agricultural sector and rural livelihoods, a great number of them still display a tremendous disparity as compared to the EU-15-average. Often, the rural economy can not sufficiently support rural livelihoods. Especially, those living from (semi-) subsistence farming are prone to low incomes and vulnerable livelihoods because they are typically small, family run agricultural holdings. These farm holdings produce mainly for own food needs and participate little in the market. However, there is no universally agreed definition of subsistence or semi-subsistence farming.² Therefore, it is important that the ground is prepared for significant structural changes in the labour force, farming structures, and the wider rural economy. If structural change does not take place, rural areas in the NMS will continue to lose attractiveness for investment and population (D2.1, Buchenrieder et al., 2007).

Rural areas make up 90% of the territory of the enlarged EU. The NMS have already undergone substantial sector restructuring and socio-economic transformation during the pre-accession phase (Rozelle and Swinnen, 2004). Nevertheless, a great number of them still display a tremendous disparity in most structural and socio-economic indicators as compared to the EU-15-average. For instance, the share of those employed in agriculture range from 4.8% in the Czech Republic to 42.7% in Romania. The EU-15 employs, on average, about 4% in the agricultural sector (D3.2 Baum, 2008a). The average farm size is approximately five hectares, and 27% of the land is cultivated by farms smaller than five hectares (Davidova, 2005). Farming activities on this land are largely characterised by low productivity, implying a severe need for restructuring and releasing those that are hidden unemployed into the non-farm sector making farm families pluriactive. About four million farmers would have to exit agriculture to reach only half of the average productivity in the agricultural sector of the EU-15. Not least due to the dependence of a large part of the population on agriculture for income creation and the low productivity in agriculture, average per capita income in purchasing power parity (PPP for 2004) varies from 30%

² *Subsistence farms* produce (almost) only for their own consumption. For practical purposes, the EC reports farms under this category being smaller than 1 European Size Unit (ESU) (Martins and Spendingwimmer, 2009). According to EU law, *semi-subsistence farms* are defined as "agricultural holdings which produce primarily for their own consumption and also market a portion of their output" (European Commission Regulation 1698/2005, Article 34(1)). This definition is not very precise and it is up to the EU member states to adapt it to their national conditions.

(Bulgaria) to 79% (Slovenia) as compared to the EU-15, with 109% of the EU25-100% (Eurostat, 2005).

In this context, it is useful to identify and analyse not only the needs for restructuring in the NMS, but also in selected regions of established Member States, which were characterised by similar features and have succeeded in reversing negative trends and in realising more attractive rural areas. Therefore, the SCARLED project has two major research objectives:

- (1) to analyse the agricultural sector restructuring process and rural socio-economic transformation including pluriactivity in the NMS, with a particular focus on five case countries (Bulgaria, Hungary, Poland, Romania, Slovenia) and
- (2) to analyse the patterns behind rural "success stories" in selected EU-15 case countries during previous enlargements (Austria, Ireland, the new German Bundesländer, Spain, and Sweden) to identify and codify best practices and to draw recommendations for the NMS.

In addition to these research objectives, the project aims at supporting the design of policies by providing policy makers and the scientific community with scientific single and cross-country analyses and policy recommendations based on up-to-date information. Methodologically, the topic is approached by comparative, structured multi-country farm surveys. Analyses rely on multivariate statistics for the analysis of subsistence farming, determinants of farm exits, and rural labour force adjustments. The agent-based simulation model AgriPoliS is used to complement the analysis of structural changes in the farm sectors by a simulation based on two selected regions, taking special account of demographic changes. Fuzzy concepts are applied for the analysis of non-farm employment diversification and pluriactivity.

Three areas of the SCARLED research are particularly crucial for identifying recommendations for successful structural change in agriculture and socio-economic equity in rural livelihoods in the NMS: (1) the driving forces behind farm restructuring and its effect on social and demographic rural factors, (2) the contribution of subsistence farming and cooperation among farmers to rural livelihoods, and (3) the factors behind the structure and adjustment of the rural labour force (sectoral and regional). All three areas are studied based on evidence from the NMS as well as on experience of established member states.

2.2 Project organisation with regional maps

SCARLED is a 6th Framework project (STREP) funded by the European Commission. The project is coordinated by the Leibniz Institute of Agricultural Development in Central and Eastern Europe (IAMO), represented by Gertrud Buchenrieder (Martin-Luther-University Halle-Wittenberg) and Judith Möllers (IAMO), Halle (Saale), Germany. The project duration is 45 months (2007-2010). Ten renowned institutions from western and eastern European countries are participating in the SCARLED project (Table 1).

Table 1 SCARLED participants

	Participant name	Short name	Country
1 (CO)*	Leibniz-Institute of Agricultural Development in Central and Eastern Europe	IAMO	Germany
2	Catholic University Leuven, Centre for Transition Economics	K.U. Leuven	Belgium
3	University of National and World Economy	UNWE	Bulgaria
4	Corvinus University Budapest, Department of Agricultural Economics and Rural Development	CUB	Hungary
5	Research Institute for Agricultural Economics	AKI	Hungary
6	Warsaw University, Department of Economic Sciences	WUDES	Poland
7	Banat's University of Agricultural Sciences and Veterinary Medicine Timisoara	USAMVB	Romania
8	University of Ljubljana	UL	Slovenia
9	The University of Kent, Kent Business School	UNIKENT	United Kingdom
10	University of Newcastle upon Tyne, Centre for Rural Economy	UNEW	United Kingdom

Note: *CO = Coordinator

To achieve the overall project objectives described above, ten work packages (WP) have been outlined (Figure 1). They incorporate quantitative and qualitative research methodologies based on primary and secondary data. The first WP is concerned with the 'Management and dissemination of results'. WP2 provides the conceptual framework for the research project. WP3 'Socioeconomic, demographic and agricultural structures in the NMS' is a comprehensive stock-taking of secondary data, while, WP5, WP6, and WP7 (framed by WP4 'Survey design and implementation') built the core empirical research packages, although in WP7, the work is also based on existing data sources for the labour force analysis. A second block of analyses thrives to deduct lessons and best practices from the rural transition in selected EU-15 regions (Austria, Ireland, new German Bundesländer, Spain, and Sweden). This block is built on two work packages (WP8 and WP9). It examines the key features of the rural and agricultural transition processes in selected case study regions among the EU-15 and codifies them in a user-friendly form. The overall project findings are summarized in this deliverable which is part of WP10 'Policy recommendations'.

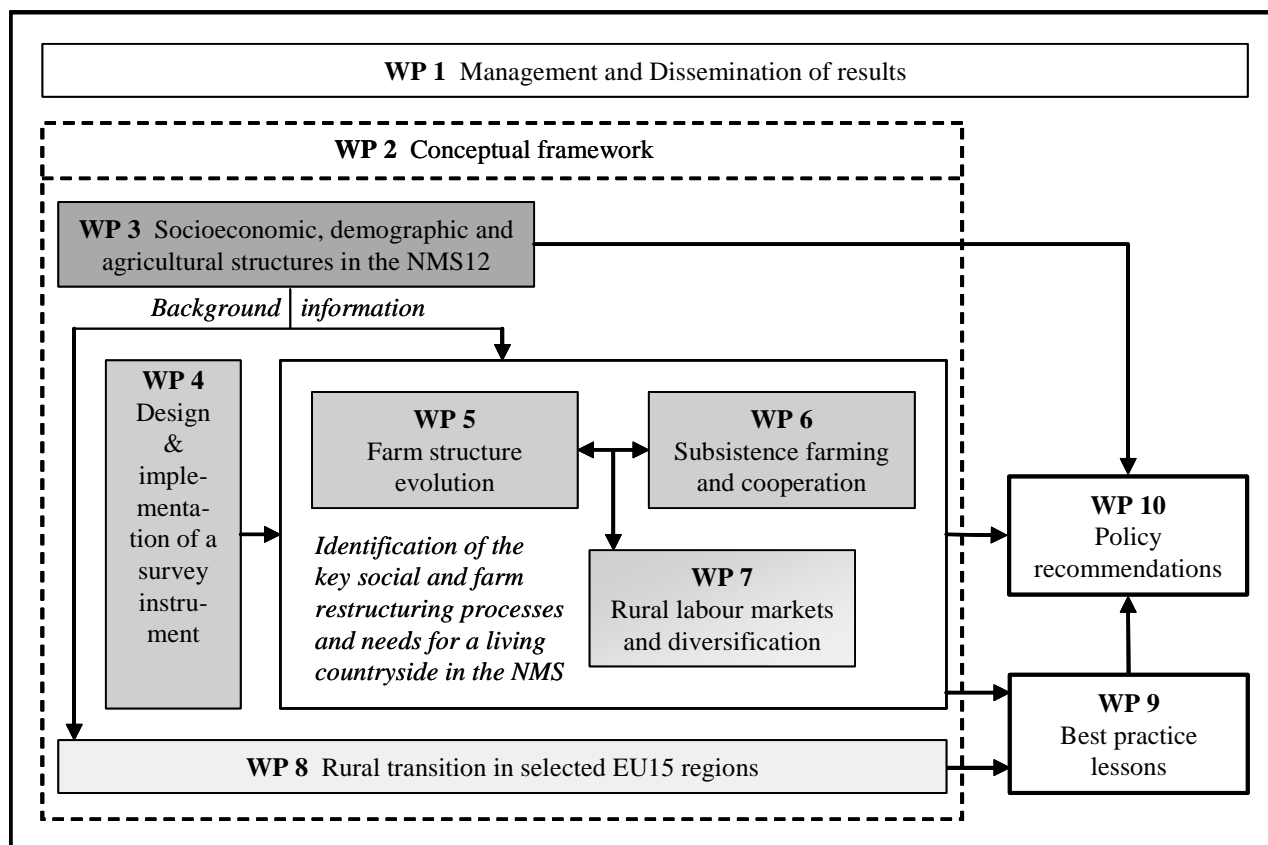
2.3 Targeted audience of SCARLED

The SCARLED project is specifically designed to meet the needs of policy makers in the agri-food sector. That means, outcomes are prepared not only for scientific purposes but also for policy makers on the EU and national level. Beside the homepage (www.scarled.eu), topical news are distributed via the quarterly IAMO newsletter. The project concludes with two final events to present SCARLED outcomes to the scientific community, EU officials and the interested public.

First, a scientific seminar will take place on the occasion of the 118th EAAE seminar 'Rural development: governance, policy design and delivery' in August 2010. The aim of this second event is to give the consortium partners and other scholars in the field the opportunity to present and discuss the final findings during a high-ranking scientific conference. The conference will host a special SCARLED session, in which project results

and conclusions are presented and summarised. The conference will attract many researchers from the NMS and thus reach important stakeholders of the project. Second, a workshop will be organised in September 2010 in Brussels. This workshop is addressed specifically to Commission staff and will concentrate on the findings of WP10 (policy recommendations).

Figure 1 Graphical presentation of the components showing their interdependencies



Regional level of analysis: All NMS Selected NMS regions Selected EU15 regions
 Selected NMS regions and all EU27 countries

3 KEY CHARACTERISTICS AND RECENT TRENDS IN RURAL AREAS

Gertrud Buchenrieder, Judith Möllers, Luka Juvančič & Alfons Balmann³

This chapter sees through the key characteristics and recent trends in rural areas in NMS. In order to do so, a typology of rural areas is presented first, followed by main trends experienced in these areas. Drivers of changes are also analysed so as to understand the background of recent trends.

3.1 Typology of rural areas

Although the term rural area is frequently used in political as well as scientific discourses, there is no common definition. In addition, rural areas can cover regions with very different characteristics. In this report, the definition of the Organization of Economic Cooperation and Development (OECD) of rural areas is used. The OECD methodology is based on population density. First, local units (e.g. municipalities) are identified as rural if their population density is below 150 inhabitants per square kilometre. Second, regions (here at NUTS3 level⁴) are classified in one of the three categories (OECD, 1994):

- Predominantly rural regions (PR): if more than 50% of the population is living in rural communes (with less than 150 inhabitants per km²),
- Significantly rural regions (SR): if 15% to 50% of the population is living in rural communes (with less than 150 inhabitants per km²), and
- Predominantly urban regions (PU): if less than 15% of the population is living in rural communes (with less than 150 inhabitants per km²).

In 2005, the OECD (2005) introduced some modifications in the second step of the classification:

- If there is an urban centre with more than 200,000 inhabitants (in the EU) representing no less than 25% of the regional population in a "predominantly rural" region, it is re-classified as "significantly rural".
- If there is an urban centre with more than 500,000 inhabitants (in the EU) representing no less than 25% of the regional population in a "significantly rural" region, it is re-classified as "predominantly urban".

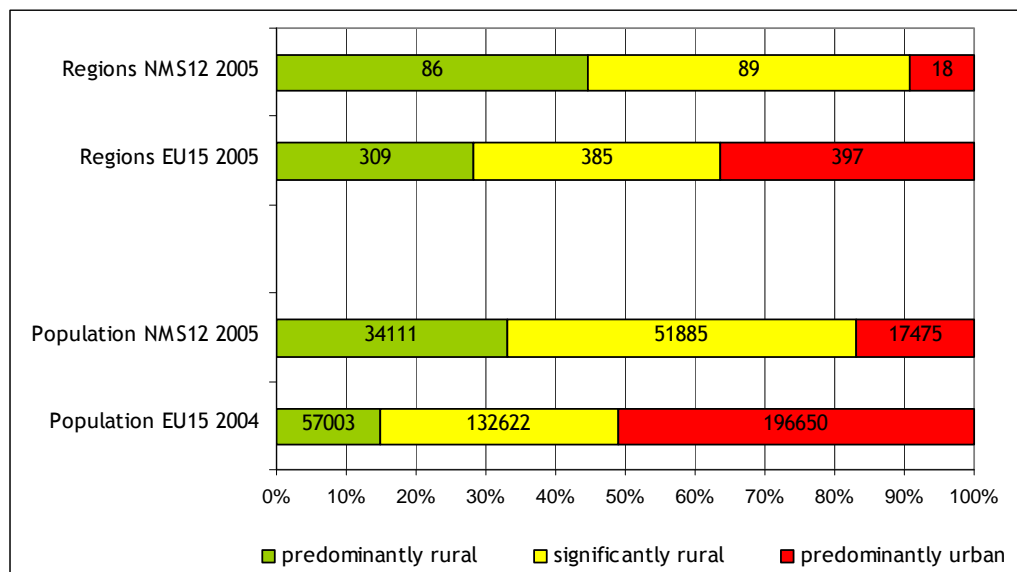
An urban centre in Europe is defined as a local administrative unit (LAU2, e.g. municipality) with a population density above 150 inhabitants per km² and total population above 200,000 inhabitants.

³ Chapters 3.1 and 3.2. were written by Gertrud Buchenrieder & Judith Möllers, Chapter 3.3. was written by Luka Juvančič, except for Chapter 3.3.4, which was written by Alfons Balmann.

⁴ NUTS = Nomenclature des Unités Territoriales Statistiques/Nomenclature of territorial units for statistics: NUTS0 and NUTS1 refer in the NMS to the whole country. The NUTS2 level represents in the NMS 55 administrative units each with approx. 800,000 to 3,000,000 inhabitants. The NUTS3 level encompasses in the NMS 193 regions each with approx. 150,000 to 800,000 inhabitants.

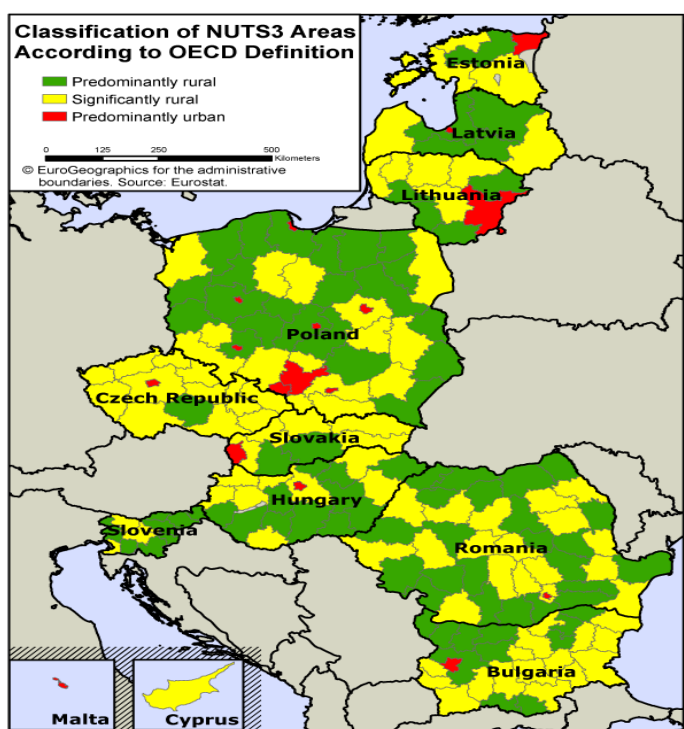
Applying the OECD definition of the NUTS3 regions in the NMS and the EU-15 shows that the NMS are much more rural in terms of regions (91% compared to 64% in the EU-15) and population (83% compared to 49% in the EU-15) (see Figure 2). Classified as predominantly urban are nearly exclusively the capitals, with the exception of other large cities in Poland, Kirde-Eesti in North-Eastern Estonia and Malta (see Map 1).

Figure 2 Share of regions and population in rural and urban regions (OECD categories) in the NMS12 and EU-15



Source: D3.2 of Baum (2008a: 2)

Map 1 Classification of NUTS3 regions in the NMS according to OECD definition



Source: D3.2 of Baum (2008a: 3)

Looking at the gross domestic product (GDP) per capita in the NUTS3 regions of the NMS reveals significant regional differences. Regions with low GDP per capita (below 6,000 EUR at PPP) are located in Romania, Bulgaria, Latvia and Lithuania. Regions with high GDP per capita (above 15,000 EUR at PPP) are the capitals, Cyprus, Malta, parts of the Czech Republic, Slovenia, and Hungary. Above the average EU-15-level of GDP per capita (2004: 24,336 EUR at PPP) are only Prague, Warsaw, Budapest, Bratislava, and Ljubljana. There is a clear urban-rural gradient. As Map 2 clearly shows, regions with a high percentage of farming are among those with lower income levels. But is it that simple? If one clusters the 175 rural NUTS3 regions of the EU12, more differentiated picture arises and five regional rural clusters emerge (D3.3 of Baum 2008b and see Map 3)⁵:

(1) *Backward agrarian regions*: These regions show very low incomes (5,458 EUR at PPP on average), a pronounced (semi-)subsistence orientation (92% of all holdings < 2ESU on average) and a strong population decrease (annually -1.9% on average, 2000-05).

(2) *Dynamic agrarian regions*: The regions show low incomes (6,586 EUR at PPP), also a pronounced (semi-)subsistence orientation (90% of all holdings < 2ESU on average), but the highest annual change rate of GDP per capita among all groups (annually +11.3%, 2000-04).

⁵ Five variables on NUTS3 level have been chosen for classification: (1) Change of population 2000-2005; (2) GDP per capita 2004; (3) Change of GDP per capita 2000-2004; (4) Share of employment in industry and services 2004; (5) Share of holdings <2 ESU 2005 (D3.3 of Baum 2008b).

(3) *Intermediate regions*: The regions display middle-incomes (8,609 EUR at PPP on average) with (semi-)subsistence agriculture below average (57% of all holdings < 2ESU on average) and lowest annual change rate of GDP per capita among all groups (annually +4.5%, 2000-04).

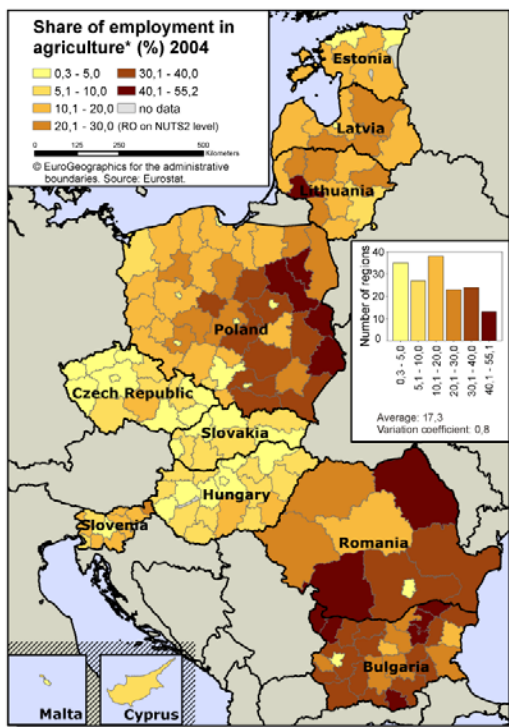
(4) *Advanced regions*: These regions are rather diversified (87% of employed in industry and services on average), are middle-income regions (9,414 EUR at PPP), and (semi-)subsistence agriculture is above average (85% of all holdings < 2ESU on average).

(5) *Best performing regions*: These regions are diversified (93% of employed in industry and services on average), have the highest per capita income (15,301 EUR at PPP on average), the lowest degree of subsistence agriculture (54% of all holdings < 2ESU on average) and a stable population (average annual change rate +0.07%, 2000-05).

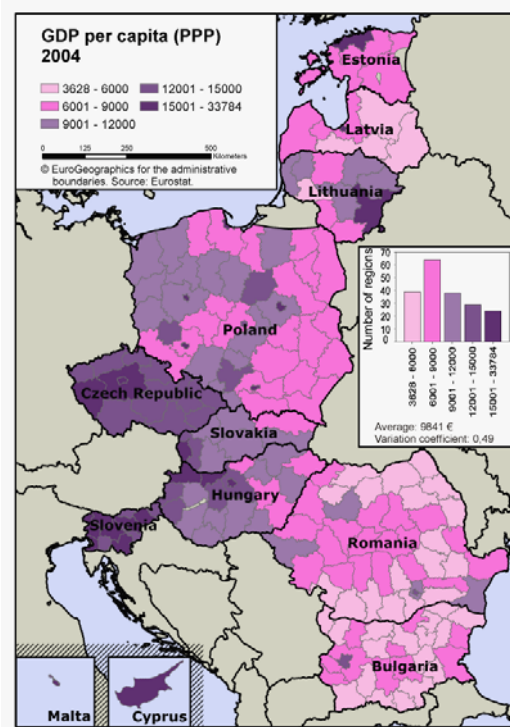
By way of summary, higher levels in diversification are generally associated with higher regional incomes. It also offers better opportunities for compensating structural change in agriculture and stimulating new economic activities. Nevertheless, even rural 'advanced regions' or the 'best performing regions' face structural challenges with regard to the large number of small (semi-subsistence) farms. Also it should be pointed out that it is not clear whether the higher diversification is deriving from demand-pull or distress-push factors.

Map 2 Farm employment and per capita income in NUTS3 regions of the EU12

Map 2.1 Share of employment in agriculture (2004)

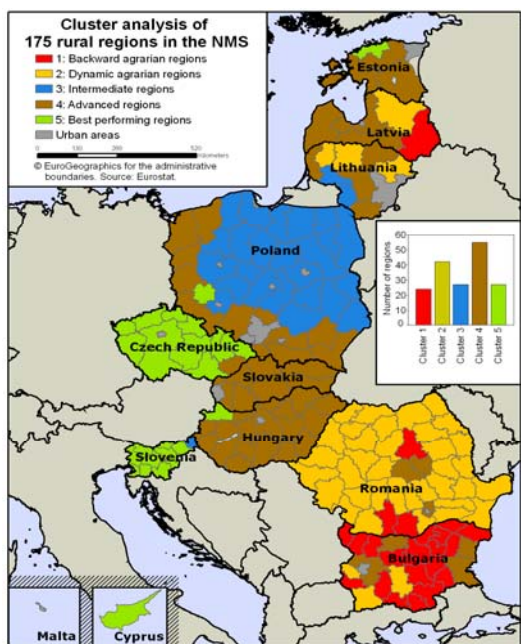


Map 2.2 GDP in Euro per capita (PPP 2004)



Source: (D3.2, Baum 2008a: 19 & 26)

Map 3 Regional rural typology, 175 rural NUTS3 regions in the EU12



Source: (D3.3, Baum 2008b: 11)

3.2 Main trends

Differences in demographic structures between rural and urban regions have an important influence on the economic dynamics and growth of rural areas, as well as on living standards and the provision of social services. The population is a very important supply-side determinant of economic activity. The population change over time, which leads normally to changes in the structure and regional distribution of population, results from two processes: the natural population change (balance of births and deaths) and migration.

3.2.1 Declining population and fertility

Since 1990, all CEE countries experienced a decline in the population, which has been strongest in the Baltic States, Bulgaria and Romania. The analysis by OECD categories shows that the population change is on average in all rural areas of the CEE countries negative, following the overall trend (see Table 2). Exceptions are the rural areas in Poland and the SR areas in Slovakia and Slovenia. The average decline of rural population varies from -2.06% per year in predominately rural regions of Bulgaria to -0.02% per year in predominately rural regions of Slovenia. The comparison of rural with urban areas shows no consistent picture among the countries. In Bulgaria, Lithuania and Slovenia, the regional type with the severest negative population trend are predominately rural regions, which have on average also the strongest *natural* population decline. In Estonia, Hungary⁶, Poland and Slovakia, the urban areas have the highest population decline connected with the lowest decrease or even increase of population in significantly rural regions. In Romania and Latvia, the predominately rural regions have the best population development within the country (in Latvia due to the predominately rural region surrounding the capital Riga).

Thus the substantial inter- and intra-country differences do not allow for identifying a general demographic trend in all rural areas of CEE. This clearly indicates that each region has its own strengths and weaknesses in terms of socioeconomics. Depending on what objective the rural development policy in a NMS is, a strategy of 'one policy fits all' may not work. Policy makers are well advised to collaborate closely with stake holders in the rural regions to determine the objectives for the region and select the most appropriate policies within the national policy portfolio.

⁶ The annual average change rate of the only Hungarian predominately urban region on NUTS3 level, Budapest, was -0.75% for 2001-2005. For 2000, no NUTS3 values are available for Hungarian population, that's why the calculation of OECD categories for the tables has been done with NUTS2 values.

Table 2 Annual average change rate of population (%) by NMS and OECD categories, 2000-2005

	Predominately rural	Significantly rural	Predominately urban	All
Bulgaria	-2.06	-0.97	0.16	-1.08
Cyprus	...	1.77	...	1.77
Czech Republic	-0.41	-0.04	-0.13	-0.07
Estonia	-0.38	-0.28	-0.70	-0.34
Hungary	-0.42	-0.30	0.07	-0.24
Latvia	-0.17	-0.95	-0.85	-0.62
Lithuania	-0.73	-0.58	-0.12	-0.49
Malta	0.69	0.69
Poland	0.02	0.04	-0.31	-0.05
Romania	-0.67	-0.77	-0.75	-0.73
Slovakia	-0.16	0.07	-0.48	-0.05
Slovenia	-0.02	0.27	...	0.10
Total	-0.37	-0.28	-0.26	-0.31

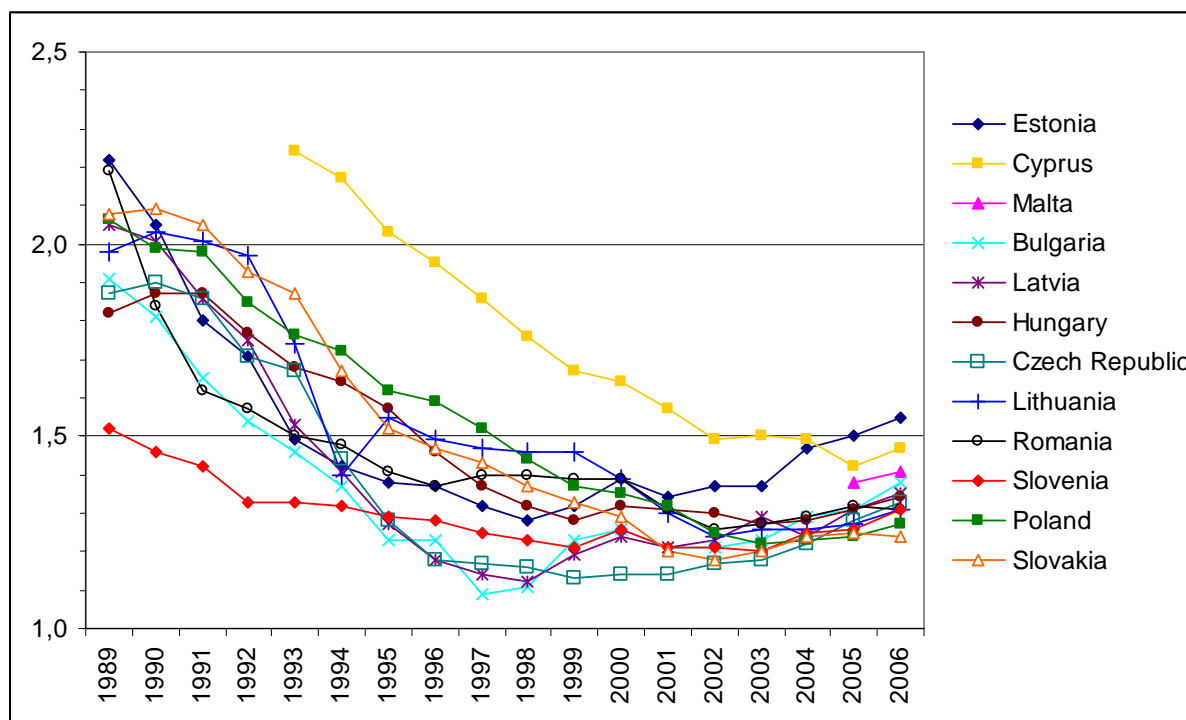
Source: D3.2 of Baum (2008a: 7)

Notes: Values for Hungary have been calculated with NUTS2 regions. ... = this category does not exist in this country.

The total fertility rate (TFR) indicates the average number of children that would be born to a woman over her lifetime if she were to experience the exact current age-specific fertility rates. However, data for the TFR are only available for the country level in Eurostat. The TFR in CEE has undergone a dramatic change since 1990 (Figure 3). Until the late 1980s the fertility in CEE was relatively high and was characterized by early timing of childbearing, low levels of childlessness, high reliance on abortions, and relatively uniform fertility pathways. Within a decade, following the breakdown of the state-socialist systems, CEE has transformed from being the ‘high-fertility’ region in Europe into the region with the lowest fertility rates in the world, at least when measured by the commonly used TFR (Sobotka, 2004). The roots of the massive fertility changes in CEE are generally similar to those in other European regions. Theirs so-called second demographic transition started at different times since 1965 and was characterised by a decline of the TFR below the replacement level of 2.1 (Dorbritz, 2000). In CEE, the second demographic transition was triggered by the dynamic social changes during transition, in particular, by massive education expansion, the opening of new opportunities for self-realisation, the rapid spread of the contraceptive pill, the culture of consumption, and the changing character of the family, as well as the intensifying conflict between employment career and parenthood. In Central Europe and, to a lesser extent, in the Baltic countries, the decline in the TFR has been dominantly driven by the massive postponement of childbearing. In Bulgaria and Romania, the progression rates to second birth declined considerably, resulting in a rapidly growing proportion of one-child families. An analysis of data on fertility, reproductive behaviour, family formation, and birth control further revealed rapidly growing differences within CEE. Despite the increasing diversity, most CEE countries have experienced a rapid shift toward the model of late timing of parenthood, higher childlessness, lower fertility quantum, and increased heterogeneity in family size and fertility timing, typical of other regions in Europe. Interestingly, fertility postponement has been most pronounced in countries that have undergone the most successful economic and social transformation and which have moved most rapidly towards the institutional framework of the established market democracies in Europe. Coupled

with the limited individual-level evidence of the prevalence of early childbearing among lower-educated and economically disadvantaged social groups, this finding challenges to some extent the widely accepted view of social and economic uncertainty as a catalyst of massive fertility postponement (Sobotka, 2004).

Figure 3 Total fertility rate (TFR) in the NMS, 1989-2006



Source: D3.2 of Baum (2008b: 9)

Eurostat data (table demo_find). Bulgaria 2006: National Statistical Institute of Bulgaria (www.nsi.bg). Latvia 1995 and 2004: Latvia Statistics (<http://data.csb.gov.lv>). Lithuania 1996 and 2001: Statistics Lithuania (www.stat.gov.lt). Poland 1989-1994: Central Statistical Office Poland (www.stat.gov.pl).

Since TFR data are not available at a regional level in Eurostat, the analysis of the specifically *rural* situation is difficult. Traditionally, birth rates tend to be higher in rural areas than in urban centres. Data for Poland show that the 1989 TFR of rural areas was by 0.7 higher than in urban areas. During transition, the TFR decreased in rural as well as in urban areas, while slightly converging. In 1999, the TFR of rural areas was only by 0.4 higher than in cities (Frątczak and Ptak-Chmielewska, 2001). However, the analysis of crude birth rate (CBR) and crude death rate (CDR) by OECD categories reveals large differences between countries (for details see D3.2 of Baum, 2008a). In one half of CEE countries, the CBR is highest in rural areas corresponding to the traditional image; in the other half CBR is highest in urban areas. This indicates that in some countries the converging trend between the fertility of rural and urban areas already results in a reversal of the traditional order between the urban and rural regions (D3.2 of Baum, 2008b).

3.2.2 Increased rural poverty

Poverty in Europe is a significant problem and its relevance increased with the recent enlargement that involved countries with a lower level of income (Eurostat, 2010). Rural

poverty represents an important aspect of European poverty, considering that rural areas account for a large part of the European territory and of the EU population. Also the relevance of the rural dimension has increased with the last two rounds of enlargement (EC, 2008).

Rural areas are characterized by a higher degree of income poverty than urban areas in all countries for which such distinction is possible (Table 3). The gap in poverty rates between rural and urban areas is bigger in eastern countries than in western countries. Moreover, in eastern countries poverty is generally associated with difficulties in the agricultural sector. In western countries, within rural areas, poverty is concentrated in remote regions and, in general, regions with accessibility problems. Patterns of rural poverty in Eastern Europe are described by a couple of examples: in Poland, in 2005, the 27.0% of the rural population lived below the relative poverty line, compared to 12.5% in cities and 18.1% for the entire country. In particular, 18.7% of the rural population lived in extreme poverty (i.e. below the subsistence minimum), compared to 8.2 % of the urban population and 12.3% of the overall population. In Lithuania and Hungary, in 2005, the poverty risk rate for rural population was three times higher than for inhabitants of biggest cities (EC, 2008). Also in Romania poverty is a significantly rural phenomenon. Romania has the highest poverty risk rate in the EU; more than 70% of the poor live in rural areas and the poverty risk is three times higher for rural people. The country's rural poor people are typically subsistence farmers, unemployed rural workers and women who are heads of households. The poverty rate of self-employed farmers was 32% in 2007 (Möllers and Buchenrieder, 2010).

Table 3 GDP per head (NUTS 3 level 2004, national average = 100)

Country	Type of region according to OECD definition		
	Predominantly rural	Intermediate	Predominantly urban
Bulgaria	78	86	191
Germany	91	93	109
Spain	79	92	120
France	79	88	136
Greece	78	87	133
Hungary	72	88	205
Ireland	87	...	132
Italy	82	89	112
Lithuania	69	108	
Poland	79	84	158
Portugal	79	85	116
Romania	81	101	198
Slovenia	85	121	...
United Kingdom	68	86	107

Source: EC (2008)

It seems that despite the general 'success story' of the EU enlargement, a rural poverty trap for small scale, mainly subsistence oriented producers persists (D5.1 Juvancic et al., 2009). Semi-subsistence farms are a matter of concern especially because many farmers have no other gainful activities (or in other words non-farm activities), which could reduce the risk of poverty (EC, 2008). Furthermore, the EU Common Agricultural Policy contains a

hidden bias against small farms. They are not able to capitalize the market opportunities and favourable policy conditions (D5.1 of Juvancic et al., 2009). However, the farming sector is not only concerned with a high rate of poverty, but could also help to fight it. The role of agriculture for overcoming the rural poverty is discussed in more detail for the case of Romania in D7.3 by Salasan and Fritzsich (2009).

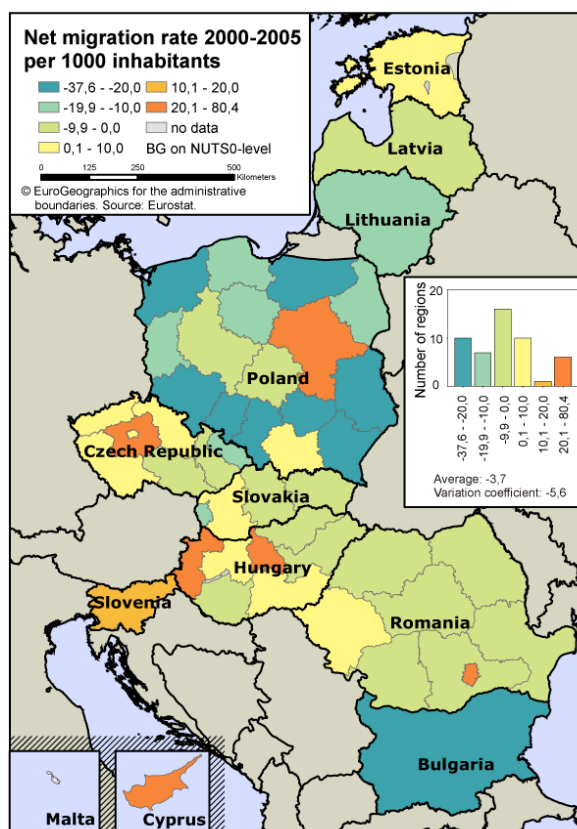
3.2.3 Lower migration in CEE than in EU-15

Neoclassical economic theory suggests that production factors will follow the income drift causing labour migration, not only rural-urban but also international labour migration. This explains why it was strongly expected that east-west labour migration would significantly increase with EU enlargement.

However, availability of data with regard to labour migration in the NMS is very limited not allowing detailed regional analysis. Most countries either do not have accurate figures on immigration and emigration or have no figures at all so that net migration is generally estimated on the basis of the difference between total population change and natural increase. This could be done only at NUTS2 level.

The interpretation of the resulting figures is difficult enough. Net migration is the balance between two flows (in and out). In any individual region, the in and out flows are likely to be driven by two different spatial processes, a centripetal one (urbanisation) and a centrifugal one (sub-urbanisation and/or counter-urbanisation), each of which are age selective in their effects. Additionally, the inter-regional flows within countries may be overlain by international flows. The only way to satisfactorily separate these different processes would be through an analysis of full in-out migration matrices. Unfortunately the available data do not allow for this (D3.2 of Baum, 2008a). Generally, in most transition economies (with the exception of the Baltic States and Romania) inter-regional migration is lower than in EU-15 labour markets and has fallen during transition. Possible reasons for this phenomenon are a combination of liquidity constraints, housing market imperfections, low educational level, and poor employment opportunities of potential migrants (Huber, 2007). A look at the regional net migration rate reveals a negative rate in the majority of NMS regions. This is most pronounced in Bulgaria, Lithuania, and parts of Poland. Regions with a strong positive net migration rate are Cyprus, Slovenia and the capital regions of Poland, the Czech Republic, Hungary and Romania (see Map 4). Revealing migration patterns between rural and urban areas requires analyses at the local level. Since such analyses cannot

Map 4 Net migration rate per 1000 inhabitants in NUTS2 of the NMS, 2000-2005



be done in the course of this Deliverable, some evidence is extracted from secondary literature.

In CEE, there is generally a detectable tendency for people to migrate away from peripheral rural regions to the capital regions or other urban agglomerations (e.g., in Bulgaria, Hungary, Lithuania, Poland, Romania, Slovakia, and Slovenia). Rural communes around the capitals and other large cities are increasingly gaining population due to the emerging sub-urbanisation tendencies. Some of the cities experience already net losses of population to the suburbs (e.g., in the Czech Republic and Hungary) and others still net gains of population (e.g. in Poland). To sum up, with the exception of communes surrounding urban agglomerations, rural areas in CEE are dominated by negative net migration. Nevertheless, in some countries, there is evidence for a smaller migration stream towards remote villages in the rural periphery during transition (e.g., in Hungary, Poland and Romania). There exist no data about the structure of these in-migrants in rural areas. Yet, it is beyond doubt that many of them have been steered to rural villages by the social network resources of kin and community, possibilities of self-provisioning and prospects of acquiring land. They were partly pushed out of the cities by high urban unemployment, high costs of living or personal failure in finding a job (Brown and Schafft, 2002, Kupiszewski, 2005). Due to the relatively high shifting costs, it becomes thus increasingly difficult to migrate from rural to urban areas for unskilled labour. In Poland for example, two processes have been reported in the 1990s: the increasing difference between the salaries of highly skilled and unskilled labour and growing prices of urban accommodation. "These two factors combined together, resulted in the increase of the cost of a permanent migration from rural to urban areas, making the expected increase in salaries in the destination not compensation for the increased costs of living" (Kupiszewski, 2005, p.8). Presumably, mainly the young and able are moving away from rural areas. This assumption can be partly supported by high age dependency ratios in rural areas (EC, 2004). The processes of counter-urbanisation, i.e. the migration away from cities and its suburbs to the nearby countryside resulting in rising rural populations in many parts of Western Europe from the 1960s and 1970s, have not yet been reported for the CEE countries (Kontuly, 1998). The same holds for the associated urban-rural manufacturing shift providing new non-agricultural jobs in rural areas, which began in the USA in the 1970s and continued in Western Europe (Bański, 2004).

3.2.4 Labour market indicators: high unemployment impedes rural development

Europe's rural areas face a common challenge: their capacity to create high-quality, sustainable jobs are falling behind urban areas. Therefore, some rural areas, and in particular those which are most remote, depopulated or dependent on agriculture will face particular challenges as regards growth, jobs and sustainability in the coming years. These include lower levels of income, an unfavourable demographic situation, lower employment rates and higher unemployment rates, a slower development of the tertiary sector, weaknesses in skills and human capital, a lack of opportunities for women and young people (EC, 2010).

At the outset of transition, there was a decline in employment and a substantial increase in unemployment rates in almost all transition economies. The achieved growth in GDP per capita since 1993 - after the drastic decline at the beginning of transition - generally did not lead to a comparable growth in (formal) employment (D3.2 of Baum, 2008a). In 2005, the unemployment rate showed large differences between regions but also between countries (Table 4). Official unemployment rates never reflect the whole truth of

unemployment reality. At least some of the labour force is discouraged from searching for employment and therefore classified as "economically inactive" or is working on a family farm without working to full capacity (hidden unemployment). Therefore, disparities in the degree of under-utilisation of labour are higher than implied by registered unemployment data (D3.2 of Baum, 2008a).

Table 4 Total unemployment rate by NMS and OECD categories, 2005

	Predominantly rural	Intermediate	Predominantly urban	All
Bulgaria	12.9	10.7	7.6	10.1
Cyprus	...	5.3	...	5.3
Czech Republic	6.8	8.7	3.5	7.9
Estonia	5.8	7.1	14.6	7.9
Hungary	8.3	7.3	4.7	7.2
Latvia	7.6	12.1	7.9	8.9
Lithuania	7.1	8.9	8.6	8.3
Malta	7.3	7.3
Poland	18.5	18.3	15.5	17.7
Romania	7.1	7.6	6.8	7.2
Slovakia	20.8	16.6	5.3	16.3
Slovenia	7.6	5.0	...	6.5
Total	13.2	11.7	10.7	11.9

Source: D3.2 of Baum (2008a: 22)

Notes: Total values for the category predominantly rural without the regions lt004, lt007, ro226, and ro314, for the intermediate category without the regions bg322, and bg413 due to missing values.

... = this category does not exist for this country

Table 5 provides an overview of European trends in rural labour market indicators between 2000 and 2005 calculated on the base of Eurostat data (EC, 2008). While national and regional data results in a mixed picture, the overall trend is clear. The performance of rural regions is getting worse. All indicators show an improvement for predominantly rural areas (except for youth unemployment), but a negative sign for predominantly rural areas.

Table 5 EU labour market indicators (percentage change 2000-2005; NUTS2-level)

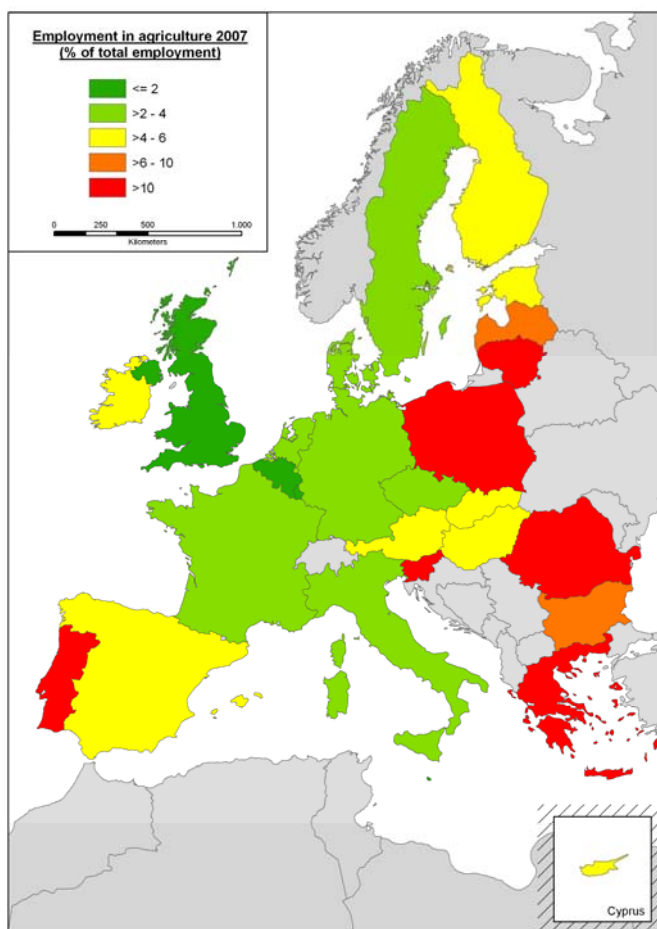
Indicator	Type of region according to OECD definition			All regions
	Predominantly rural	Intermediate	Predominantly urban	
Activity rate	-3.4	0.8	5.0	1.2
Employment rate	-1.9	0.2	2.6	0.3
Youth unemployment ratio	-0.6	0.1	1.3	0.4
Employment rate of older workers	-1.2	3.1	8.7	3.6
Long term unemployment rate	-0.1	-0.1	-0.9	-0.2

Source: EC (2008)

3.2.5 Agriculture is still important

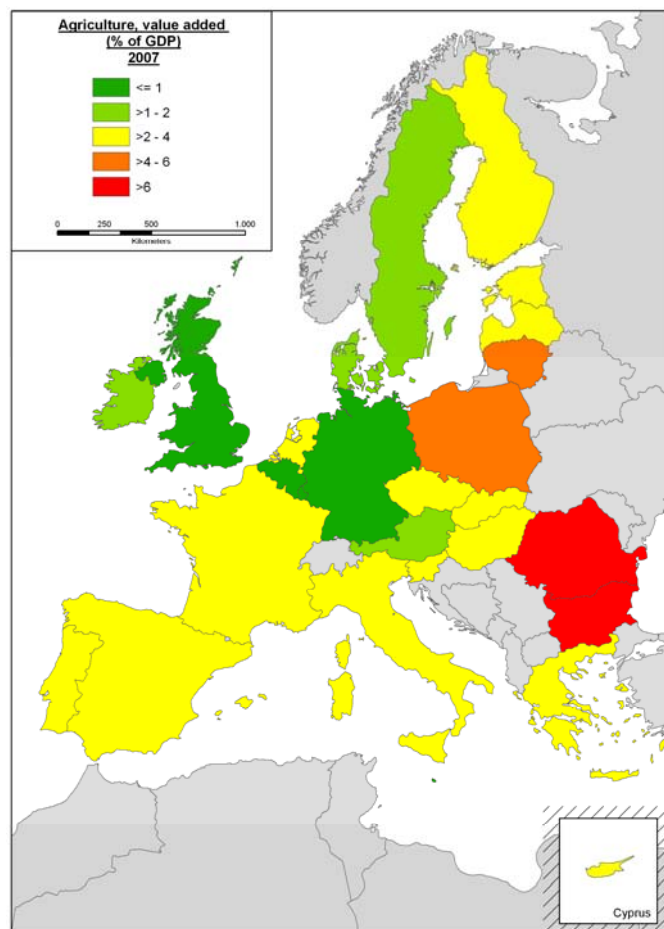
The agricultural sector accounts for a decreasing but nevertheless still significant share of employment in most NMS (Map 5). An overwhelming high share is observed in Romania (29.5% in 2007) but also in Poland and Slovenia it is above 10%. These high shares in employment do not correspond to the relative contribution of agriculture to GDP in these countries (Map 6). This is an indicator for underemployment and hidden unemployment in rural areas. While in Hungary, Poland, and Slovenia, agriculture accounts for less than 5% of GDP in 2007, it is still important for Romania (8.8%) and Bulgaria (6.2%). However, in all five countries, the share of agriculture in GDP has been declining since economic growth started after the transition shock.

Map 5 Employment in agriculture
(% of total employment), 2007



Source: Own map with data from WDI (2010).

Map 6 Agriculture, value added
(% of GDP), 2007



Source: Own map with data from WDI (2010).

Nevertheless, agriculture is still an important income source for rural and vulnerable households. For them, it is not primarily the money income from farming that contributes most to household income but the in-kind income from agriculture, i.e. the opportunity to

cover family's food demand from own production (see D7.3 of Salasan and Fritzsich, 2009 for the situation in Romania).

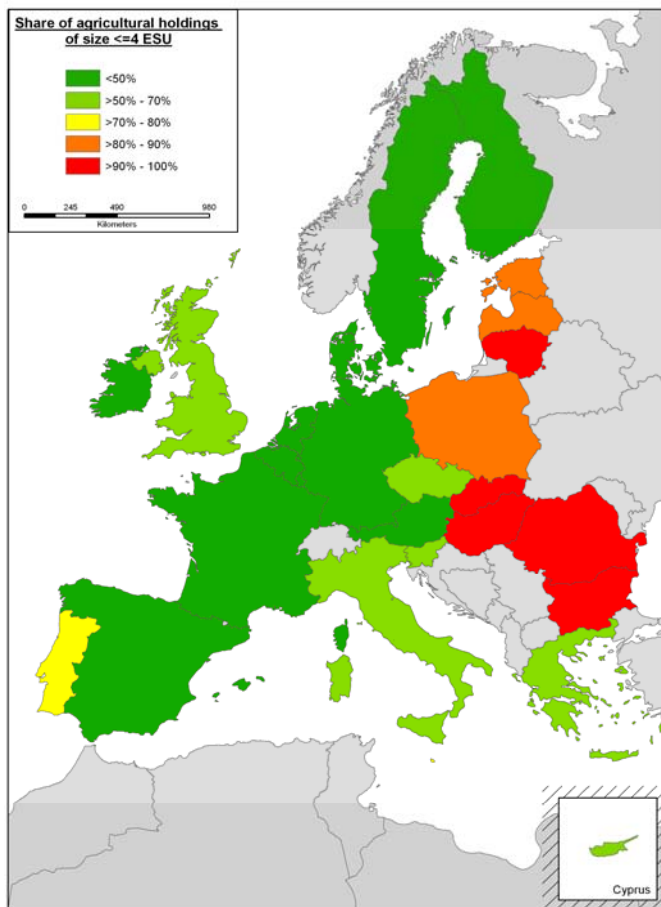
3.2.6 Dual farm structure and consequences

The most striking characteristic of the agricultural sector in most NMS is their high share of small farm holdings (Map 7). From about 10 millions of farms up to 4 ESU in EU27, seven million are located in Bulgaria, Hungary, Poland, Romania, and Slovenia. Those farms are usually subsistence and semi-subsistence farms and market only the annual surplus.⁷ Although their important role as social safety net for socially disadvantaged people is unquestionable, they hold back a considerable share of land and labour resources from the market and are less responsive to market signals and policy measures (Brüntrup and Heidhues, 2002; Crescenzi, 2004).

Structural change in rural areas calls for reducing the share of small farms and strengthening competitive commercialised family farms and large-scale corporate holdings. With the exception of Poland and the Socialist Federal Republic of Yugoslavia, the social class of farmers was abolished in the socialist era by expropriating their land. Thus, farms of size 8 to 40 ESU account for only 0.5% of holdings in Romania, 3.7% in Hungary, but 9.5% in Poland and 15.4% in Slovenia. The share of holdings larger than 40 ESU is even smaller and ranges in the five survey countries between 0.1% in Romania and 1.2% in Slovenia. The share of farms in both size classes is significantly below EU-15 level in which 25.3% of farms are of size 8 to 40 ESU and 15.2% of farms are larger than 40 ESU (Eurostat, 2010a). Although the Farm Structure Survey for 2007 found a decreasing number of agricultural holdings and increasing farm sizes in all five countries (Eurostat, 2008a, 2008b, 2009a, 2009b, 2010b), the group of competitive commercialised farms is still underdeveloped. It remains a major task to solve this structural problem otherwise the NMS will not catch up the EU-15 with respect to productivity and competitiveness in the agricultural sector.

⁷ For a comprehensive overview of small-scale farming in Europe see Davidova et al. (2010).

Map 7 Share of agricultural holdings of size ≤ 4 ESU, 2007



Source: Own map with data from Eurostat (2010a).

3.2.7 Limited competitiveness in agriculture

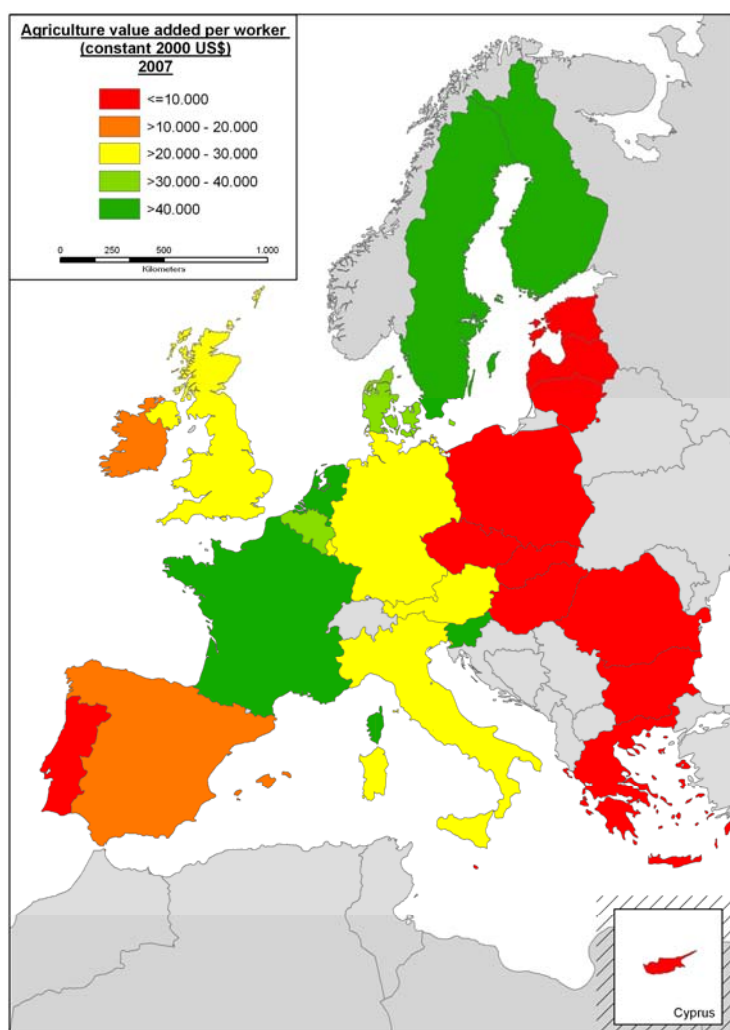
With the exception of Slovenia, productivity in agriculture in the NMS is significantly below EU-15 level (Map 8). This is due to a combination of extensive labour use and lower crop yields and animal performances. In EU-15, labour input per 100 ha utilized agricultural area (UAA) was in 2007 4.6 agricultural working unit (AWU) but for the five survey countries, it ranged from 10.9 in Hungary to 17.2 in Slovenia (own calculations with data from Eurostat, 2010a, 2010c). Also wheat yields signal a lower productivity for the five survey countries than in EU-15 (6.4 tonnes/ha in 2008) ranging between 3.4 tonnes/ha in Romania and 5 tonnes/ha in Hungary (Eurostat, 2010d).⁸ With respect to milk yields, Hungary was with 6.9 tonnes/milking cow in 2007 comparable to the EU-15 level (6.6 tonnes/milking cow). In the other four survey countries, milk yields were between

⁸ Bulgaria and Romania had a bad harvest in 2007, therefore data from 2008 were taken.

3.3 tonnes/milking cow in Bulgaria and 5.7 tonnes/milking cow in Slovenia (FAOSTAT, 2010).

Although labour input decreased in all five countries over the last years and also a positive trend in the development of crop yields and animal performances can be found, further effort is needed to catch up with the EU-15.

Map 8 Agriculture value added per worker (constant 2000 US\$), 2007



Source: Own map with data from WDI (2010).

3.3 Drivers of changes

Basically, there have been three main drivers behind changes analysed above: (1) the completion of transition, (2) the impacts of EU membership, and (3) changes in technology and innovation in agri-food chain. These changes will be discussed below in more detail.

3.3.1 Completion of transition/macroeconomic framework

Structural change can be accelerated and irreversibly affected also by specific, one-off occurrences. Radical structural change in agriculture (Csaki and Lerman, 2000) as a consequence of transition to a market economy comes as an obvious example. Economic transition brought tectonic changes to the economies. These differences can be illustrated by the fact that the pre-transition per capita GDP figures were differing within a range 1:4. The first ten years of transition have only increased this gap. Highly divergent paths of growth among the transition economies have characterized the first decade of transition. By 1999 the central European transition economies had either regained (e.g. Poland, Slovenia), were close to their pre-transition GDP levels (Hungary), or were still struggling with the transformational recession (UN-ECE 2000). After the year 2000, the paths of growth were more uniform. It can be inferred that in all the observed countries, except in Poland, the total GDP was constantly increasing. In all the analysed countries, except Slovenia, the growth of GDP has been most of the time noticeably greater than in EU-15/EU-27. As in the pre-transition, the 2007 GDP per capita figures presented still reflects some major discrepancies, although convergence within the countries and towards EU could be noted. The EU enlargement additionally accelerated economic growth and significantly contributed towards catching up of the NMS with the EU-15 development level (Rapacki and Prochniak, 2009). Nevertheless, the latest global financial crisis affected the region through the scarcity and the rise in costs for external financing, and the by weakening of foreign demand for their exports. This brought painful lessons to the region, resulting in downturn in economic growth, in some cases followed by a nearby collapse of public finances (Hungary, Latvia). The crisis therefore revealed the need for further structural reforms in virtually all NMS, making them less vulnerable to external economic shocks.

As for the implications of macroeconomic trends to the farm sector, the statistical evidence suggests after almost two decades of intensive restructuring of the agricultural sector, that the trends in NMS have recently slowed down or even reversed, however the absence of structural adaptation in agriculture is only fictitious. The general observation is that small-scale, marginal (market-oriented) producers have been leaving the sector on the account of growing larger production units. This is understandable as benefits of favourable market and policy conditions (converging prices, direct payments, and access to investment support) are increasing with farm scale. On the other hand, results of WP6 “Subsistence farming and cooperation” reveal that the subsistence sector remains persistently represented in farm structures. The social buffer role of small-scale subsistence-oriented farms remains particularly strong in regions with poor economic performance and percentage of households below the poverty line. Rural development measures designed to address this problem remain rather ineffective.

3.3.2 Impacts of EU membership

The decision-making process on agricultural households can be significantly affected by changing market conditions, or by public interventions in the spheres of agricultural and rural development policies (Weiss, 1997; Kimhi, 1994). Changes in market conditions, trade regimes or policy environment can have profound and long-term structural impacts. The accession to the EU, which resulted in transformation of market and institutional environment, also affected the agricultural sector.

3.3.2.1 CAP introduction

Summing up briefly policy developments in the first decade from formal transition to a market economy, the policy evolution is characterised as follows. In the first phase, agricultural policy regimes were liberalized and subsidies abolished. Consumer prices

increased, while real incomes often declined, and domestic demand fell. Foreign market access deteriorated as the traditional agricultural export markets dwindled and because EU remained closed to the CEE agricultural exports. Farm input prices greatly increased relative to producer prices, causing a decline in agricultural terms of trade and renewed demands for government support. This phase was followed by policy interventions in the agricultural sector to protect consumers and producers against negative real income effects of agricultural and macroeconomic reforms. IAMO (2004) stipulates that due to a lack of experience, governments and their administrations in the emerging market economies reacted to unanticipated policy effects by sudden and frequent policy changes, thereby adding to the uncertainty induced by general economic reforms.

Only after these liberalisation and adaptation shocks, governments started to formulate comprehensive long-term-oriented agricultural policies. 'Common Agricultural Policy (CAP)-style' agricultural policy instruments were put into place, therefore including the systems of guaranteed prices, production quotas, export subsidies, and (variable) import levies. However, the introduction of these CAP-style policies had been taken place more or less on an ad-hoc approach. In some cases, the governments intervened on markets where the EU provides only limited support to EU-farmers (e.g. pork in Poland).

Since then, IAMO (2004) reports that agricultural policies have undergone various degrees of modifications, both to comply with international agreements (bi- and multilateral trade agreements) and to bring the level and kind of intervention more in line with those of the EU. Most of the NMS have changed their policy mix to include more direct payments and other subsidies with somewhat less reliance on market price support. Bulgaria, which until recently discriminated against its agricultural sector, significantly modified and liberalised its agricultural policy regime. Again, this adaptation of CAP-style policies was not done systematically. In some cases, governments neglected the fact that their budget and markets did not have sufficient depths to maintain these intervention policies. Since 1997, only in Slovenia has the level of protection exceeded that of the EU. Farmers in the other analysed countries have been granted less support than their colleagues in the EU. However, as the accession year was nearing, the level of support slowly converged towards the EU-15 level. In many cases, suppliers of agri-food products faced markets with limited export possibilities and limited regional integration. In this situation, the farmers faced rapidly changing policies in highly volatile markets bearing high market and policy risks. As a consequence, this unstable political environment affects many elements of farm behaviour, e.g., investments. As a long-term effect, the pre-accession period brought only a slow movement towards competitive farm structures.

Finally, accession to the EU reflected in an increased public expenditure on agriculture. It caused accelerated convergence of agricultural prices to the EU level, and together with the adoption of the CAP (Pillar 1 Direct payments) affected dynamics of net value added of agricultural production and factor income of agriculture. Countries that acceded to the EU in 2004 have experienced an upward trend in both indicators. Moreover the last years also sought an increase in rural development expenditure, triggered or at least stimulated by, the matching EU public expenditure: first by the pre-accession financial mechanisms (Phare, SAPARD), and after accession by the CAP Pillar 2 (Rural development) expenditure.

Yet, the darker side of the 'success story' of EU accession is the persisting rural poverty trap for small scale, mainly subsistence oriented producers. The EU CAP toolkit (based upon direct payments, market support and investment subsidies) contains a hidden bias against small farms. They are not able to capitalize the market opportunities and favourable policy conditions. The CAP measure designed especially for these producers merely mitigates the social hardships of marginal producers, whereas it is not realistic to

expect that payments would result in farm restructuring to an extent that would allow them to develop a long-term viable market production.

3.3.2.2 Increased competitive pressure

On the whole, transition to a market economy and later, accession to the EU brought net economic benefits to both, agricultural consumers and agricultural producers (Csaki, 2007, Buchenrieder, Hanf and Pieniadz, 2009). Trade in agricultural commodities, food and beverages with the rest of the EU are intensifying consistently. With the exception of Hungary and Poland, the net trade balance in the agri-food sector is negative and deteriorating. Although the tendency as regards the level of processing (and thus value added) is not entirely clear-cut between NMS and commodities (Drabik and Bartova, 2007), the share of raw materials and semi-processed commodities in exports is persistently high (Csaki, 2007). Increased share of imported highly processed food products from EU-15 add to the competitive pressures to the agri-food sector in the NMS.

As pointed out by several authors, the competitive position of producers deteriorated especially in these NMS, which in the pre-accession focused on price and income support and less to the competitiveness of the agri-food sector to allow it to grasp the advantages of the access to the enlarged internal market. Further improvement is therefore needed in terms of better market access and access to capital; either through public support (e.g. improvement of physical and market infrastructure, investment support, support for producer groups), or indirectly through private initiatives (e.g. stimulating micro-credit schemes).

The last decade has brought major changes to the food supply chain and correspondingly to food consumption patterns. The so called retail revolution with prevalence of vertically integrated product chains is taking place throughout the region. Some of the farms, especially the small ones are having major difficulties with the new situation (Csaki, 2007). As a response to competitive pressures from the changing retail structure and consumption patterns, innovative approaches towards marketing of agri-food products (e.g. vertical integration, local supply chains) and adding value to agricultural products (quality labels, gastronomy) should be stimulated.

3.3.2.3 Increased farmers' income

EU-accession brought stabilisation of the market and policy environment. As a general pattern, price gaps with the rest of the EU have started to diminish and are expected to come rather close or equal to the EU-15 average in the next few years. IAMO (2004) stipulates that the upward trend of farm incomes is going to continue as a direct result of CAP implementation.

Furthermore, rural development policies and funding available after accession to the EU have accelerated the possibilities of generating non-farm incomes. However, these policies have not immediately reduced unemployment and/or provide opportunities for generating additional farm income, since the effects of structural measures, unlike those of direct payments, will come gradually and more in the medium-term horizon.

3.3.2.4 Increased food safety and quality requirements

Similarly as in the case of primary production, the food processing sector in the analysed countries experienced a sharp drop output during the early years of transition (IAMO, 2004). However, EU accession implies new challenges of a similar dimension for the food-processing sector. NMS have to face stricter standards and increasingly rigorous quality control. Having been aware of the problems related to the access to finance for

reinvestment, or difficulties in meeting EU food quality and hygiene standards, intensive consolidation of the sector is taking place. Foreign companies have played a leading role in this process (Csaki, 2008).

3.3.3 Fundamental changes on markets for agricultural products

In general, the integration into the single EU market brought positive price developments to the NMS. Apart from favourable market outlook for virtually all agricultural commodities, EU accession also brought a sharp rise in the subsidies granted to agricultural producers in the NMS. Owing to this, the medium-term projections (European Commission, 2007) anticipated a steady growth in agricultural incomes (a 24.9% growth over the period 2006-2014 for EU-10 and even 71.8 % growth for EU-2), which is well above the EU-15 level (projected 9.9% income growth).

A short period of growing agricultural prices in 2007-2008 was followed by a sharp drop and, following the outbreak of global economic crisis, changing demand patterns and tightened price-cost relationships (according to Eurostat (2010), only in 2008 the price of fertilisers increased by 40.3%). As a consequence, especially in NMS, input use fell sharply. Favourable income prospects therefore failed to materialise, even though for the 2005-2010 period, EU-12 records a 9.9% growth of agricultural factor income (compared to a 4.6% fall in agricultural factor income in EU-15).

Even though the agricultural sector is generally more resilient to economic crises than other sectors, the current macroeconomic situation is expected to weigh heavily over the short-term perspectives of most agricultural sectors (European Commission, 2010). Taking into account uncertainties underlying agricultural production in the years to come (economic, market and policy developments, the path of technological change, future climatic conditions), and changing patterns of agricultural trade (reflecting also in decreasing stocks in agricultural commodities), the volatility of agricultural prices is likely to increase. Owing to these, mid-term agricultural income projections are difficult to predict.

The last decade has brought major changes to the food supply chain and correspondingly to food consumption patterns in the NMS. The so called retail revolution with prevalence of vertically integrated product chains is taking place throughout the region. Some of the farms, especially the small ones are having major difficulties with the new situation (Csaki, 2007). As a response to competitive pressures from the changing retail structure and consumption patterns, innovative approaches towards marketing of agri-food products (eg. vertical integration, local supply chains) and adding value to agricultural products (quality labels, gastronomy) can be seen as promising strategies.

3.3.4 Technology and innovation in agri-food chain

In a long-term perspective, technological progress and innovation in agriculture have to be considered as productivity increasing and input saving (Mundlak 2005). Quality improvements play rather a role when considering the agri-food chain in total. These relationships strongly affect the agricultural sector through structural changes within the sector as well as on the input and output side. Particularly on the output side, productivity increases, combined with the low demand elasticity for food, do not just imply declining agricultural prices but quite often even declining revenues. In a dynamic context this is reflected in the well-known agricultural treadmill (Cochrane 1958). As a consequence of Engel's law this tendency can't even be stopped through macroeconomic growth. On the input side, technological progress is mainly labor saving (e.g. Ruttan, 2002) with a declining factor income share of labor (Coelli and Rao, 2005). Valentinyi and Herrendorf

(2008) find for the US that the agri-food sector has the highest capital intensity among all sectors with a factor income share (including land) of 43%, thereof 10% for land. Konduru and Bjornson (2005) find that within the agri-food chain, the capital share is particularly high and the labour share particularly low for farming. According to Mundlak et al. (2008), it would have to be supposed that the high capital shares would even be higher if they would not be rationed through limited capital availability. Balmann and Schaft (2008) argue that there is a general tendency that agriculture is becoming more and more a sector in which investments are less driven by farmers' goals to secure their income from own-employment than from the search for investment opportunities.

Taking US and Western agriculture as outriders for the trends in the NMS, this has several implications. The first is that developing and modernizing the agricultural sector can have only limited or even negative employment effects in general. A second implication is related to the fact that technological progress in the agri-food chain is particularly depending on the availability of capital. In principle, this may be considered as an employment conserving argument as risk capital is limited. However, as agri-food markets are continuously liberalized and globalized, one has rather to expect that without the necessary investments, the NMS agri-food sectors may lose further grounds.

3.3.5 Changes in rural economies

Notwithstanding general positive economic impacts of the EU accession, rural regions often fail to gain from general economic growth and remain trapped in rural poverty. The main characteristics of these areas are high unemployment rate, lower income compared to the country average, more severe negative trend in population growth than the average for the country, unfavourable age structure of the population and undeveloped infrastructure (Mishev, 2010). Rural areas in NMS were additionally hit by the exodus of labour force, looking for better job opportunities and income prospects in old EU Member States that opened their labour markets.

FAO (2010) reports about the polarisation of poverty in the rural areas, particularly among smallholder farmers in Eastern Europe. Rural poverty, and its relationship to the farming community, represents an important aspect of poverty in the NMS, considering that rural areas account for a large part of their territory. Notwithstanding this, the awareness of European public opinion as well as the commitment of the public institutions to the problems of rural poverty remains weak. The EU CAP toolkit (based upon direct payments, market support and investment subsidies) contains a hidden bias against small farms. They are not able to capitalize the market opportunities and favourable policy conditions. The CAP measure designed especially for these producers merely mitigates the social hardships of marginal producers, whereas it is not realistic to expect that payments would result in farm restructuring to an extent that would allow them to develop a long-term viable market production.

3.3.6 Increased awareness of sustainability

Together with the rest of the Community, the NMS share the commitment towards sustainable growth. However, looking at the relation between the key aspects of sustainability (environmental, social and economic), the emphasis may differ between some NMS and their EU-15 counterparts. Although empirical evidence on this issue is virtually non-existing, policy practice lead us to a hypothesis that especially in low-income rural regions, the most strongly pronounced aspects of sustainability relate to social impacts (e.g. poverty reduction) and less so to the environmental sustainability.

This can be illustrated by the structure of Rural Development Policy expenditure patterns, which reflects the public preferences towards different aspects of rural development and, to some extent, also the relative significance of different aspects of sustainability. Compared to the EU-15 which devote on average 51.9% of their rural development budgets to measures addressing agri-environmental issues, this share in the NMS is considerably lower (34.8%). Czech Republic, Slovakia and Slovenia depart from this Rural Development expenditure pattern, with figures ranging close to the EU-15 average (Copus, 2009). Hypothesis can be further substantiated by a low interest of farmers for RDP Axis 2 measures. For example, Kopeva et al. (2010) report that during the first phase of the implementation of the Rural Development Plan in Bulgaria (2007-2009) the farmers' interest to participate in the Axis 2 measures is very low.

4 IN-DEPTH ANALYSIS OF RURAL LIVELIHOODS IN NMS

Sophia Davidova, Lena Fredriksson, Alastair Bailey, Gertrud Buchenrieder, Judith Möllers, Alfons Balmann, Cosmin Salasan, Kristine van Herck, Johan Swinnen & Dominika Milczarek⁹

After obtaining key characteristics and recent trends in NMS rural areas, rural livelihoods are analysed in the region in detail. In-depth analyses of the SCARLED survey results are discussed under the headings of rural labour adjustments, subsistence and poverty issues as well as market integration and farming matters.

4.1 Rural labour adjustments

Rural labour adjustments have taken place in most rural livelihoods in NMS. Employment diversification of farm households was one of the most important factors of rural labour adjustments, therefore they are analysed below in detail followed by a comparative analysis of selected rural labour markets. The section includes a special analysis on rural labour adjustments in Romania as well as an analysis on employment and structural change in Hungary.

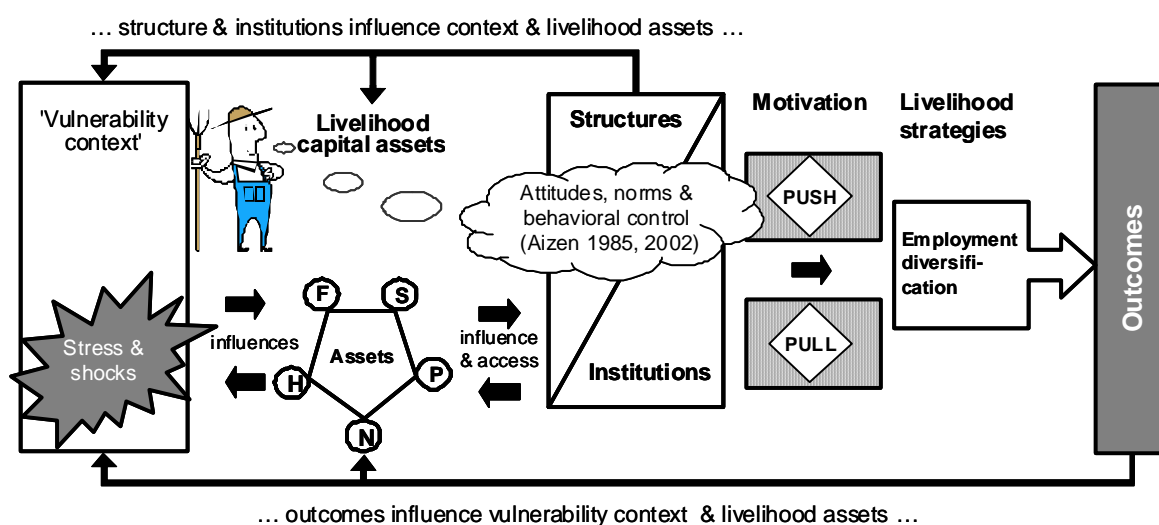
4.1.1 Employment diversification of farm households

The rural non-farm sector is widely recognised as one important driving force of rural economic development and as an income source with increasing importance also for farm households. However, individual farm households have different potentials for non-farm income diversification. Although knowing farm households diversification potentials seems important for promoting structural change no attempt has been made so far to assess this potential.

A number of factors are discussed as important triggers of non-farm diversification in the literature. The integrated framework from Möllers (2006) melts well-acknowledged approaches and forms the basis for assessing farm household's potential for non-farm income diversification.

⁹ Chapter 4 was written by Sophia Davidova, Lena Fredriksson and Alastair Bailey with the following exceptions. Chapter 4.1.1. was written by Gertrud Buchenrieder and Judith Möllers, Chapter 4.1.2. was written by Johan Swinnen and Kristine van Herck, Chapter 4.1.3. was written by Cosmin Salasan, Chapter 4.1.4. was written by Alfons Balmann, while Chapter 4.3.3. was written by Dominika Milczarek.

Figure 4 An integrated framework for the analysis of non-farm rural employment



Source: adapted from Buchenrieder (2003) and Möllers (2006) with own adaptations.

Note: F: financial capital, S: social capital, P: physical capital, N: natural capital, H: human capital - these five capital assets constitute the capital asset pentagon.

The framework is depicted in Figure 4. It is based on the so-called sustainable livelihood framework (SLF). This concept is explained in the SCARLED deliverable D2.1 (Buchenrieder et al., 2007). With its grey-shaded components it represents the natural, social and institutional environment of the decision maker. The concept focuses on action alternatives and constraints. The factors affecting people's access to different forms of non-farm rural employment strongly relate to whether or not and to which extent, people have access to the five forms of capital assets depicted in the asset pentagon, i.e. natural, physical, human, social, and financial assets. These livelihood assets influence and determine access to the socio-economic structure of society at large and their formal and informal institutions.

All components of the SLF influence the decision making process itself. Because neither the SLF nor the related demand-pull and distress-push concepts do address the diversification decision itself, the integrated analytical framework is complemented by the theory of planned behaviour (Ajzen, 1985, 2002). Its main components are symbolised within the "thought bubble" in Figure 4. The intention of a certain behaviour depends on three key determinants: attitudes, norms, and control variables. A detailed description of the integrated framework used in the SCARLED project is given in D2.1 of Buchenrieder et al. (2007).

On the basis of this integrated framework, an index for assessing farm household's potential for non-farm income diversification was developed and applied to 1,077 farm households in the NMS Bulgaria, Hungary, Poland, Romania, and Slovenia (D7.5 of Fritsch et al., 2010). Results in Table 6 show, that three quarters of households have a potential

for diversification and that not all households with a potential use it. Thus, **there is still capacity for further development of non-farm rural employment.**¹⁰

Table 6 Number and percentage of households with a non-farm diversification potential

Country	Number of households	Households with a non-farm diversification potential		Actually diversified households	
		N	%	N	%
Bulgaria	223	146	65.5	140	62.8
Hungary	218	135	61.9	144	66.1
Poland	199	163	81.9	125	62.8
Romania	224	190	84.8	149	66.5
Slovenia	213	187	87.8	165	77.5
Total	1,077	821	76.2	723	67.1

Source: D7.5 of Fritsch et al. (2010)

An in depth analysis of actual diversification behaviour and the socio-economic situation of the households show that there are two different life cycles of farm households. Life cycle 1 (**distress-push cycle**) starts with non-diversified households having only a small farm¹¹ and a potential for non-farm diversification. Those households could embark on non-farm employment and become what is called distress-push diversifiers. However, whether they start non-farm employment or not will not help that, over time, they will lose their potential for diversification and end up as pensioners' households living under distress-push conditions. Life cycle 2 (**demand-pull cycle**) starts with non-diversified households that have middle sized farms. When the households have a diversification potential, they could embark on non-farm income diversification and become what is called demand-pull diversifiers. Households with no diversification potential could develop their farm. Households within this cycle have good prospects to maintain and to improve their current livelihood. However, even when continuing as at present, the households will not be worse in the end than middle-sized farmers' households.

Theoretically, households in the first and second stage of the distress-push cycle could wish to switch to the demand-pull cycle. However, this is only possible by triplicating or quadruplicating the size of their farms and it seems very unlikely that the households will get the capital for necessary large-scale investments. Thus, **both life cycles seem to pre-determine the development paths of their households.** Nevertheless, exiting the agricultural sector seems a feasible option for households in the first and second stage of the distress-push cycle.

Promoting structural change in the most efficient way means to address the households within the two life cycles in the right way. Not all development paths are equally suitable for all households thus fine targeting of policy measures according to the life cycle and the

¹⁰ Sample size is low and sampling procedure does not result in a representative sample of farm households. Thus, extrapolation of the results to the agricultural sector should be cautiously made.

¹¹ The farms are usually subsistence or semi-subsistence farms.

position of a household within its cycle is recommended.¹² With respect to non-farm rural employment diversification, **households of the first and second stage of the demand-pull cycle** are expected to be **the backbone of the rural economy**. These households have the best capital endowment thus rural entrepreneurs are most likely found among them. Measures supporting entrepreneurship accompanied by training and business guidance are best targeted to those households. Likewise, educational measures that increase employability of household members in the non-farm wage sector could support income diversification.

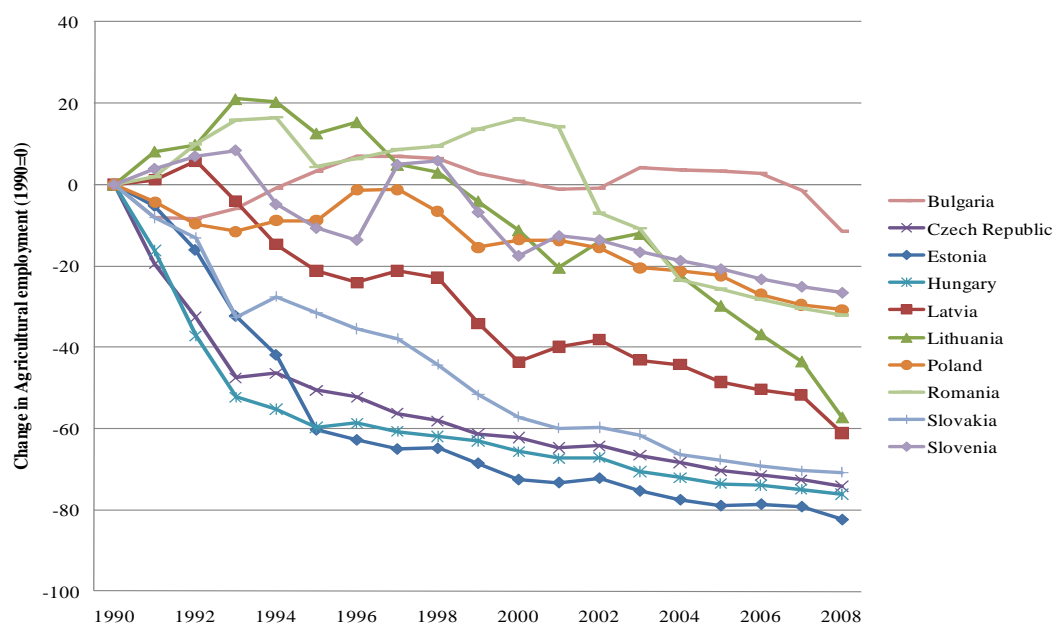
4.1.2 Comparative analysis of rural labour markets in selected EU-15 and NMS

With EU accession and high economic growth rates in the past years, structural change in the NMS farming sector accelerated and the decline in the agricultural workforce has been stronger in the NMS than in the EU-15 in recent years. However, despite the declining share of agricultural employment in NMS, the agricultural sector remains important as it accounts for 4% of GDP and 15% of total employment¹³ in 2008. This is a large difference with the EU-15 where the share of agriculture in GDP is only 1.7% and its share in employment is 3%. There are also large differences among NMS. In countries like Hungary and the Czech Republic, agricultural employment declined already strongly in the early to mid 1990s and has since declined further (Figure 5).

¹² Identification of household's life cycle and its state within the cycle is an easy task. Farm size distinguishes between the distress-push and the demand-pull cycle while education and age of household members show whether non-farm employment is still possible. By including only those three indicators in the eligibility criteria of support measures, policy has a tool to take household's life cycle and stage within the life cycle into account. Thus, targeting the right households with the right measure seems a simple administrative procedure.

¹³ These aggregate employment data hide important differences between countries (Figure 2). In general, we can distinguish three groups: a first group includes Czech Republic, Slovakia and Estonia where the share of agricultural in total employment is less than 5%, which is approximately the same level than in the EU-15. A second group includes Latvia, Lithuania, Hungary, Slovenia and Poland where agricultural employment ranges between 5% and 15% of the total employment. This is in the range of the poorer, southern countries of the EU-15, such as Greece and Portugal. Finally, there is a third group, which includes Bulgaria and Romania, where agricultural employment is approximately 20% of total employment in Bulgaria and almost 30% of total employment in Romania.

Figure 5 Change in agricultural employment in the NMS since the start of the reforms

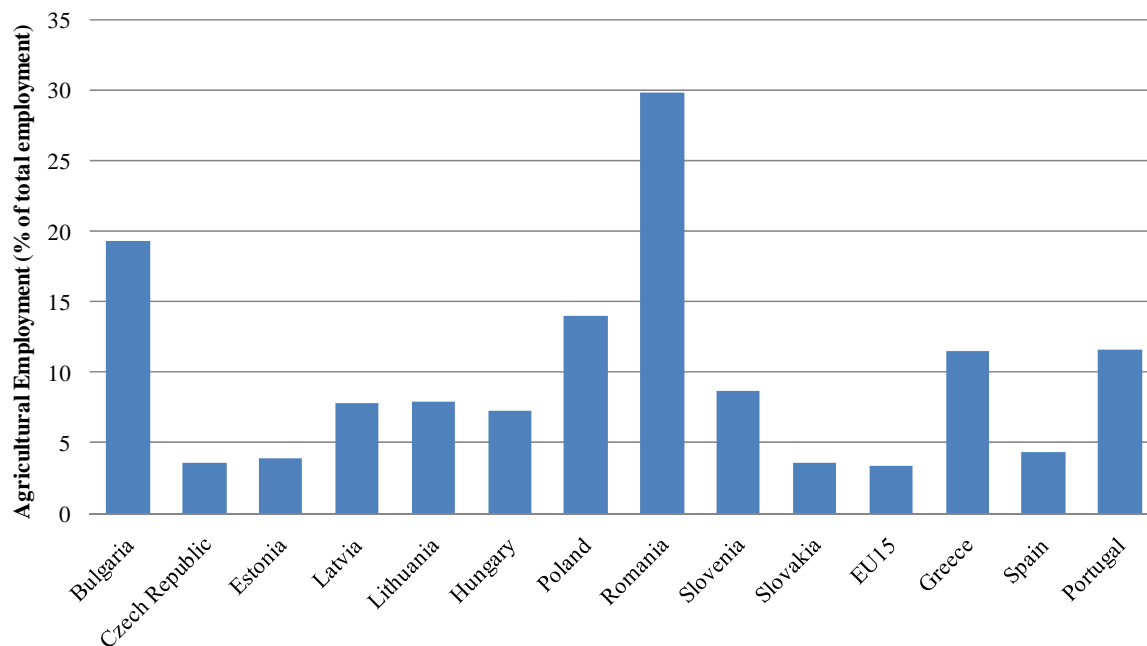


Source: ILO, Eurostat, national statistics

In other countries, such as Slovenia, Latvia, Lithuania and Poland - countries with many small farms - there was much less outflow of labour in the first half of the 1990s. In fact, in several of these countries agriculture acted as a “buffer” and absorbed labour during early transition¹⁴. In these countries agricultural employment gradually started declining in the second half of the 1990s as institutional reforms reduced labour constraints, and alternative employment developed. In Romania, on the other hand, agricultural employment continued to increase until 2001. In fact, as Figure 5 illustrates, Romania is the only country where employment increased in the 1996-2001 period. The increase in the latter period is mainly caused by the strong general economic decline between 1996-1999, when the decline in industrial employment caused people to fall back on farming as a survival strategy. However, since 2001 agricultural employment has started declining in Romania, like in all other NMS.

¹⁴ For an explanation of the various “patterns” of labour adjustments in the CEE countries, and how these relate to the restructuring of the farms, see Swinnen et al. (2005).

Figure 6 Agricultural employment in NMS and EU-15 in 2008



Source: Eurostat

In the rural areas of the poorest and least developed NMS, agriculture remains an important source of income as there is still a large proportion of the rural population employed in agriculture. For example, in 2006, the agricultural sector represented more than 40% of total employment in rural Romania and more than 30% of total employment in rural Bulgaria. Much of this is self-employment in small, semi-subsistence farms, which constrains structural change and economic growth in the agricultural sector. For these households a large proportion of their income is in-kind income, and many of them live in poverty. Hence, it is clear that important restructuring needs to take place to fully integrate the agricultural sector and the rural areas of these poorer countries into the EU.

In the more developed rural regions of the NMS, rural employment involves new activities, such as the environmentally friendly landscape management and production of energy from biomass. Well functioning rural labour markets are important for rural development as they contribute to a more optimal allocation of labour in the economy by reducing transaction costs of hiring labour and by facilitating farm surplus labour to find employment in other, more remunerative, sectors. In this way, well-functioning rural labour markets are essential, both for those employed in agriculture and those not. They are a major factor in determining where people live, work and spend their income. Thus, in rural areas they determine people's incomes, their location, their opportunities and their well-being.

4.1.3 Rural labour adjustment in Romania

The Romanian agricultural employment in 2007 accounted for a total of 3.931.350 farms (only 0.45% with legal status) a work place for 6.467.571 persons. From these figures almost 99% of the employees were captured in individual private farms and only 1.07% in farms with legal status. From a total of 4,716.969 employees, 4,645.202 were temporary employees (98.47%), 52,975 permanent employees (1.12%) and 18,792 farm heads (0.39%).

This situation allows the consideration of 71.767 work places as permanent employment, which represents only 1.5% of the total employment in the agricultural sector (NIS, 2007).

To profile the agricultural active population we shall take into consideration the fact that over 95% of them have practical experience only in terms of vocational training/education and two thirds of the farm heads are over 55 years of age, and almost 45% of the total are over 65 years of age. In terms of activity more than half of the farms' heads are inputting less than $\frac{1}{4}$ AWU yearly, while the other relatives and non-relatives work input appear to be seasonal (NIS, 2007).

Most private individual farms of small and medium size are self-employed the farm's head and using family non-remunerated work. This cheap solution to produce agricultural goods on small plots allows a number of elderly persons to survive with small pensions and reduced social transfers by compensating for their consumption. Most likely this category will resist the restructuring driven by economical interest. Their farms will become subject of restructuring after the farm's head will have consented to renounce to the land or after they have disappeared as individuals. However, the restructuring resources are outside this category where surfaces are more important in size. The farm restructuring inside the agricultural production without diversification has chances to produce low employment as the incremental growth rarely employs extra labour.

The diversification of agricultural activities represents an important source of employment, especially in agricultural goods processing and services. This category presents an important potential and records substantial growth and benefits from consistent support for development from public funding. A total of 853,637 farms have diversified their activities incorporating non-agricultural activities still related to the agriculture, such as processing of agricultural raw material, services, crafts, agro-tourism or non-conventional energy production. The individual private farms represent the dominant type of farms that diversified or converted their activity profile as presented (NIS, 2007).

The rural employment as formal institutionalized employment does not capture the entire rural active population in the standard statistics. The different waves of immigration from urban to rural as result of industrial collapse in the 1990s continues to be a social burden for rural. Today the immigration balance continues to be positive for rural in terms of incomers except for the youngest categories (NIS, 2008).

The non-agricultural jobs in rural areas are still dependent on the business environment development closely linked to the enhancement of the physical infrastructure and the improvement of its quality. A closer attention could be granted to the public measures addressing training in order to transfer basic agricultural knowledge to employers but also to the employees. A special emphasis could be given to the temporary employees and their formal institutionalization as labour.

4.1.4 Employment and structural change in Hungary

Hungarian farm structures are characterised by a moderate dualism of legal forms. While individual farms represented about 96% of farms, their share on land use amounts to 46%, on production to 45%, and on total labour input 62% (EUROSTAT, 2007). Accordingly, average individual farms produce more labour intensive and less labour efficient compared to average corporate farms. Hence, one has to emphasize on the heterogeneity inside both groups, particularly in the group of individual farms. The findings of the SCARLED farm household survey approve the heterogeneity of individual farm households: for the

numerous small farm households, the existing labour capacity exceeds the labour necessary to farm. Thus, hidden unemployment is likely. In addition to agricultural activities, the majority of the small farm households allocates labour resources to non-farm activities as well and thus improves their financial situation by income diversification. However, the scope of action given to these household members is restricted by a multitude of farm internal and external factors. Typical farm internal factors refer to personal-specific characteristics like age or education while external factors emphasize on farm location and macro-economic developments, for instance.

Differing in extent, Western and Eastern European countries show an over-ageing in the group of private farm household operators. In Hungary only 8% of farm operators are younger than 35 years while 45% are 55 years and older (EUROSTAT, 2007). This trend is not unique to family farms as it applies to corporate farms as well, though less pronounced. Recent EUROSTAT statistics show a slight improvement towards a less skewed age distribution inside the farming sector. However, the overall level of demographic unbalance in the primary sector still exists. The farm household survey approves two trends: There are some large farms managed by quite young and highly educated farm successors where the partner - who is generally equally high-educated - engages in non-agricultural high-income activities. Secondly, there are surprisingly few farm households stating that the parental or children generation have an essential part of working manpower within the household.

Which impacts can be expected with regard to future employment and structural change against the background of both before-mentioned findings? The majority of old labour force inside the group of individual farms - but on corporate farms as well - will shift to a retirement phase in a mid-term perspective. One can not exclude for some negative impacts on the performance of the agricultural sector as the labour force of individual farm households composes a substantial part with regard to land use and production. Thereby, one can expect that efficient and inefficient labour forces leave the sector quite proportionally as it is rather a demographic than an economic process. If it would be the latter case, the less efficient compared to the opportunity cost would be leaving firstly. Opportunity costs vary significantly among farms, nationally and internationally. While, Hungary has wage advantages compared to most Western European countries, there are also countries with lower wage levels. While for some lines of production the substitution of labour by capital has hardly been a problem (e.g. crop farming), there are also some more labour intensive lines of production (e.g. livestock, wine-growing, fruits, organic farming). However, every agricultural activity requires a minimum of qualified staff for planning, coordination and controlling.

With regard to employment one has to consider that once production capacities are closed down, there is a de facto irreversibility for a re-establishment. Hence, employment and value added would be vanished definitely. As the boom of some agricultural commodity markets in 2007/2008 showed, one should be careful to characterise a whole sector to be unprofitable and on the pull-out path.

According to the demographic process, huge challenges will be burdened to the (agricultural) pension system as a large number of retiring household members - and former employees on corporate farms as well - have to be supported. On the other hand, the low rate of young farmers inside the group of individual farms shows that the private farming sector is not attracting many young people. Labour market experts already advise against a too tendency of choosing a non-agricultural profession as skilled personnel is increasingly scarce. This somehow paradoxical problem is stated by corporate farms and larger family farms as well, i.e. by those groups requiring hired labour.

These developments entail strong implications for farm structural change. The high share of farmers aged 55 and above gives a significant hint that the next 15 years will be characterised by an intensive phase of potential farm transfers or farm closings, respectively. A high share of these farms will not be carried on by a successive generation as a potential successor has to consider the opportunities on the off-farm job market in countries like Hungary with fast economic growth. The reasoning behind this is, that in contrast to a predecessor, a successor should calculate his/her job perspectives on a full cost basis at the beginning of the professional career (ignoring for multi-generational aspects of continuing family farming traditions or other specific personal preferences). A full-cost calculation affects the initial professional choice as well as all investment decisions. A continuation of farming requires on the one hand an up-to-date knowledge. On the other hand re-investments into modern technology are ideally coupled to individual planning horizons if possible. Farm closures, in turn, entail an acceleration of structural change in the way of thinning the number of farms as well as increasing farm sizes. Thereof, resources of land, buildings, but also intangible goods like knowledge of the exiting farms may be incorporated inside neighbouring, expanding farming entities. However, it will not be guaranteed that physical production units are compatible with the needs of legal entities.

4.2 Subsistence and poverty

The role of agriculture in economic development and poverty reduction is a major concern for development economists and international organisations (e.g. OECD, 2006; Anríquez and Stamoulis, 2007; World Bank, 2007). However, the potential role of agriculture for poverty alleviation depends on the level of development of a particular country. For some, farming is essential for economic development, but first, an increase in the productivity of small farmers has to take place (World Bank, 2007). The more developed a country is, the less important agriculture is for economic growth. In developed countries, agriculture is strongly integrated into up- and downstream sectors, but it is no longer "the backbone of the rural economy" (OECD, 2006, p. 39).

Technological progress in agriculture has a positive impact on poverty reduction, particularly for the poorest of the poor (de Janvry and Sadoulet, 2002; Anríquez and Stamoulis, 2007). On the one hand, poorer rural households depend more on farm incomes (Davis et al., 2007). On the other, agriculture serves as a type of "farm-financed social welfare" (World Bank, 2007, p. 3) in times of economic crisis. In urbanised countries, agriculture can reduce rural poverty when smallholders are given the chance to participate in modern food markets. For countries that are neither agriculture-based nor urbanised, shifting to high-value agriculture, accompanied by measures that enable people to exit farming and measures facilitating rural employment creation could address the problem of rural poverty (World Bank, 2007).

While most studies in the field of poverty alleviation centre on less and the least developed countries, two recent studies (Alam et al., 2005; Macours and Swinnen, 2008) focus on the specifics of transition economies. They stress the important role that agricultural development may have for poverty reduction in rural areas in transition countries where farming is a major source of income and employment.

SCARLED Deliverables 6.3 (D6.3: Fredriksson et al., 2010) and 7.3 (D7.3: Salasan and Fritzsche, 2009) investigated the role of subsistence farming as a tool for poverty alleviation and as a safety net. While D6.3 analysed the general picture in the five EU NMS studied as part of the project (Bulgaria, Hungary, Poland, Romania and Slovenia), D7.3 focused particularly on the role of agriculture for overcoming rural poverty in Romania where

subsistence farming is the most wide-spread. An important part of this research was to value subsistence production at market prices as an addition to household cash incomes and to analyse the importance of its contribution to reducing rural poverty. The scale and importance of subsistence farming, and some conclusions drawn on the basis of the research conducted within the above two deliverables are summarised below.

When discussing subsistence farming, it should be stressed that it can be defined in more than one way. Generally, a definition of subsistence farming may depart from three different criteria: physical measures, economic size and market participation. Physical measures, such as agricultural land, volume of inputs and number of livestock, may define subsistence through thresholds. McConnell and Dillon (1997) have suggested that 0.5-2.0 ha of cultivated land might be a good proxy indicator for semi-subsistence farms. Economic size thresholds are widely applied for statistical and policy purposes. In the EU Farm Structure Surveys (FSS) and Eurostat's corresponding series "Statistics in Focus", farms smaller than 1 ESU are labelled as subsistence farms and farms smaller than 8 ESU as small farms. Farms within the size group of 1 to 8 ESU may be labelled 'semi-subsistence'.

The market participation criterion is probably the most widely used. Wharton (1969) argued that farm households could be placed on a continuum from zero to 100% depending on the proportion of their output sold. At the two extremes are purely subsistence and purely commercial operations. With regard to this continuum, he introduced a threshold of 50% of marketed output, classifying farmers selling less than this as subsistence and semi-subsistence, while labelling those above the threshold as semi-commercial and commercial. The EU also employs a definition based on a market participation criterion for defining semi-subsistence farms. Council Regulation on Support for Rural Development by the European Agricultural Fund for Rural Development (EC) No. 1698/2005 Article 34 (1) defines semi-subsistence farms as "agricultural holdings which produce primarily for their own consumption and also market a proportion of their output". This definition is used for the purposes of rural development measure 141, i.e. support to semi-subsistence farms undergoing restructuring. However, in practice, countries applying the measure use economic size thresholds to determine eligibility for this type of support.

The quantification of the role of subsistence and semi-subsistence farms in the farm structure of NMS based on Eurostat 2007 FSS data is presented in Table 7. Table 8 indicates that according to all indicators in 2007, subsistence farms were prevailing in the NMS from CEE, including in the chosen SCARLED countries. In Romania their share was above the average for the region.

Table 7 Number and share of subsistence and semi-subsistence farms in CEE-10

	Total number of farms (millions)	0 < 2 UAA		< 1 ESU		1<8 ESU		Producing mainly for own consumption	
		No	%	No.	%	No.	%	No.	%
CEE-10	8.0	4.7	58.9	5.5	68.7	2.1	26.9	5.3	66.1
- SCARLED NMS-5	7.5	4.6	61.0	5.2	69.2	2.0	26.5	5.0	66.4
- of which Romania	3.9	2.6	65.2	3.1	78.0	0.8	21.4	3.2	80.7

Source: Eurostat FSS data (2007)

Six key conclusions emerge from the analysis based on the unique data set collected through the primary survey carried out within the SCARLED project. From this data, 49.1% of households in the above mentioned five NMS can be classified as subsistence oriented, i.e. selling less than 50% of output. Thus the first conclusion from the research is that subsistence production remains pervasive in the NMS. The prevalence of subsistence production is unlikely to change in the short to medium term, as the majority of the respondents envisaged no change in their farming operations in the next five years. Subsistence production should therefore not be seen as merely a transitional phenomenon in CEE. Twenty years after the downfall of socialist regimes, it still remains a critical characteristic of agriculture in the NMS.

As mentioned, unsold output (subsistence production) was valued at market prices, household by household, to analyse the importance of its contribution to reducing rural poverty and as an addition to household incomes. Table 8 indicates the degree to which the valuation of subsistence production shifts households from below to above the poverty line. Based on these data, the second conclusion from the analysis is that estimations of poverty are sensitive to the valuation of subsistence production. Given the large number of subsistence oriented households in the NMS, this is an important finding. For the sample as a whole, the valuation of subsistence production pushes 8% of the sample above the poverty line (equivalent to roughly one half of those classified as poor prior to the valuation of such production).

Table 8 Household distribution below the poverty line by country with and without the value of subsistence production (%)

	Bulgaria	Hungary	Poland	Romania	Slovenia	Sample total
Below the poverty line excl. subsistence production	26.6	11.5	9.5	5.2	24.6	15.1
Below the poverty line incl. subsistence production	8.9	9.1	2.0	1.6	15.8	7.0
Shifted above the poverty line	17.7	2.4	7.5	3.6	8.8	8.1

Source: D6.3: Fredriksson et al. (2010)

Third, the impact of subsistence production for moving households above the poverty line is strongest in the poorest EU Member State, Bulgaria. However, the effect of valuing subsistence production is sensitive to the distance of poor households from the poverty line in the individual country samples. This explains why there are significant differences in the role of subsistence production in reducing relative poverty rates between the sampled countries. This also explains why Romania, one of the poorest of NMS, has the lowest share of households below the poverty line. Poverty rates should therefore be treated with caution. For that reason, the contribution of subsistence production to total household cash income was considered as a complementary indicator of the importance of subsistence farming as a safety net in the NMS.

Fourth, the contribution of subsistence production to total incomes is uneven but significant (Table 9). The table presents large variations in the contribution of subsistence production to total cash household incomes, both across countries and across the three household categories (households always below the poverty line, even after including the value of subsistence production; households who were shifted from below to above the poverty line when the value of subsistence production was added to the cash incomes and households who were always above the poverty even before the valuation of subsistence production). Only for households above the poverty line in Hungary and Slovenia does subsistence production contribute very little to total incomes.

Table 9 Subsistence production contribution to total household income by group of households and by country (%)

	Bulgaria	Hungary	Poland	Romania	Slovenia	Sample mean
Below the poverty line	32.9	17.6	16.6	59.7	18.5	24.4
Shifted from below to above the poverty line	47.6	30.0	45.7	57.9	30.0	44.1
Above the poverty line	24.6	5.3	22.7	31.5	9.3	20.4

Source: D6.3: Fredriksson et al. (2010)

Fifth, subsistence production is most important for remote and poor households. Such households are fairly reliant on agriculture for their livelihoods but possess insufficiently large farms to generate high incomes. The fortunes of this group will be closely linked to social security systems and whether the non-farm rural economy expands to provide alternative occupations in remote rural locations.

Finally, the case of Romania illustrates the need of concerted policy actions that are finely targeted at different groups if structural change is to take place. The agricultural sector in Romania is dominated by subsistence and semi-subsistence farm households and subsistence production contributes with more than 50% to total household incomes within the two first household groups. An important problem is that a large share of Romanian subsistence and semi-subsistence households are headed by persons of retirement age without any formal agricultural training, meaning they are unlikely to adopt innovations or to enlarge their farms. More importantly, however, is that current pension levels are so low that poor Romanian farmers are forced to stay in the sector as a survival strategy. This locks the land market and prohibits that land is sold or rented out to more efficient use (commercial farming). This situation is not expected to change rapidly.

It should be noted that the opportunity costs of semi-subsistence farming are high. Large-scale corporate farms and commercial private farmers comprise only 40% of Romanian UAA. Thus, although agriculture has been contributing to poverty reduction, there are good reasons to believe that future economic development will rather come from outside the agricultural sector and that small-scale farming may continue to play the role of a social safety net. Developing a functioning land market and providing access to agricultural product markets could promote the development of a highly productive group of commercial private farmers. Non-farm job creation in rural areas could provide income opportunities for the surplus agricultural labour force. Both new farmers and potential non-farm employees seem to require profession-specific advice and training to become competitive. The large group of pensioners could be given incentives to exit the agricultural sector if they could rely on income from social provisions that would cover their household needs.

Overall, the analysis reveals the distinctiveness of farming in the five studied NMS in comparison with farm structures in Western Europe. Most agricultural households studied, and the size of land they cultivate, do not fit with notions of what constitutes a typical family farm in Western Europe (Shucksmith and Herrmann, 2002). While small-scale farms dominate the farm structure in these five NMS, due to the size of their holdings they are not the main beneficiaries of CAP direct payments (Davidova, 2008), which, for the most part, are currently paid on a simple per hectare basis in the NMS. The implication of this is that there is a stark mismatch between the fortunes of those who are mostly likely to benefit directly from the CAP (large commercial holdings) and those most in need (small commercially oriented and small subsistence oriented households). While a central objective of the CAP remains to ensure a 'fair standard of living for the agricultural community' (EC, 2009), current policy is unsuited for this task in the NMS.

4.3 Market integration and farming

Market integration and farming is another important issue when analysing rural livelihoods. Typology of market integrated households, facilitators and barriers to commercialisation as well as the role of social capital and cooperation in Poland are analysed below in detail.

4.3.1 Typology of market integrated households

Market integration was the focus of SCARLED Deliverable 6.6 (D6.6: Fredriksson et al., 2010), analysing the determinants of, and barriers to, increased commercialisation. Within the SCARLED survey, households were asked to state the degree to which they agreed or disagreed with a set of statements, measured on 5-point Likert scales ranging from 'Totally disagree' - 1 to 'Totally agree' - 5, with 3 being a neutral option. Altogether, 28 statements were included in the survey organised under four sub-headings: current aims for agricultural activity, perceptions about current agricultural activity, perceptions about barriers to increasing production and sales, and perceptions about facilitators of commercialisation.

Using cluster analysis, six types of farm households with similarly held attitudes and perceptions were identified by this research: 1) Low-income part-time farmers; 2) Commercially oriented market constrained households; 3) Commercially oriented part-time farmers; 4) Commercially oriented market unconstrained households; 5) Commercially oriented externally constrained households and 6) Subsistence oriented low-income households. Several conclusions could be drawn from this analysis.

First, the attitudes of the majority of respondents towards the aims for their farming activities are both to provide food for the household (49.7% totally agreed) and to

generate cash income (40.4% totally agreed). These attitudes place them in general within a semi-subsistence type of behaviour.

Second, some households with small farming activities are hobby farmers. In this regard, 24.1% of respondents totally agreed with the statement that their aim in agriculture was to “Enjoy farming”, 25% totally agreed with the statement “We only produce for the provision of safe food for the household” and 18.7% totally agreed with the statement “We do not produce for pecuniary reasons”.

Third, the market integrated households are not homogeneous. Considering commercially oriented households, i.e. those selling more than 50% of their output, as market integrated, three clusters of market integrated households have been identified by this research -commercially oriented market unconstrained households, commercially oriented market constrained households, commercially oriented externally constrained households and commercially oriented part-time farmers.

Fourth, farmers labelled commercially oriented market unconstrained are the youngest in the sample (but still above 50 years old), with the largest cultivated land area. The commitment to commercial agricultural activity is reflected in the time allocation of the household heads. On average, they spend more than 80% of their working time on-farm. These households have invested in agriculture and farm mainly with own agricultural machinery. Although a minority of farmers in this group makes use of formal credit, still this is the highest percentage within the overall sample - 14%. Similarly, a larger share of farmers in this cluster use advisory services. Households in this group show signs of what in Western Europe has been characterised as ‘engagement’ in agriculture (Hawkins et al., 1993). They achieve the highest income per capita in the sample both with and without the valuation of subsistence production. The households in this cluster are relatively more remote in comparison to the other market integrated households, measured by the average distance from the farm house to the nearest urban centre (around 35 km), which may explain the lowest level of household income diversification.

Fifth, the two groups of constrained market integrated households, are either only externally constrained by market prices or insufficient policy support, or also internally constrained by lacking capital accumulation and being in need of credit and investment in machinery, are both led by older household heads, cultivate a smaller land area and generate lower incomes. The heads of these households spend less time on-farm. Less than half of the farmers in these clusters farm with their own machinery. Still, the share of household using advisory services is larger than the average of the sample, which may suggest the importance of technical and market advice for commercialisation.

Sixth, the commercial part-time farmers form a specific group of market integrated households. Farmers in this group agree with the statement that they farm with the objective “to enjoy farming” but less so with the aim of generating cash income. They have the largest households and have a high share of members engaged in waged employment. Thus, they appear to base their livelihood strategy on income diversification. This is supported by the high average incomes and the low contribution of subsistence production to the total household income. The share of farmers using their own agricultural machinery is the second largest after the cluster of commercially oriented unconstrained farmers. This group of part-time farmers seems to correspond to the category of ‘survivalist farms’ profiled by Daskalopoulou and Petrou (2002) for Greece. These farmers own small farms but rent in additional land; they also have a higher degree of mechanisation than subsistence farms, but ‘survivability’ is based on farming part-time. Therefore, pluriactivity is an important characteristic.

Seventh, the two subsistence oriented groups, low-income part-time farmers and subsistence oriented low-income households, are quite dissimilar. Concerning farm endowments, the low-income part-time farmers have the smallest land holdings in the sample, operate with the lowest level of technology and make the least use of hired labour. Although some households in this cluster may be forced to keep farming to secure household food consumption because of their low incomes, most appear to be hobby farmers, whose engagement in agriculture, as they claim, is simply a lifestyle choice. Agriculture does not appear to be the main economic activity of this group and hence, increased commercialisation of this type of farmers is unlikely.

The subsistence-oriented low-income households are also farming part-time. Yet, in relation to the low-income part-time farmers, they have a stronger agricultural profile as sales are higher, off-farm employment lower and land assets larger. Moreover, their engagement in farming appears to be forming part of a livelihood strategy rather than being a lifestyle choice or hobby. This is supported by a high share (21.6%) of households living at-the-risk-of poverty before accounting for the value of subsistence production, a figure which drops to 10.8% when including the value of subsistence production. Most importantly, at present, these farmers indicate that they do not possess the necessary assets, skills and contacts to commercialise. Consequently, commercialisation of this group of farmers would require major adjustments and investments.

The analysis conducted in D6.6 illustrates well the heterogeneity of agricultural households in the NMS. While some households are already well integrated into formal markets, others are not. Consequently barriers to, and facilitators of, commercialisation, also vary between groups. The next two sections summarise some conclusions in respect to barriers and facilitators for commercialisation with a specific focus (in Section 3.3.3) on a case study on Poland centred on the role of social capital and networking for increased commercialisation.

4.3.2 Facilitators and barriers to commercialisation

As identified in D6.6 “Determinants for, and barriers to, exit from subsistence food production: commonalities and differences among NMS” by (Fredriksson, Davidova, and Bailey, 2009), the fact that households are heterogeneous means that they are likely to face different barriers to commercialisation and may therefore require different policy measures to increase their market integration. The key conclusions from the analysis of respondents’ perceptions about barriers to commercialisation and factors/policies that may facilitate market integration are summarised below. Some of the conclusions are more general whilst others are targeted at particular farm clusters.

First, farm households in the NMS claim that they do respond to market prices, so they appear not to be completely isolated from markets, and might therefore not only base their decision-making on shadow prices alone but also on market prices. More than half of the respondents perceive that the prices they receive are low and that this is their main barrier to increase production and sales.

Second, farm households in NMS seem to be ‘interventionists’ wanting more CAP support for agriculture and rural development with the notable exception of households in the cluster of commercially oriented unconstrained households. This corroborates the work of Gorton et al. (2008) who found that, in comparison to EU-15 Member States, farmers in the NMS strongly opposed any idea for agricultural policy liberalisation and did not feel that CAP imposed restrictions on their farm plans.

Third, poor infrastructure, insufficient capital, old age and health problems were other important barriers to commercialisation perceived by respondents.

Fourth, there are important country differences in household attitudes towards the aims for their farming activities, their perceptions about barriers to commercialisation and factors that may facilitate their market integration. Almost all households in the two poorest countries (Bulgaria and Romania) totally agreed that the main objective of farming is to provide food for the household. On the other hand, the attitude to farming as an activity households enjoy was the most pronounced in the richest amongst the five NMS, Slovenia.

Fifth, each of the clusters described in section 4.3.1 have their own barriers to further market integration and to a certain extent different perceptions about facilitators for commercialisation (with the exception of commercially oriented market unconstrained households as the label suggests).

The groups of commercial externally constrained and commercial part-time farmers appear relatively unconstrained in increasing output but face barriers to increase sales. Improved infrastructure is likely to have a positive effect on the commercialisation of these two groups. Modernisation of agricultural equipment and access to credit are identified as important facilitators to increased commercial activity by part-time farmers. Training in both marketing and the meeting of quality standards are other factors that could be important, as well as establishing contracts with buyers.

Commercially oriented externally constrained households claim they receive low prices for agricultural output and in order to increase sales they strongly agree that market prices would need to be higher. Policy payments to agriculture are an equally important factor. Infrastructure improvement could also facilitate their market integration, although to a lesser extent. An important point, however, is that a high proportion of households in this cluster are at, or close to, retirement age. This means that they may need more early retirement measures and setting-up young farmers than a standard CAP Pillar 1 support.

The low income part-time farmers also claim to be constrained by the low market prices. They also recognise that they need to invest in machinery, cooperate with other households and establish contracts with buyers in order to become more commercially oriented. Polish households dominate this cluster. In this relation section 4.3.3 present some conclusions from the analysis of farmers' co-operation in Poland.

For the group of subsistence oriented low income households to shift away from part-time subsistence oriented farming toward commercially oriented agricultural activities would require major changes. This is reflected in their perceptions about barriers to increase production and facilitators for increasing commercialisation. These farm householders agree with all proposed statements. In principle, increased policy payments and increased market prices might facilitate their market integration as could infrastructure improvements, but most importantly the answers of respondents indicate that at present they do not possess the necessary assets, skills and contacts to commercialise. It appears that what would benefit the households in this cluster the most are not policies aimed at commercialisation of agricultural activities as much as rural development policies enabling the creation of rural off-farm jobs. Such measures would allow the small land assets of these farmers to be put to more efficient use by larger commercially oriented holdings.

In summary one of the factors that negatively affects market integration and which could be influenced by policy is technology. This is particularly the case on farms where the main field operations are performed manually. This is consistent with several previous studies which have argued that technological productivity improvements, and not price support, should be at the centre of policy interest in order to achieve a higher share of market integration (Toquero et al., 1975; Rios et al., 2008). Policies to promote the use of

machinery co-operatives, the so-called 'machinery rings', can help capital poor farm households to increase production above subsistence levels.

Finally, a key factor that impedes commercialisation is the underdeveloped and inadequate transport and market infrastructure. This is a typical case in which targeted rural development policies could help significantly to improve the welfare of the rural poor.

4.3.3 The role of social capital and cooperation in Poland

Cooperation among farmers is often advised as a remedy for small-scale farmers to overcome barriers to market integration. Common action problems and the importance of efficiency of producers' organisations have been recognized as important factors influencing the process of restructuring the agricultural sector (Csaki et al., 2008). However, in the case of small-scale farms, different kinds of informal cooperation may be the only available strategy for accessing the necessary resources for agricultural production and further, for their market integration (D6.1: Wołek and Milczarek-Andrzejewska, 2008). Informal cooperation is based on social capital which reduces transaction costs associated with formal coordination mechanisms, such as contracts or bureaucratic rules (Fukuyama, 2000). One of the major weaknesses of social capital in Poland is a very low propensity to cooperate in conducting economic activity. It seems that rural Poland still relies on its traditional social capacities but does not formalise and institutionalise these ties for joint work and formal cooperation (Rural Poland, 2006).

SCARLED Deliverable 6.4 (D6.4: Wołek and Łopaciuk-Gonczaryk, 2010) investigated the role of social capital in promoting informal cooperation, and further, the role of informal cooperation for commercialisation. The analysis was based on 245 observations from the SCARLED survey conducted in Poland. The main results from this research were the following:

First, the most popular form of informal cooperation was help in field works (77% of households engaged in informal cooperation). Other popular forms included common use of machinery, common use of transportation means (each 24%) and common purchase of production inputs (14%).

Second, informal cooperation was to a large extent determined by the level of farms' owned production factors (land and capital). Farmers belonging to the group classified as the best equipped with production factors, cooperated informally the least often (16%), while farmers equipped with basic machinery, cultivating relatively small areas and focusing on off-farm economic activities cooperated informally the most often (53%).

Third, social capital has facilitated informal cooperation among farmers to some extent. An analysis of individual social capital indicators showed that there was a positive relationship between readiness to cooperate and informal cooperation as well as between attendance in political elections and informal cooperation.

Fourth, farm households which cooperated informally represent higher levels of commercialisation. In this case, commercialisation is the effect of informal cooperation in the form of common use of machinery, common transportation and common purchase of production inputs. In addition, the most important benefits from informal cooperation indicated by farmers were related to accessing machinery and to decreasing production costs (approximately 60% and 56% of farmers, respectively, judged these benefits as very important). Thus, informal cooperation can be considered as a strategy allowing farmers to overcome deficiencies in production factors and lowering production costs.

Overall, social capital facilitates informal cooperation among small-scale farmers. However, currently scarcity of production factors is decisive for their engagement in cooperative action. This is why informal cooperation at this stage of development should be perceived as a substitute for insufficient production factors (land and capital). Therefore, the most important policy measures aiming at an increase in the level of commercialisation should be those focused on modernisation of farms that could potentially increase their productivity and profitability, and allow them to expand. However, for several farms informal cooperation only seems to be a strategy allowing them to engage in farming as an additional source of income - these are the smallest farms, equipped with very basic machinery, whose head of household is also engaged in non-farm wage employment. It can be argued that other policy measures - going beyond agricultural and even rural policy - are required for such households who may exit agriculture if there were adequate social safety net and well-functioning rural labour markets.

5 LESSONS FROM EU-15

Carmen Hubbard & Matthew Gorton

SCARLED research project examined the socio-economic development and agricultural performance of five regions in established EU member states as well: the Borders, Midlands and Western Region of Ireland (D8.2: Hubbard and Ward, 2008), Navarra in Spain (D8.3: Iraizoz, 2007), Tyrol, Austria (D8.1: Hubbard and Kaufmann, 2008), Skåne in Sweden (D8.4: Copus and Knobbloch, 2007) and Altmark in Eastern Germany (D8.5: Wolz and Reinsberg, 2007). The regions were selected because of their ability to offer 'successful' experiences of rural transition following accession to the EU. More specifically, the research focused on patterns of transition, evaluating to what extent they fit with competing models of rural development. The case studies drew on desk-research and (face-to-face and telephone) interviews with 39 experts across the five countries.

The case study evidence reveals that the economic performance of the regions has been closely tied to that of their respective nation state. The success or otherwise in local rural development should be understood in the particular context of the national performance of each Member State. However, while external factors are important determinants, no region's trajectory has been due solely to exogenous factors. Similarly no region has been insulated from national/global trends or grown entirely due to internal, endogenous factors. There is therefore little evidence of purely *exogenous* or *endogenous development*. Rather it is the combination of both internal (endogenous) and external (exogenous) factors and their interplay which drives the development of these regions. This combination of endogenous and exogenous forces is consistent with neo-endogenous development theories.

In all cases, EU membership, particularly the CAP and the Structural and Cohesion Funds led to agricultural restructuring and significant socio-economic change in rural areas. However, the level and nature of change has varied from country to country according to their own specific economic, social, political and cultural conditions.

Undoubtedly, the CAP remains critical. CAP Pillar 1 measures, such as price support and direct payments, remain important, and in general they account for the largest share of the EU funds allocated for agriculture. It is clear that price support and market interventions measures were more important before the adoption of the MacSharry reform in 1992 and countries such as Ireland and Spain, benefited fully from these measures. The introduction of compensatory (later on direct) payments shifted the balance within Pillar 1, and they have become the most important component of farm income across countries and regions. The significance of direct payments is unquestionable particularly for small-scale producers which depend largely on these subsidies. However, there are differences in the distribution of direct payments by farm types and size across countries and regions and thus not all farmers benefit to the same extent.

CAP Pillar 2 measures, particularly agri-environmental schemes and Less Favoured Areas (LFAs) compensatory payments, are important for most of the countries and selected regions, as they also support farm income. In Austria and Sweden, the implementation of the agri-environmental programmes is extremely significant and they were considered as the most appropriate instruments following EU accession.

Interestingly, the analysis highlights the importance of the Community Initiative Programmes, particularly LEADER. Although, very limited funds were allocated for this Programme, in all countries and regional case studies, LEADER became popular and well received by most local communities. Its popularity led to countries such as Spain and

Germany creating similar national programmes (e.g. PRODER in Spain and Active Regions in Germany).

Overall, it can be concluded that although policy measures are extremely important there is not one, single determining factor for rural change but a combination of internal and external driving forces (including effective policies) which, for success, also depend on a favourable macro-economic environment.

Drawing principally on the interviews conducted in the five selected case studies, lessons of best practice in managing rural development policy were drawn (D9.1: Hubbard and Gorton, 2009). Table 1 summarises specific country level policy and administrative lessons.

Ireland and BMW

The creation of appropriate EU structures and institutions which act in accordance with the interests of the country and are able to attract EU funds was seen as essential by the Irish experts. Additionally, the design and delivery of the National Development Plans are also very important - “*deliver what you say you will do*”. To accomplish this requires strong, sustainable and responsible capacity building. The need for a clear regional strategy, particularly for a balanced development at the regional level, to which the government is committed to, is also considered as very important. The lack of an earlier regional policy in Ireland was perceived by most experts as a missed opportunity for balanced regional development which led to a “weak urban hierarchy” and a “very weak planning system”. Moreover, decentralisation of responsibilities and a broader involvement of local communities at the regional and local levels need to be fostered and encouraged.

Spain and Navarra

The design and implementation of rural development measures, according to Spanish experts, should be based on a *territorial & integrated* approach. The allocation of funds should be based on an assessment of *needs* by each rural area and focused towards those areas which are most in need. Better territorial targeting will address specific problems and reduce the gap between lagging and leading rural areas. This seems to be very important as most rural development policy measures are oriented towards the agricultural sector, with diversification largely restricted to the promotion of rural tourism and marketing of agricultural products. The wider involvement of regional and local authorities and other local actors in the design and implementation of Rural Development Programmes is preferable. Spanish experts believe that the lack of involvement of the rural population in the decision-making process impedes rural development. This is linked with the need to invest in social capital (networking) and human capital (at the local level) through education and training.

Sweden and Skåne

In line with interviewees in Ireland and Spain, Swedish experts believed that a more devolved, regionalised but flexible Rural Development framework allows for more creative inputs from local actors. This relates to the need to build into the implementation arrangements the facility to respond to regional variations in rural fortunes, preferably through a “bottom-up” involvement of the local representative organisations (e.g. LEADER-like approaches). This may not be easy where social capacity is less well developed, which leads to the importance of investing in social capital. An inflexible, horizontal, sectoral approach is unlikely to be effective in the medium-long term. The integration of rural development in the broader national policy context was perceived as critical for ensuring long term strategy. In shaping rural policy in Sweden, an (urban) societal view of the role

of agriculture, perceiving the countryside's / farms' function as the provider of (environmental) public goods has been critical.

Austria and Tyrol

The implementation of an integrated territorial approach is the first lesson which can be drawn from Tyrol, whereby pluriactivity and the preservation of traditions and environment are considered the core for rural-agricultural development. An integrated approach has the potential to create synergies between different policy areas and facilitate interactions with other industries. The implementation of an integrated, territorial approach requires a facilitating governance structure, which should begin with a professional collaboration between the national ministries and the regional authorities to elaborate integrated, focused, and pragmatic national and regional development plans. In the delivery of programmes and measures, it often paid off to combine administration with responsibility for content and to avoid parallel structures in the localities wherever possible. The creation of "institutional memory" through the retention of key persons in administration and the relevant stakeholders in the sub-regions and localities based on trust, openness and professional attitude to facilitate a successful integrated regional and rural development is believed (in the Austrian experts' view) as vital. Moreover as in the other case studies, at the regional level, the involvement of both local stakeholders (bottom-up) and regional authorities (top-down) to develop and implement projects (e.g. within initiatives like LEADER) and deliver programmes laid down in national and regional development plans is important. In Tyrol, lessons were learnt e.g. from the LEADER approach, where initially, the development was too much bottom-up, which resulted to some unnecessary duplication between localities.

New German Bundesländer and Altmark

Although the Altmark region has its own particularities as is the only region within the five selected case studies that belongs to a former ex-communist regime there are still some lessons to be learnt since the country's reunification. Indeed, rural areas within the region and East Germany as a whole did not benefit immediately from the reunification as harsh economic conditions led to a sharp decline of (particularly young) population, which left rural areas in search for better employment opportunities. However, the region tried to build on its strengths. Amongst these, social capital, i.e. the partnership between authorities (government, social partners, NGOs) of different administrative levels, was seen as an important asset and a beneficial tool in the development of rural policy. Although networks developed informally immediately after reunification, they strengthened after 1994 when two districts of the region agreed to collaborate in drafting a joint regional development concept. The concept sought to build on indigenous resources and create regional development priorities, and promote Altmark as a regional brand. Since then, all regional activities are based on collaborative discussion, planning and agreement and overall it is believed that this approach should be fruitful in the long-term. There is also a strong "regional identity". However, in order to achieve success in the region it is important to learn how to attract (public) funds and understand and fulfill the (administrative) requirements of funders.

Overall it can be concluded that there is no unique model for managing rural transition. There is no single determining factor of a region's economic trajectory. Rather the latter depends on the interplay between internal and external driving forces. The combination of various endogenous and exogenous forces is consistent with the neo-endogenous development theory, but much of the economic development of these rural regions is not necessarily in line with the spirit of the theory. This requires policies to enhance local

(institutional) capacity and actors' participation, to mobilise internal resources and cope with the external forces, best meeting local needs. The dynamic and meaningful participation of local actors in local and external networking is of utmost importance. Making the most of EU membership requires an understanding of funding systems and retention of such knowledge - "institutional memory". Linked to this is the setting up of appropriate EU structures and institutions which act in accordance with the interests of the region and are able to attract the EU funds.

Table 10 Policy and Administrative Lessons drawn from each case study

Ireland and BMW	<ul style="list-style-type: none"> ▪ Creation of appropriate structures and institutions, to attract EU funds ▪ <i>"deliver what you say you will do"</i> ▪ a strong, sustainable and responsible capacity building ▪ a clear regional strategy to which the government is committed ▪ decentralisation of responsibilities and a broader involvement of local communities should be fostered & encouraged
Spain & Navarra	<ul style="list-style-type: none"> ▪ design and implementation of rural development measures should be based on a <i>territorial and integrated</i> approach with funds' allocation based on the <i>needs</i> of rural areas ▪ larger involvement of regional & local authorities & other local actors in the design & implementation of rural development plans ▪ development of innovative initiatives & greater participation of local entrepreneurs in the rural development process ▪ the need to invest in social capital - networking ▪ improvement of infrastructure, particularly transport and IT ▪ investing in human capital through education and training
Sweden & Skåne	<ul style="list-style-type: none"> ▪ devolved rural development (RD) programming & implementation - a more flexible, regionalised framework allows for more creative inputs from local actors ▪ integration of RD in the broader national policy context ▪ a balance between RD measures in order to ensure a more integrated rural development ▪ build social capacity through a "bottom-up" involvement of local actors so to respond to regional variations
Austria & Tyrol	<ul style="list-style-type: none"> ▪ the implementation of an integrated territorial approach built around pluriactivity & the preservation of traditions, environment & cultural landscape ▪ the role of an "institutional memory" based on trust, openness and professionalism to facilitate a successful integrated regional and RD ▪ involvement of both local stakeholders (bottom-up) and regional authorities (top-down) to develop & implement projects within programmes like LEADER and national / regional development plans ▪ a dual education system (agriculture & one additional profession) & continuing training of farmers
New German Bundesländer & Altmark	<ul style="list-style-type: none"> ▪ investing in social capital (networking) ▪ a partnership between authorities (government, social partners, NGOs) at different administrative levels for joint policy development ▪ develop knowledge on how to attract (public) funds and understand / fulfill the (administrative) requirements of funders

Source: Own composition based on study area research

6 POLICY CONCLUSIONS AND RECOMMENDATIONS

Csaba Csaki, Attila Jambor, Luka Juvančič, Johan Swinnen and Kristine van Herck¹⁵

Structural change in agriculture and rural livelihoods in the NMS is of utmost importance not only for those which are directly affected by these changes, but also for EU and national policy makers following the cohesion objective of the EU and pursuing the European Employment and Lisbon Strategy. This section of D10.2 identifies and synthesises the policy implications of the results of the analyses for the NMS and for established Member States.

The chapter starts with the hidden bias problem against small farms and their policy relevance followed by the development of and lessons learned from rural labour markets. Policy conclusions and recommendations on competitiveness enhancement and integration of rural related policies are also discussed in detail. The chapter closes with policy highlights derived from SCARLED results.

6.1 Hidden bias against small farms

Hidden bias against small farms has always been a key issue of agricultural and rural development policies. Definition of the problem together with suggested EU-level actions and national level priorities is provided below.

6.1.1 Definition of the problem

The previous chapters presented various dimensions of the “small farms” problem in NMS, where this type of rural households is a predominant economic-social category. As small farms have been only partly subject to structural changes, their social and economic status has not been fully resolved. An important share of small farms still lives under the poverty line. The accession of NMS to the EU has not solved the problem of rural poverty, but has even deteriorated it in some aspects; it has contributed to the development of only a part of rural structures, but a majority of households have not succeeded in narrowing their relative lag behind these economic subjects and households.

The economic-social problem of small farms arises from the fact that the income from agriculture fails to provide them adequate social security, whereas income from other activities is less accessible due to various reasons; there are not enough available jobs within an accessible distance which would be suitable for this type of work force, therefore they are doomed to poverty or migration. After the accession, most migrants to more developed parts of the EU came from these areas and even caused social and political tensions there.

Another particular problem is the level of social security provided by national states. This is in general relatively low compared to that provided in more developed member states. Moreover, rural areas are additionally discriminated against, as a large part of the social security measures and programmes are earmarked for the urban poor.

¹⁵ Chapter 6 was written by Csaba Csaki and Attila Jambor except for Chapter 6.1. (written by Luka Juvančič) and Chapter 6.2. (written by Johan Swinnen and Kristine van Herck).

The EU has a complex system of instruments under the CAP; it would be expected that in particular the rural development policy, given the large amounts of available funds, contribute considerably to changes in rural areas of less developed NMS characterised by small and subsistence farms.

Our hypothesis is that the efficiency of the CAP measures aimed at balanced rural development and increasing the prosperity of this type of households has been relatively limited. It is our presumption that the reasons lie not only in the narrow and sector-specific orientation of most CAP measures but also in great complexity of the problem of small farms; in most member states experiencing this problem, there is a need for more integral solutions of various public policies. We will attempt to qualitatively confirm our hypothesis by elaborating on the effects of individual Pillar I and II measures of the CAP on the development of small farms as well as the effects of some national policies.

6.1.2 EU-level actions

The EU policies with potential impact on small farms are: the CAP Pillar I direct payment policy, various rural development measures as well as cohesion policy measures.

The prevailing direct payment policy in the NMS is the Simplified Area Payment Scheme. It includes simple flat rate payments for which no demanding conditions need to be met and they are, by definition, also available to small farms. These payments have a significant economic and development impact on agricultural companies or larger family farms, but not on small farms. A large part of them is excluded by the criterion of the minimum size of area per agricultural holding eligible for payments, as some NMS have extremely high thresholds (e.g. Poland). Besides, the level of these payments is relatively low for NMS, firstly, because it has been only gradually catching up with the EU level, and secondly, because of a relatively low total share of funds earmarked for NMS (the Baltic States, Romania and Bulgaria will receive 80-120 EUR/ha at most in 2013, compared to say Greece, the Netherlands and Belgium, whose payments exceed 400 EUR/ha).

According to our estimations, the income and development effects of direct payments have been negligible in the first phase of accession. A large part of the agricultural households have either been excluded or have been receiving the amounts from 50 to 200 EUR, which is not much in the given circumstances. They have some provisional social effects, but no impact on development or incomes, let alone on the environment, as is the case in some old EU Member States. The future reforms should deal more seriously with this problem, not just by raising the general levels of payments but by considering how to support the development of this segment of agriculture. If these payments have effects on incomes, it should be reconsidered how to redistribute funds from larger and richer to smaller producers. The possibility of payments per labour proposed by some stakeholders and not only per ha should be seriously considered. Regardless of its political and economic controversy, this would no doubt be a suitable measure contributing to a more socially-sustainable structure in NMS rural areas.

The measures of the axis 1 of the rural development policy are mostly aimed at raising the competitiveness of agriculture and forestry. According to the principles of the rural development policy, they should not be discriminatory in terms of the type of agricultural holding. But in practice, various measures are in their nature discriminatory against small farms. They have difficulties in assuring the funds for financial investment and in providing all the necessary documentation; besides, small farms cannot compete in the evaluation of applications with larger and more professional farms. Experience shows (evaluation reports for NMS) that all the measures aimed at supporting investment in agriculture, forestry, and supplementary activities at farms are in the first place suited to large producers. Small

producers perhaps benefit from the measure related to meeting the EU standards, which implies simpler investments and lower amounts of co-financing. Measures supporting the quality schemes are not widely present in this part of Europe.

The only axis 1 measures which could be at least theoretically beneficial for small farms are the subsistence farming and early retirement measures. But, as experience shows, they are not as efficient as it could be expected. Not many countries have decided to apply subsistence farming support. The aim of this measure is to allow small producers to obtain support for smaller investments only on the basis of very simple business plans. The countries which applied this measure (Hungary and Romania) report problems with implementation of this measure: first, access to beneficiaries, which is difficult to establish owing to poor performance of public services, and second, lack of private initiative. Besides, they also witness problems with control, as it is difficult to guarantee rational and correct (and above all non-corruptive) spending of public funds in the given political-economic conditions of these regions. To assure greater efficiency, funds for this measure would need to increase substantially, which would, however, mean less funds for other goals of rural development policy. The implementation of the subsistence farming support measure thus clearly highlights all the dimensions of problems related to public supports for small farms: they are on the one hand not eligible for large investment, but on the other hand, they face the problem of funds and control in case of small investments.

It has been a widespread opinion among some rural development experts as well as in some EU institutions that an early retirement measure could contribute to structural changes and to solving of the small farms problem. But this measure is not feasible in practice in this part of Europe. The problem is that first, it is very expensive, second, it would be difficult to pay the amounts that would actually represent any substantial social support from the relatively limited resources, and if this is so, they would not be proportionate with other social transfers (for unemployed and other). What these areas need is a proper social policy for rural population, which could not be replaced by the early retirement measure.

The situation for measures under the axis 3, which are predominantly intended for diversification of incomes, is similar to that of axis 1 measures. In these areas, the quality of human resources is, with some exceptions, too weak to allow them alternative sources of income, setting up micro enterprises, etc. This does not mean that such projects do not exist; what is questionable is their actual impact on the general economic situation in rural areas. Some individual solutions, which do not eradicate the real problem in these areas, cannot serve as an excuse for persisting in the current policy.

For the same reasons as listed above for direct payments, the measures under the axis 2 of rural development policy are also less efficient for small farms. Compensatory allowances for less favoured areas and payments for agricultural environmental measures are even less accessible to small farms because of the tough requirements imposed on producers; moreover, these measures are in general less present in the regions with the most subsistence farms and rural poverty. It is difficult to speak about the public goods related to the environment protection in the regions where people live below the poverty line, as solving the vital economic and social issues of the rural population has an advantage over the environmental issues, which are a priority in the developed part of the EU.

Summing up this analysis of the efficiency of rural development measures, it can be concluded that despite substantial funds earmarked for the countries and regions with small-farm structure of agriculture and rural poverty, these measures are not very efficient in solving the economic and social conditions on small farms. From this aspect,

this policy is less efficient; but rural development policy is primarily not intended for solving rural poverty problems. It is, therefore, a matter of concept. If the aim of the EU rural development policy is to solve this problem, it will have to adapt its instruments and policy implementation.

Cohesion policy is another important EU policy which, by definition, should have positive development effects on regions and thereby also on small farms. There are two types of projects or policies that are implemented in the predominantly rural regions affected by rural poverty: large cohesion infrastructural projects and social policy. The regions and new Member States characterised by small farms phenomenon benefit mostly from funds for large infrastructural projects (road and energy infrastructure). If such a project takes place in a rural area, it employs labour force from that area and in this manner also supports development on small farms, but the effects are indirect and not overly efficient in the short term. So, these effects are indeed present but negligible in terms of solving the problems of small farms. On the other hand, the social fund measures only seldom reach typical rural areas; they are primarily aimed at solving the industrial labour force problems and only in rare cases target labour force on small farms (perhaps only indirectly, for part-time activities). So, also this effect is less present.

6.1.3 National level priorities

Extensive funds of the EU development policies are, therefore, only indirectly and to a lesser extent aimed at solving economic and social problems of small farms and the related rural poverty. Are at least the national policies active and efficient in solving these problems? The usual answer to this question by those dealing with the problem of rural poverty and the need for redefinition of agricultural and rural development policy measures is that this is not the purpose of the national policy. This problem should be, in their opinion, primarily tackled by social policy. But since the latter is not an integral EU policy, it should be a part of national policies.

And this is where the problem lies. These are mostly the countries with neither a fully functioning welfare state infrastructure nor the proper entrepreneurial or innovation policies; the problem of small farms and rural poverty is therefore not even addressed, let alone solved. The main reasons are the lack of funds and public infrastructure, as well as the general negligence of this problem. In the pre-transition period, the attitude to rural areas was extremely discriminatory, as politics favoured only industrial development. Agricultural activity on small farms preserved its negative social connotation, and this has not changed much during the transition and after the EU accession.

NMS who are faced with the problem of small farms and rural poverty fail to solve this problem. They have not devised adequate agricultural, social or regional policies. The problem is often manifested in social protests of farmers, who do not call for a redistribution of the existing mechanisms but only for “fair prices” of agricultural products.

Hidden bias against small farms is a reality and it has its origins in the national priorities and development concepts of NMS. The situation became almost absurd with the EU accession, as the new policies and approaches fail to directly address the problem of rural poverty and their indirect effects are insufficient.

The problem of small farms and rural poverty can only be solved by a comprehensive reform and a changed approach of European policies, and above all by setting different priorities at national levels. As long as the elites in individual regions or member states are “ashamed” of this problem and try to conceal it, this problem will continue to “migrate”

to more developed parts of EU where it will cause new tensions and dent a very delicate social and political balance.

6.2 Development of labour markets

The development of rural labour markets has been one of the most important changes in NMS from an agricultural and rural development policy perspective. These changes as well as suggested EU-level actions and national level priorities are discussed below.

6.2.1 Definition of the problem

With EU accession and high economic growth rates in the past years, structural change in the NMS farming sector accelerated and the decline in the agricultural workforce has been stronger in the NMS than in the EU-15 in recent years. However, despite the declining share of agricultural employment in NMS, the agricultural sector remains important as it accounts for 4% of GDP and 15% of total employment in 2008. This is a large difference with the EU-15 where the share of agriculture in GDP is only 1.7% and its share in employment is 3%. There are also large differences among NMS. In countries like Hungary and the Czech Republic, agricultural employment declined already strongly in the early to mid 1990s and has since declined further.

In other countries, such as Slovenia, Latvia, Lithuania and Poland - countries with many small farms - there was much less outflow of labour in the first half of the 1990s. In fact, in several of these countries agriculture acted as a “buffer” and absorbed labour during early transition. In these countries agricultural employment gradually started declining in the second half of the 1990s as institutional reforms reduced labour constraints, and alternative employment developed. In Romania, on the other hand, agricultural employment continued to increase until 2001. In fact, Romania is the only country where employment increased in the 1996 - 2001 period. The increase in the latter period is mainly caused by the strong general economic decline in the 1996-1999 period, when the decline in industrial employment caused people to fall back on farming as a survival strategy. However, since 2001 agricultural employment has started declining in Romania, like in all other NMS.

In the rural areas of the poorest and least developed NMS, agriculture remains an important source of income as there is still a large proportion of the rural population employed in agriculture. For example, in 2006, the agricultural sector represented more than 40% of total employment in rural Romania and more than 30% of total employment in rural Bulgaria. Much of this is self-employment in small, semi-subsistence farms, which constrains structural change and economic growth in the agricultural sector. For these households a large proportion of their income come is in-kind income, and many of them live in poverty. Hence, it is clear that important restructuring needs to take place to fully integrate the agricultural sector and the rural areas of these poorer countries into the EU.

In the more developed rural regions of the NMS, rural employment involves new activities, such as the environmentally friendly landscape management and production of energy from biomass.

Well functioning rural labour markets are important for rural development as they contribute to a more optimal allocation of labour in the economy by reducing transaction costs of hiring labour and by facilitating farm surplus labour to find employment in other, more remunerative, sectors. In this way, well-functioning rural labour markets are essential, both for those employed in agriculture and those not. They are a major factor in

determining where people live, work and spend their income. Thus, in rural areas they determine people's incomes, their location, their opportunities and their well-being.

6.2.2 EU-level actions and national priorities

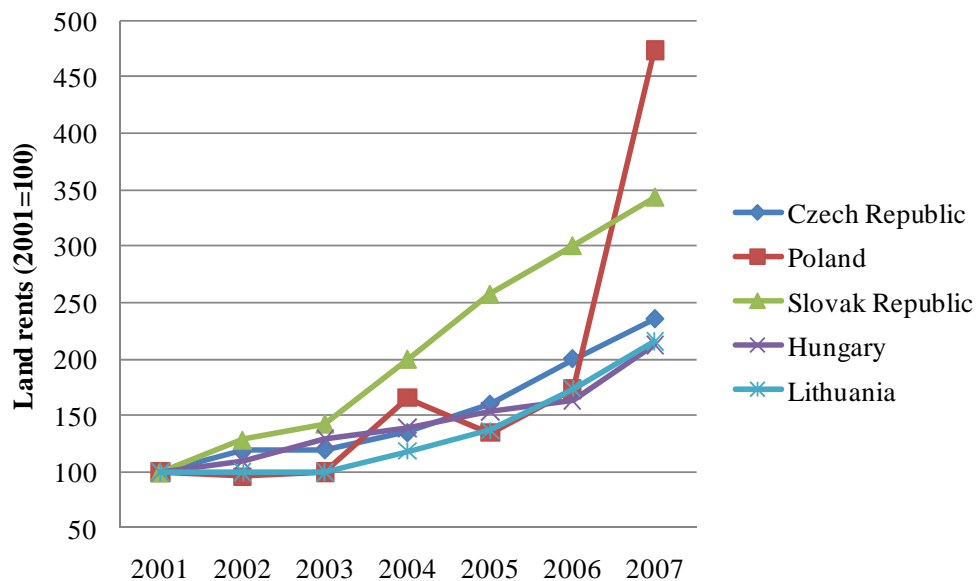
Farm support under the CAP has a series of effects on rural labour markets. First, by increasing farmers' income, it will motivate them to stay in agriculture and will reduce labour outflow and structural change. However, the strength of this effect depends strongly on a series of conditions. For example, the induced reduction of credit constraints, policy rent dissipation and poor targeting makes that the effect of subsidies on farmers' net income and labour allocation is less straightforward.

First, rent dissipation will reduce the impact of subsidies on farmers' income. OECD studies showed that the net income effects for farmers of commodity price supports (the old CAP) were around 20%, meaning that 80% of the payments ended up with non-farm groups, including input supplying companies and landowners. This rent dissipation is expected to be better in the NMS where more direct forms of payments are introduced, but these payments are still linked to land use and are driving up land prices (Ciaian and Swinnen, 2006) (Figure 7).

Second, with area payments credit constraints of farms have been relaxed leading both to increased investments and profits and to additional pressure on input prices. It may also lead to enhanced household investments in training and improved skills. This set of factors may have offsetting effects on farm employment, but it may positively affect rural labour markets by removing financial constraints and stimulating productivity. However, this effect may also constrain restructuring, in particular if it disproportionately benefits a specific group of farms (see next point).

Third, in the NMS there is unequal access to subsidies. In countries, where there is a strong bipolar farm structure, such as Poland, Hungary, Bulgaria and Romania, the smallest farms (and the poorest households) get only a marginal share of the subsidies. Small household farms (less than 1 hectare) are not eligible to receive SAPS payments and these households usually do not know how to apply for the rural development subsidies of Pillar II. For example in Romania, Cionga et al. (2008) estimate that only 1.2 million out of approximately 4.1 million farms in Romania get direct payments. Almost all of the 2.9 million farms who do not get direct payments are small, whereas all large farms receive the direct payments.

Figure 7 Evolution of land rents in selected NMS



Source: Vranken and Swinnen (2009: page)

Unequal access to subsidies will affect rural income inequality through direct and indirect effects. Directly, poor farmers will not be able to benefit from subsidies, while large farms will benefit from both direct payments and rural development subsidies. Indirectly, direct payments will reduce the credit constraints from farmers that receive them and will allow these farmers to increase their production and make investments. However, direct payments and credit constraints reductions will lead to higher input prices, including higher prices for land (see higher). Hence, unless there is better targeting of the subsidies (Pillar 1 and 2) (or alternative policies) inequality in general and in rural areas in particular is likely to become worse. Subsidies will lead to divergence rather than to convergence.

In summary, the combination of these sub effects makes the overall effect of subsidies on rural labour markets complex and certainly more nuanced than simple models predict. This is consistent with empirical evidence (Barley 1990; Goetz and Debertin 1996, 2001; Glauben et al. 2006; Breustedt and Glauben 2007; Benjamin 1994; Mishra and Goodwin 1997; Dewbre and Mishra 2002; El-Osta et al. 2004; Ahearn et al. 2006; Hennessey and Rehman 2008; Van Herck 2009). The fact that CAP subsidies do not necessarily constrain restructuring (and may even enhance it) is also consistent with the increase of labour outflow in the NMS since EU accession, instead of the reduction. This is in a way consistent with earlier experiences in the EU 15 (see also Swinnen, 2009).

That said, it is still recommendable (1) to improve the targeting of the subsidies (for reasons explained above) and (2) to move funds from Pillar I to Pillar II to more directly address constraints such as low skills, poor infrastructure, weak institutions, etc. On the whole, several factors affect structural change and the functioning of rural labour markets¹⁶. The following EU and domestic policies are important for stimulating structural

¹⁶ There is a large literature that studies structural change and labour adjustments in the

change in agriculture and for reducing constraints to more efficient functioning labour markets in NMS.

Investments in Rural Infrastructure

A key constraint for the efficient functioning of rural labour markets in the NMS is the rural infrastructure, which is still lagging behind compared to the EU-15 (European Commission 2009). Investments in rural infrastructure have several important effects on rural labour markets. First, they connect farmers to markets and improve farm profits by reducing transport costs. This could also help to integrate farmers in modern supply chains and directly or indirectly upgrade the quantity and quality of their production¹⁷. Second, investments in rural infrastructure improve the access of rural households to urban areas and other sectors. Third, it will stimulate investments in rural areas in non-farm activities and thus create more off farm employment in rural areas.

Stimulate Access to Rural Finance

In addition to investment in physical rural infrastructure, governments should also promote the development of institutions that facilitate access to finance. Access to capital and finance remains a problem in rural areas, not just for farms but also for non-farm enterprises. In both cases it constrains employment creation, and thus rural labour markets.

Facilitate and Encourage Investments in the Agro-Food Industry

Private investment of the agro-food industry and the development of modern supply chains can improve farmers' access to markets, technology, and inputs (including credit). Major advances have been made in most NMS over the past decade, especially through investment in the agro-food industry. Food companies have introduced contracts with farms which, in regions and sectors where farms face major market imperfections, assist farms both in accessing inputs and in bringing their supplies to the processing or marketing companies. However, despite the fact that improved access to output markets may come from private initiatives (e.g. processing firms that offer farm assistance programs), policies to support and facilitate these developments are needed (including the development of sufficient rural infrastructure). These policies can be integrated in the rural development schemes of the countries, but also in national action plans.

Upgrading Human Capital

On average, human capital is low in rural areas and many people employed in farming are old and lowly educated. In 2007, the majority of the farmers was older than 55 years in

agricultural sector. Studies on the determinants of labour adjustments in agriculture in the EU-15 include Weiss 1999; Pietola et al. 2003; Glauben et al. 2006; Breustedt and Glauben 2007; Gullstrand and Tezic 2008, while studies on the NMS include OECD 2001; Swinnen et al. 2005; Bojnec and Dries 2005; Ingham and Ingham 2005; Baum et al. 2006.

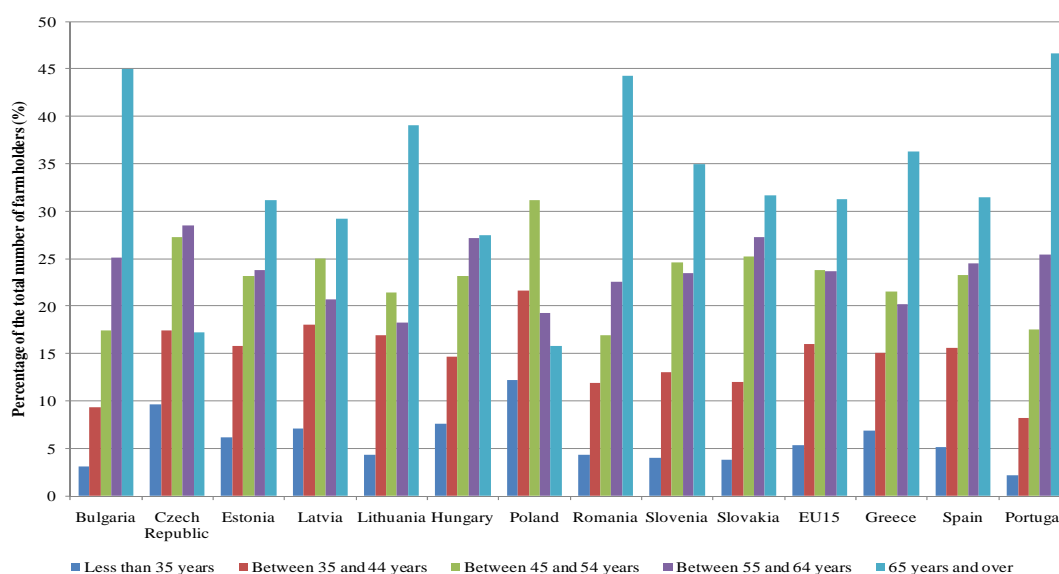
¹⁷ The results of a farm survey in five NMS (Hungary, Slovenia, Poland, Romania and Bulgaria) indicate that the lack of rural infrastructure as one of the most important constraints for commercialization and integration in output markets (Davidova et al., 2009).

the NMS. In Romania, Bulgaria, Lithuania and Slovenia, the percentage of farmers older than 65 years exceeds 30%, while the proportion of farmers younger than 35 years is below 5% (Figure 8).

However also here there are large difference between regions. In the Czech Republic, Poland and the Baltic states between 20% and 35% of the farmers received some agricultural training, while in Romania and Bulgaria, less than 8.5% of the holders received agricultural training.¹⁸

Moreover, overall education levels are low and only few farmers received agricultural education (Figure 4). Inadequate education is a very important constraint, not only for agricultural labour restructuring, but more generally for business development and economic activities in rural areas. The lack of education can be an important barrier for farmers to leave the agricultural sector for another sector (Huffman, 1980; Dries and Bojnec, 2004; Van Herck, 2009). In fact, studies find a non-linear relationship between human capital and farming activities. For example, the impact of education on the development of new farming enterprises is non-linear because beyond a certain level of education individuals tend to leave agriculture and choose for non-agricultural employment (Rizov and Swinnen, 2002).

Figure 8 Age Structure of the Agricultural Workforce in NMS and EU-15 in 2007



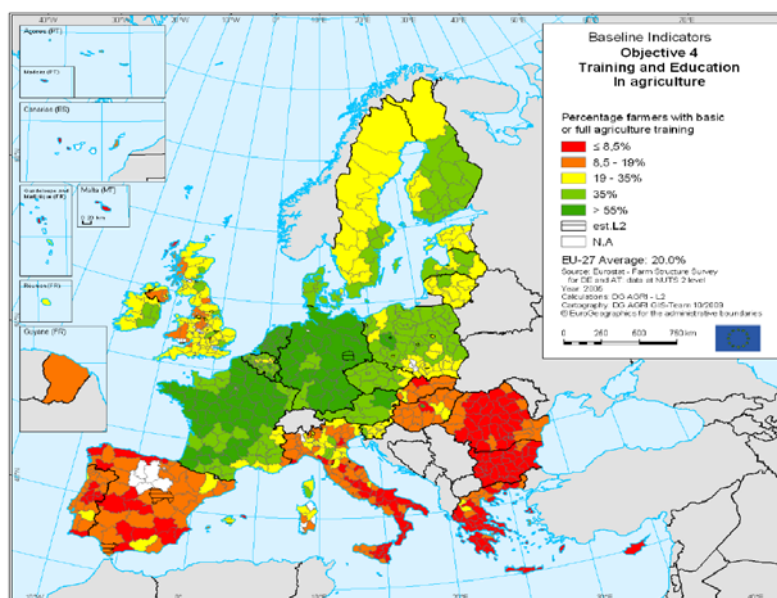
Source: ILO, Eurostat, national statistics

Investment in education would contribute to several objectives, consistent with the overall objective of rural development, such as the improvement of productivity of existing enterprises, the growth of new enterprises, reduction of unemployment, and a shift of

¹⁸ Note that average employment in farming being old and lowly educated is also the case in some EU-15 countries, such as Spain, Greece and Portugal. For example, in Portugal more than 45% of the agricultural labour force is older than 65 years and most of them did not received any agricultural training.

underemployed farm labour to other activities, thereby increasing labour productivity of the remaining farms. Investments to improve rural education could also reduce the incentives for young people to leave the rural areas. Different policies could be implemented in rural development plans. Increased education or vocational training could be stimulated by CAP subsidies under pillar II.

Figure 9 Education Structure of the Agricultural Workforce in NMS and EU-15 in 2005



Source: ILO, Eurostat, national

Adjustments in Social Security Systems

An important reason for high agricultural employment among old people is the weak pension system - or lack of it. While pensions have been increased in the past years, since they started from such a low base, the pension levels are still very low, especially in some of the poorer NMS. The problem of old people requiring farming to complement their low pensions is an important constraint for restructuring. Therefore, substantial changes in the pension or social security system maybe required to stimulate labour adjustments.

6.3 Competitiveness enhancement

Besides hidden bias against small farms and rural labour development issues, agricultural competitiveness is another key area of agricultural and rural development policies. After defining the problem, several policy recommendations and lessons regarding competitiveness enhancement are presented.

6.3.1 Definition of the problem

The region has rather significant potential for agricultural production, however, this potential is still underutilized. A significant progress can be observed in some of the NMS, which were able to increase both production and exports. However, as indicated by our study, there are a number of impediments limiting the competitiveness of farms in the region. In NMS, the fragmented land ownership and the lack of effective farm consolidation together with restrictions on land ownership and land markets are such serious impediments. Many of these countries suffer from the failures of capital and

financial markets as well as from the inadequate adaptation to changing market structures. Moreover, fragmented farming structures and complex public processes have also played a crucial role in limiting regional competitiveness. SCARLED research brought up important details on these factors as discussed in details.

6.3.2 Improved land policies

Our surveys resulted in a broad range of information upon land use patterns and land related issues. It is indicated that restrictive land policies (e.g. in Hungary) and the lack of land and farm consolidation has been a factor negatively influencing the utilisation of the advantages of the enlarged markets by constraining significantly the flow of outside capital to the agricultural sector. On the other side, liberal land policies (e.g. Baltic countries) helped agricultural sector to obtain more resources and utilise better the possibilities created by the accession.

A live debate is going on in the region on the major limiting factors of land policies. In almost all the countries, there are some limitations upon the ownership of agricultural land. The most heated issue is the foreign ownership of agricultural land. For some countries (e.g. Poland and Hungary), derogation was granted to ban foreign agricultural land ownership. There is a significant pressure upon the respective governments to seek for the extension of these derogations, while others propose revised land ownership legislation which would formally allow but significantly restrict foreign ownership.

Another impediment is the restriction of agricultural land ownership only to physical persons. The reason for this ban can be understood under the conditions of the early 90s. Nowadays, however, the existence of this regulation limits the move of capital into agriculture and restricts land markets. It is also questionable why absolute physical limits exist for physical persons to have agricultural land.

SCARLED surveys studied the options for small farmers to grow. There is a hard evidence that underdeveloped and not properly regulated lease markets represent significant constraints and improvements in almost all the countries would be strongly recommended.

The subdivision of land and the rigidity of rules on land use is a major obstacle for producers, especially those wanting to make investments. A key question for the future is whether the NMS is able to implement land consolidation measures allowing a more efficient use of land. Combined with restrictions regarding ownership, the fragmented land ownership is an enormous obstacle to development. Together with the well thought-out land policy, the easing or lifting of ownership restrictions could accelerate the influx of new resources into the sector and help the rehabilitation of animal husbandry and irrigation.

6.3.3 More effective capital and financial markets

The lack of adequate agricultural financing continues to be one of the most serious constraints to agricultural growth. In the NMS, the financing of agriculture has improved considerably since 1994 but still remains relatively weak. The new private financing institutions require managerial capacity building and are financially vulnerable. However, in the recent years, a significant share of the banking sector became foreign owned - this resulting in improved efficiency and profitability. The creation of an agriculture-oriented rural banking network has been progressing, indicating the establishment and increasingly active operations of agricultural credit co-operatives and financial institutions specializing in rural areas.

On the whole, however, the financing of primary agriculture, especially credit supply for the small farms, is not sufficient in the NMS. The recent economic crisis has made these problems even more serious. Bridge financing for EU projects practically does not exist for small farmers. Lending to smaller farms is considered as a very risky activity and done only exceptionally. It can be recommended that the respective governments and the EU give stronger priority to the financing of the small farming segment and promote small farm credits with conditional guarantees.

6.3.4 Farmer-friendly market structures

EU membership has made the NMS part of a large, rather competitive market. On the one hand, this market offers tremendous opportunities for their agricultural sectors; on the other hand, they are faced with significantly increased competition in their domestic markets. This situation is due to the rapid emergence of vertically coordinated food chains including supermarkets, hypermarkets and multinational agro-processing companies with regional procurement systems, thus creating new and much more competitive conditions both for producers and consumers; the market share of foreign-origin products has increased significantly. Due to very strong price competition, consumers are generally the beneficiaries of these changes. However, some of the cheap products on shelves can sometimes be of dubious quality due to use of the lowest cost raw materials and occasionally inappropriate ingredients. At the same time producers are not always able to adjust, or to cope with business practices employed by the large chains which are occasionally not entirely fair. The concentrated and Europe-wide procurement systems of the major chains create high requirements for suppliers and impose strong price pressures as well, especially for small farmers as our results suggest.

On the whole, it is apparent that the relationship between producers and the market is undergoing a major shift. Vertically organised food chains and the dramatically changing food trade are starting to dominate more and more. The most important tasks of the near future is to support the adaptation of producers, especially the small farmers, to make sure that they can fit in with the new market conditions. Cooperation among producers, small establishments in particular, needs support and stimulus to ensure market access for their products. We need to encourage sales through sales cooperatives so that their share approaches the figures in NMS. The production and marketing of local and specialty products on local markets should be supported.

6.3.5 Creating a more efficient farming structure

One of the most important outcomes of the SCARLED is the detailed analysis of post-reform farming structure in the countries studied. As a result of reforms, a mixed farming structure in the region containing combinations of large scale and small scale farms with the exception of Poland and Slovenia has been evolved. The relatively consolidated farm structure with the dominance of small farms proved to be advantageous for these two countries and especially for Poland. The consolidated structure brought higher level of asset endowment as well.

There have been significant changes in farming structures in all other NMS. The so called dual farm structures, meaning that a large number of very small farms and a small number of very large farms are operating at the same time, remained in most NMS even after EU accession with increasing differences. In countries with so called “dual” farming structure, both end of the farming are still suffering by a kind of “transition phenomena” (Swinnen-Rozelle, 2006). The small farms are generally too small and farmers are inexperienced and

lack of resources, while the large ones still have some heritage of the collective farming system with some embedded inefficiencies.

Our project brought some information on recent changes in the farming structure after accession. On the whole, 600,000 farms have disappeared in NMS. Some countries are still dominated by large farms as well as the gap between sizes of small and large farms decreased but is still high. Gross farm income increased in vast majority of cases in the countries analyzed due to introduction of CAP. The move towards a more efficient farming sector needs to be promoted both on EU and national levels. As small farms are continuously disappearing, policies have to provide adequate response to this problem. On the one hand, measures should be in place to support those small farmers able and willing to grow and survive. On the other hand, the exit of those who are unable to continue farming needs to be facilitated.

6.3.6 Public processes and implementation (administration)

No doubt that institutional measures and policy implementation needed to strengthen competitiveness are of key importance for the entire sector. Although SCARLED has not brought up too many details in this subject, we might conclude that this is a complex task which must include the further development of the regulatory system, the enhancement of knowledge and institutions.

The regulatory system of national agricultures is far too rigid, even dogmatic at times, which is characterised by practices ignoring the special conditions of the sector and by the inflexible enforcement of EU regulations. A more flexible regulation practice is needed, one focusing more on competitiveness, including a more 'production-friendly' environmental protection and a more 'farm-friendly' veterinary health services and labour rules made after due consideration of the special features of agricultural production.

Institutional reforms have accelerated in the NMS since 1995, simulated by the challenges of EU accession. Despite these tangible developments, the institutional system of agriculture requires further transformation in these countries. Reforms toward the ability to effectively integrate into the common market still remain one of the most pressing issues. In addition to technical and human capacity building in public administration, further qualitative development is required in practically all areas of the institutional systems for market-oriented agriculture, including consulting, training and research.

One of the main weaknesses of the agricultural and rural development policy in the NMS is that planning and implementation processes depend heavily on national and regional authorities. The administrative capacity and the commitment of the administration of NMS in the development of agricultural and rural development strategy is therefore of utmost importance.

The involvement of the civil society is also important. However, many countries have neglected the involvement of civil society, thereby limiting the quality of implementation and struggling with designing and implementing good programmes. Although the EU is now aware that integrated local approaches are more effective than sectoral subsidies to generate endogenous rural development growth.

6.4 Better integrated and targeted rural policies

Rural development policies have always played a crucial role in shaping rural livelihoods. The lessons of EU-15 suggest that there is no unique model for managing rural development as well as there is no single determining factor of a region's economic trajectory. Therefore, rural policies are required to enhance local capacity and actors'

participation, to mobilize initial resources and cope with the external forces, best meeting local needs (D8.6 and D8.7: Hubbard and Gorton, 2008). In light of these lessons, the future course of rural policies will be discussed here focusing on the evolvement of CAP and potential reforms.

6.4.1 CAP Reform Conducive for NMS

The European Union's Common Agricultural Policy has been a framework for rural development since the beginning of the 1990s. The growing debate about the future of the EU Budget post 2013 raises major questions about the future of the CAP. The public debate has already been launched in April 2010 and a formal Communication on the future of the Common Agriculture Policy (CAP) after 2013 is due to be published by the Commission in the Autumn/Winter 2010. As is to be expected, the major contributions to the debate so far focus on a range of different issues.

First of all, it is worth looking at whether the planned reform can put a halt to the sliding competitiveness of European agriculture and whether the planned reform of EU agricultural policy is an adequate response to tackle the latest global challenges. The answer is a 'no' rather than a 'yes'. It seems that the EU can only imagine reforms if the principle of multifunctionality is preserved, meaning that the EU does not wish to treat agriculture merely as an economic sector. This could further reduce the competitiveness of European agriculture as adding more emphasis to environmental and animal welfare aspects imposes major costs on farmers. Stricter cross-compliance requirements will put EU farmers and producers in an even more difficult position compared to their competitors in the global market. Looking at the conditions in the NMS as mapped by SCARLED, a more competitiveness focused CAP would be beneficial for the region. Agriculture still remains the major source of income for a large number of rural inhabitants and an agriculture supposed to respond to a large number of environmental and animal welfare restrictions might not be able to serve as a proper source of income.

Second, the wide-scale opening up of the markets, which might happen due to the results of the WTO talks, will increase competition within the EU. Imports from countries outside the EU producing more effectively could soar. A planned reform of the CAP, leading to the cutting back of payments and increasing the role of national budgets, will create a particularly tough situation in the NMS where competitiveness of agriculture is weak, the number of people employed in the sector is high and the resources of the national budgets are limited.

Third, another important area of future CAP reform is evolved around the common nature of the policy. Does one agricultural policy fit the whole European Union? Can a single policy measure be adapted to all rural areas? It is apparent that the current CAP is designed based on the conditions of EU-15 countries. The experiences of the first five years in the new member countries indicate that a uniform system even with the possible modifications does not fully fit to the conditions of the new member countries and especially to the poorest segments of NMS (Csaki and Jambor, 2009). Our study results indicate that the current CAP is not targeted effectively to the NMS. There are at least four main reasons for this: (1) the lack of convergence between rural areas in NMS and EU-15; (2) differences in farm structures in terms of both size and organizational type; (3) an inappropriate balance between the two CAP Pillars (direct support and Rural Development); (4) inadequate policy to implement rural development measures in the NMS. Therefore, any change of the system of the CAP should lead to a better consideration of diversity inside European Union.

It is crucial to make sure that the new scheme created by the reforms provides an adequate framework to remedy the special problems for the newcomers. As for incomes in agriculture and the average size of an agricultural business, the NMS are in a radically different situation. Today's CAP model meets the needs and the more or less homogenous circumstances of the EU-15. Although the current system allows for certain areas to be treated specially, it is not suitable for providing real assistance to the millions of small farms working in the NMS, let alone to tackle rural poverty, although the latter goes far beyond agriculture in the strict sense of the word. So it is doubtful just how far the maintenance of the single and largely uniform CAP lies in the interest of poorer countries.

Moreover, the debate on competitiveness enhancement versus payments for public goods also has a critical role in forming the future of European rural areas. On the one hand, it is clear that agricultural production is still an important (though not the only) function of agriculture and policies concerning agricultural competitiveness should help producing value added products and selling them in the domestic and international markets. On the other hand, the idea that certain forms and patterns of farming should be preserved for their social, cultural and environmental benefits continues to be an important part of the CAP debate. The multifunctional role of agriculture provides several public goods as by-products to its market commodities. Landscape management, biodiversity, wildlife habitat preservation and water-land-air management are all common examples of 'goods' also provided by agriculture. However, the lack of a market to provide these public goods creates a need for public policy to intervene in order to support the farming systems which deliver these goods. The proper allocation of funds between these two aims will fundamentally determine the future of European agriculture and rural development. SCARLED results underline that the new CAP should ensure that agriculture can continue contributing to employment and the economy of rural regions by maintaining agricultural production possibilities throughout the EU. Of course, it should also contribute to the preservation of local landscapes, social and natural values and heritage by creating and maintaining a market for public goods.

6.4.2 Better coordination of all rural related policies

Currently, rural related policies including support are pursued by different instruments. One major source of support is under CAP (Pillar 2), which is supplemented by structural and cohesion funds as well as national budget funds. Unfortunately, these different avenues are managed by different ministries and institutions and have never been integrated under rural label. SCARLED project as a whole calls for an integrated treatment of rural livelihoods. Accordingly, these funds should be managed through an integrated way.

As an addition, better coordination of both state and private activities is a key priority. The development of agriculture and the entire rural space is based on the private sector. However, support from the state is still indispensable as is efficient control. Thus the requirements of production and the market require more efficient cooperation between the private and public sectors. The role of the state has to move away from direct intervention and financial support. Given the circumstances of agricultural and food markets in transition, the most important task of the state is to guarantee safe and wholesome food production and to gradually develop the rules of operation and the institutional infrastructure necessary for the functioning of the market.

It is not only agriculture that is undergoing change but also the surrounding economy. Creating a new form of synthesis between farming and rural areas is extremely important, where agricultural production and the non-agricultural economy of the countryside form an

integral unit. Within this framework, local initiatives and the role of small communities are invaluable, especially in combination with effort made to help improve the quality of life in rural areas in general and help such areas catch up.

6.4.3 Targeted policies for subsistence farms

As it was indicated, the so called small farmers issue is one of the key areas of rural NMS. The NMS agriculture is characterised by a diversity of producers and businesses. The ‘small establishment versus large establishment’ debate has been going on for years, often shifting into the political arena. Effective agricultural production can take place at establishments of various sizes. Both small and large establishments have their advantages under certain circumstances and human conditions. Therefore, readying us for the challenges of the future requires that agricultural policy accept this diversity. Consequently, it is necessary to apply a differentiated agricultural policy, one which does not apply the ‘one-size-fits-all’ approach but which provides support with tools meeting the unique features of the specific type of establishment. Small and medium size establishments require effective support adjusted to their conditions and needs. This is why due emphasis must be given to providing adequate assistance to small establishments to help them develop and adapt to market conditions.

The majority of small farms in the region is subsistence oriented and have only marginal contacts with markets as our surveys suggest. Most of these contacts are with local markets or in the form of direct sales from the farm. They have practically no direct relations with large retailing systems. Beyond local markets, they sell to wholesalers and to the processing industry. Impacts of retail revolution can be felt by them via increased demands and pressures from the wholesaling and processing side. The integration of small farms to vertical chains requires fundamental change on the side of small farms as well. A large portion of them are not willing or not able to make these changes. These farms will either maintain part time, subsistence nature providing only additional income or disappear, providing scope for consolidation of the rest. However, many of the small farmers will become more commercial, increase size, improve technology and will cooperate to cope with the challenges of vertical chains. Policies should target the latter group supporting them in this process.

Moreover, small farmers have difficulties accessing funds from pre-accession and EU CAP related investment support programmes. In all the countries small farmers were de facto excluded from the SAPARD funds provided to improve competitiveness during the EU accession period due to the nature of the program. Similarly, CAP Pillar 2 resources are out of reach for most of the small farmers with the exception of the support to semi-subsistence farming. The design of Pillar 2 programs do not take into account that small farmers have limited own resources and it is very difficult for them to obtain credit for bridge financing. As an addition, the very small farms are excluded from direct payments as well. Our results indicate that this situation should be changed and efforts should be made in order to guarantee that higher portion of CAP funds are accessible for small farmers.

6.4.4 Actions needed to alleviate significant rural poverty

The study highlights the increased rural poverty in the region during the process of structural change. This phenomenon has to be fully recognized both on EU and national levels. The study also led to important conclusions regarding the complexity of rural poverty and about the potential difficulties to deal with this problem.

Though this is beyond of the scope of this investigation, on the basis of SCARLED, it can also be concluded that a complex approach and a high profile programme is needed to alleviate rural poverty in the region. Agriculture obviously will remain a significant source of employment and income in rural areas, therefore the development of agriculture at the same time is the essential foundation for further fight against poverty. This programme, however, needs to be broader than traditional rural development efforts, including the issues of rural non-farm economy and improving education as well as rural-urban linkages.

6.5 Policy highlights

The multifaceted complex nature of SCARLED has led to a broad range of policy conclusions as discussed above. In the following, the major lessons are summarized.

1. The transition of the 1990s and 2000s as well as the EU accession has made significant impact upon the structure and the status of rural livelihoods in the region. The integration into the EU has made a visible positive impact on all aspects of the rural life. At the same time, rural-urban gaps have widened and rural poverty has increased and became apparent.
2. Agriculture is still a rather important economic sector in most of the rural areas, however, it is not the major source of income in most of rural families.
3. The large number of subsistence and semi-subsistence farms is a special characteristic of NMS. SCARLED has brought up a large analytical evidence regarding the operation and motivation of these farms. These farms are hardly comparable to any segments of EU-15 farming sector and require special attention and policies. Currently, CAP provides almost nothing to these farms and the change of this situation with a policy package focused on small farms is highly needed.
4. Rural employment and the development of rural labour markets have been deeply discussed by SCARLED as a crucial factor of future development. The study highlights the critical important actions needed to increase and diversify rural employment and income earning possibilities.
5. The region has rather significant potential for agricultural production, however, this potential is still underutilized. However, as indicated by our study, there are a number of impediments limiting the competitiveness of farms in the region. In NMS, the fragmented land ownership and the lack of effective farm consolidation together with restrictions on land ownership and land markets are such serious impediments. Many of these countries suffer from the failures of capital and financial markets as well as from the inadequate adaptation to changing market structures. Moreover, fragmented farming structures and complex public processes have also played a crucial role in limiting regional competitiveness.
6. Rural development policies have always played a crucial role in shaping rural livelihoods. The lessons of EU-15 suggest that there is no unique model for managing rural development as well as there is no single determining factor of a region's economic trajectory. Therefore, rural policies are required to enhance local capacity and actors' participation, to mobilize initial resources and cope with the external forces, best meeting local needs.
7. The CAP plays a crucial role in agriculture and rural development in the NMS. The study brought up three lessons for consideration for future CAP reform. First, it is evident that a fully uniform CAP only partially addresses the needs of NMS. Second, the region's agriculture is not ready for a CAP which operates mainly by provision of public goods,

competitiveness enhancement payments seems to be still needed. Third, the inclusion of small farms in the region in the CAP should be achieved.

8. Currently, rural related policies including support are pursued by different instruments. One major source of support is under CAP (Pillar 2), which is supplemented by structural and cohesion funds as well as national budget funds. Unfortunately, these different avenues are managed by different ministries and institutions and have never been integrated under rural label. SCARLED project as a whole calls for an integrated treatment of rural livelihoods. Accordingly, these funds should be managed through an integrated way.

9. The study highlights the increased rural poverty in the region during the process of structural change. This phenomena has to be fully recognized both on EU and national levels. It can also be concluded that a complex approach and a high profile programme is needed to alleviate rural poverty in the region. This approach, however, needs to be broader than agricultural and traditional rural development efforts, including the issues of rural non-farm economy and improving education as well as rural-urban linkages.

10. SCARLED project demonstrates the potential values of a complex research on ongoing changes in rural areas of NMS. Further investigations are highly recommended.

List of references

- Ahearn, M., H. El-Osta and J. Dewbre (2006). "The Impact of Coupled and Decoupled Government Subsidies on Off farm labor participation of US farm Operators", *American Journal of Agricultural Economics*, Vol. 88(2), pp. 393-408.
- Ajzen, I. (1985). *From intentions to actions: A theory of planned behaviour*, in: Kuhi J. and J. Beckmann (eds.): *Action-control: From cognition to behaviour*, pp. 11-39, Springer, Heidelberg, Germany.
- Ajzen, I. (2002). *Constructing a TpB questionnaire: Conceptual and methodological considerations*: <http://www-unix.oit.umass.edu/~ajzen/>, last access 21st April 2010.
- Alam, A., Murthi, M., Yemtsov, R., Murrugarra, E., Dudwick, N., Hamilton, E. & Tiongson, E. (2005). *Growth, poverty, and inequality: Eastern Europe and the former Soviet Union*, World Bank Washington, DC.
- Anríquez, G. & Stamoulis, K. (2007). *Rural development and poverty reduction: Is agriculture still the key?* ESA Working Paper No. 07-02 FAO, Rome, Italy.
- Balmann, A., Schaft, F. (2008): Zukünftige ökonomische Herausforderungen der Agrarproduktion: Strukturwandel vor dem Hintergrund sich ändernder Märkte, *Politiken und Technologien*. Archive für Tierzucht - Archive for Animal Breeding 51 (2008) Sonderheft, 13-24.
- Bański, J. (2004): *The development of non-agricultural economic activity in Poland's rural areas*. In *Changing functions of rural areas in the Baltic Sea Region*, Bański, J. (ed.): 31-43, Warsaw.
- Brown, D.L., and K.A. Schafft (2002). Population deconcentration in Hungary during the post-socialist transformation. *Journal of Rural Studies* 18: 233-244.
- Barkley, A.P. (1990). "The Determinants of the Migration of Labor out of Agriculture in the United States, 1940-85.", *American Journal of Agricultural Economics*, Vol. 72(3), pp. 567-573.
- Benjamin, C. (1994). "The growing importance of diversification activities for French farm households", *Journal of Rural Studies*, Vol.10 (4), pp 331-342.
- Breustedt, G., and T. Glauben (2007). "Driving Forces behind Exiting from Farming in Western Europe", *Journal of Agricultural Economics*, Vol. 58(1), pp.115-127.
- Bojnec, S. and L. Dries (2005). "Causes of Changes in Agricultural Employment in Slovenia: Evidence from Micro-data", *Journal of Agricultural Economics*, Vol. 56(3), pp. 399-416.
- Buchenrieder, G. (2003). Overview of poverty impacts of and policy options for non-farm rural employment. XXVth International Conference of Agricultural Economists (IAAE) on "Reshaping Agriculture's Contributions to Society". Durban, ZA.
- Buchenrieder, G., Hanf, J.H., and A. Pieniadz (2009). 20 Years of transition in the agri-food sector, *Agrarwirtschaft*, Vol. 58, No. 7, pp. 285-293.
- Ciaian, P. and J.F.M. Swinnen (2006). "Land Market Imperfections and Agricultural Policy Impacts in the New EU Member States", *American Journal of Agricultural Economics*, Vol. 88, pp. 799-815.
- Cionga, C., Luca, L. and C. Hubbard (2008). "The impacts of Direct Payments on Romanian Farm Income: Who Benefits from the CAP?", Paper prepared for the 109th EAAE Seminar "The CAP after the Fishler Refrom: National Implementations, Impact Assessment and the Agenda for Future Reforms, Viterbo, Italy, November 20-21st.

- Cochrane W. (1958). *Farm prices, myths and reality*. University of Minnesota Press: Minneapolis.
- Coelli, T.J. and Rao, D.S.P. (2005). Total Factor Productivity Growth in Agriculture: A Malmquist Index Analysis of 93 Countries, 1980-2000. *Agricultural Economics*. 32:115-134.
- Csaki, Cs., Forgacs, Cs., Milczarek-Andrzejewska, D. & Wilkin, J. (eds.) (2008). *Restructuring Market Relations in Food and Agriculture in Central and Eastern Europe*, Agroinform Publisher Co Ltd., Budapest.
- Daskalopoulou, I. & Petrou, A. (2002). Utilising a farm typology to identify potential adopters of alternative farming activities in Greek agriculture. *Journal of Rural Studies*, 18, pp. 95-103.
- Davidova, S. (2008). *Implementation of Single Area Payment Scheme in The EU New Member States*. The 109th Seminar of the European Association of Agricultural Economists. Viterbo, Italy, 20th-21st November.
- Davidova, S., Fredriksson, L. and A. Bailey (2009). "Subsistence and semi-subsistence farming in selected EU new member states", *Agricultural Economics*, Vol. 40(1), pp. 733-744
- Davis, B., Winters, P., Carletto, G., Covarrubias, K., Quinones, E., Zezza, A., Stamoulis, K., Bonomi, G. & DiGiuseppe, S. (2007). *Rural Income Generating Activities: A Cross Country Comparison*. ESA Working Paper No. 07-16. FAO, Rome, Italy.
- de Janvry, A. & Sadoulet, E. (2002). World Poverty and the Role of Agricultural Technology: Direct and Indirect Effects. *Journal of Development Studies* 38: 1-26.
- Dewbre, J and A Mishra. (2002). 'Farm Household Incomes and US Government Program Payments', Selected paper for presentation at the 2002 AAEA meetings, Long Beach, California, July 28-31.
- DFID (2000). *Sustainable livelihoods guidance sheets*. London, UK: Department for International Development (DFID), www.livelihoods.org/info/guidance_sheets_rtf/ssect8glo.rtf (accessed in September 2004)
- Dorbritz, J. (2000). *Europäische Fertilitätsmuster*. Zeitschrift für Bevölkerungswissenschaft 25: 235-266.
- EC (2004). *Third progress report on cohesion: Towards a new partnership for growth, jobs and cohesion*. Brussels.
[http://ec.europa.eu/regional_policy/sources/docoffic/official/reports/pdf/interim3/com\(2005\)192full_en.pdf](http://ec.europa.eu/regional_policy/sources/docoffic/official/reports/pdf/interim3/com(2005)192full_en.pdf) (accessed January 2008).
- EC (2008). *Poverty and social exclusion in rural areas*. Final Study Report. European Commission, Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit E2, Brussels.
- EC (2009). *Mission statement: Directorate-General for Agriculture and Rural Development, Commission for the European Communities*, Brussels, Eurostat FSS data (2007). Eurostat "Agriculture" database:
<http://epp.eurostat.ec.europa.eu/portal/page/portal/agrculture/data/database>.
- EC (2010). *Employment in rural areas*.
http://ec.europa.eu/agriculture/rurdev/employment/index_en.htm
- El-Osta, H., Mishra, A. and M. Ahearn (2004). "Labor Supply by Farm Operators Under "Decoupled" Farm Program Payments", *Review of Economics of the Household*, Vol.2(4), pp. 367-385.

- Eurostat FSS data (2007). Eurostat "Agriculture" database:
<http://epp.eurostat.ec.europa.eu/portal/page/portal/agriculture/data/database>
- European Commission (2008). *"Rural Development Report"*, Brussels: Directorate-General for Agriculture and Rural Development.
- European Network for Rural Development (2010). *Semi-subsistence farming in Europe: concepts and key issues*. Background paper prepared for the seminar "Semi-subsistence farming in the EU: current situation and future prospects", Sibiu, Romania 21-23 April 2010. European Network for Rural Development (ENRD) Brussels, http://enrd.ec.europa.eu/app_templates/filedownload.cfm?id=FB3C4513-AED5-E24F-E70A-F7EA236BBB5A, last access 9th May 2010.
- Eurostat (2010). *Combating poverty and social exclusion*. A statistical portrait of the European Union 2010. Luxembourg: Publications Office of the European Union.
- Frątczak, E., and A. Ptak-Chmielewska (2001). *Fertility and family life cycle changes in Poland and the second demographic transition*. Poster presented at EuroConference on Family and Fertility Change in Modern European Societies, Explorations and Explanations of Recent Developments, http://www.demogr.mpg.de/Papers/workshops/010623_paper12.pdf (accessed January 2008).
- Glauben, T., Tietje, H. and Weiss, C. (2006). "Agriculture on the Move: Exploring Regional Differences in Farm Exit Rates in Western Germany," *Review of Regional Research*, Vol. 26, pp. 103-118.
- Goetz, S.J. and D.L. Debertin (1996). "Rural Population Decline in the 1980s: Impacts of Farm Structure and Federal Farm Programs", *American Journal of Agricultural Economics*, Vol. 78(3), pp. 517-529.
- Gorton, M., Douarin, E., Davidova, S. & Latruffe, L. (2008). Attitudes to agricultural policy and farming futures in the context of the 2003 CAP reform: A comparison of farmers in selected established and new Member States. *Journal of Rural Studie*, 28 (3): 322-336.
- Gullstrand, J. and K. Tezic (2008). "Who leaves after entering the primary sector? Evidence from Swedish micro-level data", *European Review of Agricultural Economics*, Vol. 35(1), pp. 1-28.
- Hawkins, E. A., Bryden, J., Gilliatt, N. & MacKinnon, N. (1993). Engagement in agriculture 1987-1991: a west European perspective. *Journal of Rural Studies* 9: 277-290.
- Hennessy, T. C. and T. Rehman (2008). "Assessing the Impact of the 'Decoupling' Reform of the Common Agricultural Policy on Irish Farmers' Off-farm Labour Market Participation Decisions", *Journal of Agricultural Economics*", Vol. 59(1), pp.41-56.
- Huber, P. (2007). Regional Labour Market Developments in Transition: A Survey of the Empirical Literature. *The European Journal of Comparative Economics* 4: 263-298.
- Huffman, W.E. (1980). "Farm and Off-farm Work Decisions: The Role of Human Capital", *Review of Economics and Statistics*, Vol. 62(1), pp.14-23.
- Ingham, H. and M. Ingham (2005). "Labour flows into and out of Polish agriculture: A micro level analysis", Working Paper 002169, Lancaster University Management School, Economics Department, Lancaster, UK.
- Konduru, S., Bjornson, B. (2005). Changing Factor Income Shares in Agri-Food Industries. *Journal of Agricultural and Applied Economics*, 36/3: 747-763.
- Kontuly, T. (1998). *Contrasting the counterurbanisation experience in European nations*. In Migration into rural areas, Boyle, P., and K. Halfacree (eds.): 61-78, Chichester.

- Kupiszewski, M. (2005). *Migration in Poland in the Period of Transition - the Adjustment to the Labour Market Change*. PIE Discussion Paper Series March 2005. <http://www.ier.hit-u.ac.jp/pie/Japanese/discussionpaper/dp2004/dp266/text.pdf> (accessed January 2008).
- Macours, K. & Swinnen, J. (2008). *Rural-urban poverty differences in transition countries*. *World Development* 36: 2170-2187.
- Martins, C. and F. Spendlingwimmer (2009). *Farm Structure Survey in Romania - 2007*. Eurostat Statistics in Focus 80/2009. KS-SF-09-080-EN-N, European Communities.
- McConnell, D. & Dillon, J. (1997). *Farm management for Asia: a systems approach*. FAO Farm Systems Management Series 13, FAO, Rome, Italy.
- Mishra A. and B. Goodwin (1997). "Farm Income Variability and the Supply of Off-farm Labor", *American Journal of Agricultural Economics*, Vol. 79, pp. 880-887.
- Möllers, J. (2006). Außerlandwirtschaftliche Diversifikation im Transformationsprozess - Diversifikationsentscheidungen und -strategien ländlicher Haushalte in Slowenien und Mazedonien, *Studies on the Agricultural and Food Sector in Central and Eastern Europe*, Vol. 35, Leibniz Institute of Agricultural Development in Central and Eastern Europe (IAMO), Halle (Saale), Germany.
- Möllers, J. and Buchenrieder, G. (2010). *Romania Rural Pensions* (Economic and Sector Work, ESW). Deliverable for World Bank consulting service 100026634. Halle: IAMO.
- Mundlak, Y. (2005). Economic growth: Lessons from two centuries of American agriculture. *Journal of Economic Literature* 43/4: 989-1024
- Mundlak, Y., Butzer, R., Larson, D.F. (2008). *Heterogeneous technology and panel data: The case of the agricultural production function*. Rehovot: The Center for Agricultural Economics Research, Discussion paper 1.08, 2008.
- NIS (2007). *Romanian Statistical Yearbook 2007*, National Institute of Statistics, Bucharest, Romania.
- NIS (2008). *Farm Structural Survey 2007*, National Institute for Statistics, Bucharest, Romania.
- OECD (1994). *Creating rural indicators for shaping territorial policy*. Paris, F: Organization for Economic Cooperation and Development (OECD).
- OECD (2001). "Market Effects of Crop Support Measures", Organization for Economic Cooperation and Development, Paris.
- OECD (2005). *Regions at the glance*. Paris, F: Organization for Economic Cooperation and Development (OECD).
- OECD (2006). *The New Rural Paradigm: Policies and Governance*, Paris, France, OECD Publishing.
- Pietola, K, Väre, M. and A. Oude Lansink (2003). "Timing and type of exit from farming: farmers' early retirement programs in Finland", *European Review of Agricultural Economics*, Vol.30(1), pp. 99-116.
- Rios, A. R., Masters, W. A. & Shively, G. E. (2008). *Linkages between Market Participation and Productivity: Results from a Multi-Country Farm Household Sample*. Selected Paper, 461840, 27-29.
- Rizov, M. and J.F.M. Swinnen (2004). "Human capital, market imperfections and labour reallocation in transition", *Journal of Comparative Economics*, Vol. 32(4), pp. 745-774.
- Rural Poland (2006). *Rural Poland*. Report on the Condition of Rural Areas. FDPA, Warsaw.

- Ruttan, V.W. (2002). Productivity growth in world agriculture: sources and constraints. *The Journal of Economic Perspectives* 16: 161-184.
- Shucksmith, M. & Herrmann, V. (2002). Future changes in British agriculture: projecting divergent farm household behaviour. *Journal of Agricultural Economics*, 53: 37-50.
- Sobotka, T. (2004). *Postponement of Childbearing and Low Fertility in Europe*. Dissertation Rijksuniversiteit Groningen. Amsterdam, Netherlands. <http://dissertations.ub.rug.nl/FILES/faculties/rw/2004/t.sobotka/thesis.pdf> (accessed January 2008).
- Swinnen, J.F.M., Dries, L. and K. Macours (2005). "Transition and Agricultural Labour", *Agricultural Economics*, Vol. 32(1), pp. 15-34.
- Swinnen, J.F.M. (2009). "On The Future of Direct Payments," Paper presented at the Bureau of Economic Policy Advisors (BEPA) Workshop on "Reflections on the Common Agricultural Policy from a Long-Run Perspective, February 26, 2009, European Commission, Brussels.
- Toquero, Z., Duff, B., Anden, T. & Hayanic, Y. (1975). *Estimating the elasticities of home consumption and marketable surplus for a subsistence crop: rice in the Philippines*.
- Valentinyi, A., Herrendorf, B. (2008). Measuring Factor Income Shares at the Sector Level. *Review of Economic Dynamics* 12/4: 820-835.
- Vranken, L. and J.F.M. Swinnen (2009). "Land and EU Accession: Review of the Transitional Restriction by New Member States on the Acquisition of Agricultural Real Estate", Brussels: CEPS Publications.
- Weiss, C. (1999). "Farm growth and survival: Econometric evidence for individual farms in Upper Austria", *American Journal of Agricultural Economics*, Vol. 81, pp.103-116.
- World Bank (2007). *World Bank Report 2008: Agriculture for Development*. The World Bank, Washington D.C.

SCARLED DELIVERABLES

- Baum, S. (2008a). Socio-economic, demographic, and agricultural patterns of rural areas in the new Member States. Deliverable D3.2 of the 6th Framework Programme project SCARLED (Structural Change in Agriculture and Rural Livelihoods). <http://www.scarled.eu/publications/deliverables.html>
- Baum, S. (2008b). Typology of rural areas in the new Member States . Deliverable 3.3 of the 6th Framework Programme project SCARLED (Structural Change in Agriculture and Rural Livelihoods). <http://www.scarled.eu/publications/deliverables.html>
- Buchenrieder, G., Möllers, J., Happe, K., Davidova, S., Fredriksson, L., Bailey, A., Gorton, M., Kancs, d'A., Swinnen, J.F.M., Vranken, L., Hubbard, C., Ward, N., Juvančič, L., Milczarek, D., and P. Mishev (2007). Conceptual framework for analysing structural change in agriculture and rural livelihoods. Deliverable 2.1 of the 6th Framework programme project SCARLED (Structural Change in Agriculture and Rural Livelihoods), <http://www.scarled.eu/publications/deliverables.html>
- Copus, A. and Knoblock, E. (2007). Development of socio-economic and agricultural structures in selected rural regions in Sweden after EU accession. Deliverable D8.4 of the 6th Framework Programme project SCARLED (Structural Change in Agriculture and Rural Livelihoods). <http://www.scarled.eu/publications/deliverables.html>
- Fredriksson, L., Davidova, S., and A. Bailey (2010). Determinants for, and barriers to, exit from subsistence food production: commonalities and differences among NMS. Deliverable

D6.6 of the 6th Framework Programme project SCARLED (Structural Change in Agriculture and Rural Livelihoods). <http://www.scarled.eu/publications/deliverables.html>

Fredriksson, L., Davidova, S., and M. Gorton. (2010). The importance of subsistence farming as a safety net in the NMS. Deliverable D6.3 of the 6th Framework Programme project SCARLED (Structural Change in Agriculture and Rural Livelihoods).

<http://www.scarled.eu/publications/deliverables.html>

Fritzsich, J., Möllers, J., and G. Buchenrieder (2010). Employment diversification of farm households and structural change in the rural economy of the New Member States. Deliverable D7.5 of the 6th Framework Programme project SCARLED (Structural Change in Agriculture and Rural Livelihoods). <http://www.scarled.eu/publications/deliverables.html>

Hubbard, C. and Gorton, M. (2009). Best practice lessons in managing the rural and agricultural transition following EU membership. Deliverable D9.1 of the 6th Framework Programme project SCARLED (Structural Change in Agriculture and Rural Livelihoods). <http://www.scarled.eu/publications/deliverables.html>

Hubbard, C. and Kaufmann, P. (2008). Development of socio-economic and agricultural structures in selected rural regions in Austria after EU accession. Deliverable D8.1 of the 6th Framework Programme project SCARLED (Structural Change in Agriculture and Rural Livelihoods). <http://www.scarled.eu/publications/deliverables.html>

Hubbard, C. and Ward, N. (2008). Development of socio-economic and agricultural structures in selected rural regions in Ireland after EU accession. Deliverable D8.2 of the 6th Framework Programme project SCARLED (Structural Change in Agriculture and Rural Livelihoods). <http://www.scarled.eu/publications/deliverables.html>

Iraizoz, N. (2007). Development of socio-economic and agricultural structures in selected rural regions in Spain after EU accession. Deliverable D8.3 of the 6th Framework Programme project SCARLED (Structural Change in Agriculture and Rural Livelihoods). <http://www.scarled.eu/publications/deliverables.html>

Juvančič, L., Jaklič, T., Žgajnar, J., and S. Kavčič (2009). A comparative analysis of structural adjustment patterns and determinants of structural change in five selected NMS. Deliverable D5.1 of the 6th Framework Programme project SCARLED (Structural Change in Agriculture and Rural Livelihoods). <http://www.scarled.eu/publications/deliverables.html>

Salasan, C., and J. Fritzsich (2009). The role of agriculture for overcoming the rural poverty in Romania. Deliverable D7.3 of the 6th Framework Programme project SCARLED (Structural Change in Agriculture and Rural Livelihoods). <http://www.scarled.eu/publications/deliverables.html>

Wołek, T., and D. Milcarek-Andrezejewska (2008). Methodological approaches to analyse cooperation among Polish farmers. Deliverable D6.1 of the 6th Framework Programme project SCARLED (Structural Change in Agriculture and Rural Livelihoods). <http://www.scarled.eu/publications/deliverables.html>

Wołek, T., and B. Łopaciuk-Gonczaryk (2010). Analysis of farmers' cooperation in Poland. Deliverable D6.4 of the 6th Framework Programme project SCARLED (Structural Change in Agriculture and Rural Livelihoods). <http://www.scarled.eu/publications/deliverables.html>

Wolz, A. and Reinsberg, K. (2007). Development of socio-economic and agricultural structures in selected rural regions in the new German Bundesländer after German unification. Deliverable D8.5 of the 6th Framework Programme project SCARLED (Structural Change in Agriculture and Rural Livelihoods). <http://www.scarled.eu/publications/deliverables.html>