

Institutional Arrangements and Land Reallocation During Transition: A
Regional Analysis of Small Farms in Romania

by

Georgeta Vidican Sgouridis

Bachelor Degree in Economics, Universitatea de Vest Timisoara, 2000

Master in Applied Sociology, UMASS Boston, 2002

Master in City Planning, Massachusetts Institute of Technology, 2004

Submitted to the Department of Urban Studies and Planning in partial fulfillment of the
requirements for the degree of

Doctor of Philosophy in International Development
at the

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

February 2008

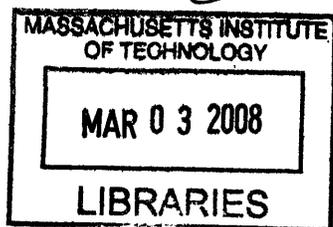
© 2008 Georgeta Vidican Sgouridis. All Rights Reserved

The author here by grants to MIT the permission to reproduce and to distribute publicly paper and
electronic copies of the thesis document in whole or in part.

Author _____
Department of Urban Studies and Planning
January 18, 2008

Certified by _____
Professor Annette Kim
Department of Urban Studies and Planning
Thesis Supervisor

Accepted by _____
Professor Eran Ben-Joseph
Chair, Ph.D. Committee
Department of Urban Studies and Planning



ROTCH

Institutional Arrangements and Land Reallocation During Transition: A Regional Analysis of Small Farms in Romania

by

Georgeta Vidican Sgouridis

Submitted to the Department of Urban Studies and Planning on January 18, 2008 in partial fulfillment of the requirements for the degree of Doctor of Philosophy in International Development

ABSTRACT

My dissertation examines an unexpected outcome of post-socialist agricultural transformation in the Central and Eastern European countries. Contrary to the initial expectations of Neoliberal transition policy-makers, various forms of agricultural associations emerged throughout the former communist countries, following the distribution of private property rights to individuals. The reallocation of land in associations occurred while this institutional arrangement was criticized in the literature and individual farming was portrayed as the panacea for these countries.

The main research question that frames my dissertation is: Why do farmers still persist in joining associations despite perceived collective action problems and the availability of leasing as a close substitute? Additional questions are also examined: Why did associations emerge in some regions and not in others? What are the factors that affect landowners' choices between associations and leasing transactions? How different, or similar are associations from the old socialist collective farms?

While earlier literature focused on explaining why landowners choose to farm the land individually, the choice between associations and leasing has not been previously researched. Using statistical analysis on household surveys and qualitative fieldwork I explain why and under what conditions associations are the optimal farming alternatives for landowners. Going beyond the capital constraints argument, I examine the role of institutional legacies and the effect of collectivization in explaining regional differences in land reallocation during transition.

Based on my findings, theories of institutional change that view transition as a homogeneous and a-temporal process across and within countries do not fully capture the interdependencies between different factors that shape individuals' responses to the incentives and constraints imposed by transition. This research provides policy recommendations especially for land consolidation efforts. Given high transaction costs associated with participating in land markets, farming associations should be strongly emphasized as a channel for achieving land consolidation. Support measures, such as improved access to credit and marketing channels, can enhance the competitiveness of associations.

Thesis Supervisor: Annette Kim
Title: Assistant Professor

Committee Members:

Prof. Alice Amsden, Barton L. Weller Professor of Political Economy
Prof. Abhijit Banerjee, Ford Foundation International Professor of Economics
Prof. Tavneet Suri, Assistant Professor, MIT Sloan School of Management

ACKNOWLEDGEMENTS

This study has certainly been a collaborative effort. I am very grateful to my dissertation advisor, Prof. Annette Kim, for providing support and guidance over the course of my doctoral studies. Perhaps more importantly, with her clear insight, she helped me see the big picture and taught me a great deal about the research process. I also thank Annette for steering me onto the right path every time I started wandering from the topic at hand and for helping me crystallize my ideas early on. My gratitude also goes to my committee members. Prof. Alice Amsden has been my mentor during my time at MIT. Her intellectual curiosity, energy, enthusiasm and support played a critical role in my professional development. Prof. Tavneet Suri provided mentorship and guidance beyond her duties in the final year of my PhD. I also thank her for providing me with knowledge so deep and clear that even I could understand it. Prof. Abhijit Banerjee helped me achieve greater conceptual rigor, for which I am very grateful. The entire committee contributed to my intellectual development resulting in a wonderful and rich learning experience.

Over the years I have been surrounded by quality researchers and scholars. At MIT I received valuable help from Profs. Bish Sanyal, Martin Rein, Karen Polenske and Phil Thompson. I would also like to thank Prof. Johann Swinnen from the Katholieke University in Leuven who's research stimulated my interest in this topic, and who gave me access to the only household survey data available for Romania (for 1996 and 1998). Without his early collaboration this research would not have been possible or it would have been much more limited in scope. In Romania I received intellectual advice and research support from Cecilia Alexandri, Lucian Luca, Marioara Rusu from the Institute of Agricultural Economics at the Romanian Academy of Science, Mihail Dumitru from the European Commission and Sebastian Lazaroiu from Center for Urban and Regional Studies. I also appreciate Prof. Dumitru Sandu's research support during my fieldwork in Romania and his technical expertise during survey implementation. My friends Codrina Rada, Timea Pal and Diego Valencia read bits and pieces of this research while it was still in progress. Their challenging but constructive feedback contributed enormously to my intellectual development. I would also like to thank my colleagues in DUSP who offered their support and suggestions, especially Ayman Ismail, Rajendra Kumar, Xin Li, Kyung-Min Nam, Zhan Guo, Yang Chen, Kathy Araujo and Cristian Quijada Torres. I would also like to thank the participants in the Workshop on Poverty, Development and Globalization from June 2007 in Manchester UK, who offered valuable feedback over various discussions and presentations.

Finally, I am especially grateful to Sgouris, my husband. His constant support and confidence in my research endeavors made the last three years the most enjoyable part of my life. No one else would have tolerated the ups and down that were part of the last year of dissertation research and writing. He kept me grounded, sane and loved through this intellectual journey. Sgouris also took the time to read and gave valuable feedback on various versions of the dissertation. I also thank my parents, Florica and Gheorghe, and my sister, Adela, who instilled in me the ambition and intellectual curiosity that led me to pursue doctoral studies. They served as examples to follow in my personal and professional development, and offered me unconditional affection and moral support which made it possible to get through the tough times that were part of the process. The strength and values of my grandmother, Mama Lina, helped me stay on track for all these years.

TABLE OF CONTENTS

LIST OF TABLES.....	7
LIST OF FIGURES.....	9
LIST OF APPENDICES.....	11
LIST OF BOXES.....	11
CHAPTER 1 : INTRODUCTION	13
1.1 POST-SOCIALIST TRANSITION AND LAND REFORM.....	13
1.2 DISSERTATION OBJECTIVES AND RESEARCH QUESTIONS	14
1.3 RESEARCH CONTRIBUTIONS	17
1.4 INTRODUCING ROMANIA AS A CASE STUDY.....	18
1.5 THE STRUCTURE OF THE DISSERTATION.....	19
CHAPTER 2 : LITERATURE REVIEW AND ANALYTICAL FRAMEWORK.....	23
2.1 TRANSITION AND THE INSTITUTIONALIST THEORIES.....	25
2.1.1 <i>Limitations of the “new” institutionalist approach</i>	26
2.1.2 <i>Revisiting the contributions of the “old” institutionalist approach</i>	27
2.2 THE ISSUE OF INDIVIDUAL CHOICE: CONCEPTUAL ASPECTS.....	29
2.3 PRIVATE PROPERTY RIGHTS.....	31
2.4 LAND TENURE	34
2.5 THE CHOICE OF DIFFERENT INSTITUTIONAL ARRANGEMENTS FOR FARMING	36
2.5.1 <i>Farming associations</i>	36
2.5.2 <i>Land market participation</i>	41
2.6 THE MISSING LINK.....	44
CHAPTER 3 : RESEARCH DESIGN	47
3.1 SETTING THE SCENE	47
3.2 THE TWO REGIONS: WESTERN PLAIN AND CENTRAL ROMANIAN PLAIN.....	47
3.3 RESEARCH DESIGN.....	51
3.3.1 <i>Qualitative methods</i>	52
3.3.2 <i>Survey research methods</i>	53
3.3.3 <i>Data limitations</i>	59
CHAPTER 4 : THE CHRONOLOGY OF LAND REFORMS IN ROMANIA.....	81
4.1 THE “NEVER-ENDING” STORY OF LAND REFORM	81
4.2 THE 1918-1921 LAND REFORM	83
4.2.1 <i>Legacies from earlier land reforms</i>	84
4.2.2 <i>The 1918 land reform</i>	87
4.3 THE COMMUNIST ERA: AGRICULTURE BETWEEN 1945-1989.....	91
4.3.1 <i>Collectivization between 1945-1962</i>	91
4.3.2 <i>The agricultural sector between 1962-1989</i>	95
4.4 DE-COLLECTIVIZATION: THE 1990S POST-SOCIALIST LAND REFORM.....	101
4.4.1 <i>The restitution of property rights</i>	105
4.4.2 <i>Challenges for land consolidation and improved performance</i>	109
4.5 CHAPTER SUMMARY	114
CHAPTER 5 : TAKING STOCK OF THE MAIN LAND REFORM OUTCOMES IN ROMANIA.....	115
5.1 THE NEOLIBERAL MYTH AND THE ROMANIAN TRANSITION	115
5.2 THE ECONOMIC OUTCOMES OF LAND REFORM	118
5.2.1 <i>Romania’s agricultural sector in the EU context</i>	119
5.2.2 <i>Agriculture in the national economy</i>	124
5.3 SOCIAL OUTCOMES OF LAND REFORM.....	134
5.3.1 <i>Poverty and rural development</i>	135
5.3.2 <i>Migration</i>	143
5.4 CHAPTER SUMMARY	145

CHAPTER 6 : EVALUATING REGIONAL DIFFERENCES: SMALL FARMING IN THE WESTERN PLAIN AND THE CENTRAL ROMANIAN PLAIN	147
6.1 INTRODUCTION	147
6.2 TWO REGIONS IN TRANSITION	148
6.3 HOUSEHOLD LEVEL COMPARISON	154
6.3.1 <i>Human capital</i>	155
6.3.2 <i>Land ownership</i>	155
6.3.3 <i>Farm size</i>	155
6.3.4 <i>Land fragmentation</i>	158
6.3.5 <i>Capital endowment</i>	159
6.3.6 <i>Commercialization</i>	160
6.3.7 <i>Investment and finance</i>	162
6.3.8 <i>Household incomes</i>	163
6.4 CHAPTER SUMMARY	166
CHAPTER 7 : LAND REALLOCATION INTO DIFFERENT INSTITUTIONAL ARRANGEMENTS	169
7.1 INTRODUCTION	169
7.2 INSTITUTIONAL OUTCOMES, NATIONAL AND REGIONAL TRENDS IN LAND REALLOCATION	170
7.2.1 <i>Institutional outcomes from land reallocation</i>	170
7.2.2 <i>National trends in land reallocation</i>	171
7.2.3 <i>Regional trends in land reallocation</i>	173
7.3 PRIVATE INDIVIDUAL FARMING	175
7.4 FARMING ASSOCIATIONS	176
7.4.1 <i>Formal associations</i>	179
7.5 LAND LEASING	183
7.6 SUMMING UP THE RESEARCH HYPOTHESES	191
7.6.1 <i>Household characteristics</i>	191
7.6.2 <i>Institutional and socio-economic environment</i>	193
CHAPTER 8 : EXPLAINING LAND REALLOCATION BETWEEN DIFFERENT FARMING ARRANGEMENTS DURING THE POST-SOCIALIST TRANSITION	207
8.1 THE PUZZLE OF LONG-TERM OUTCOMES IN LAND REALLOCATION	207
8.2 ECONOMETRIC EVALUATION OF THE CHOICE OF INSTITUTIONAL ARRANGEMENTS FOR LAND REALLOCATION	212
8.2.1 <i>Econometric methodology</i>	212
8.2.2 <i>Data and variables</i>	215
8.3 RESULTS AND INTERPRETATIONS	229
8.3.1 <i>Why do households seek alternative farming strategies instead of farming the land individually?..</i>	235
8.3.2 <i>What are the factors that affect a landowner' choice between joining an association and privately leasing their land?</i>	247
8.4 SUMMARY OF FINDINGS	252
CHAPTER 9 : ALTERNATIVE EXPLANATIONS FOR THE PERSISTENCE OF FARMING ASSOCIATIONS	255
9.1 INTRODUCTION	255
9.2 WHY WERE ASSOCIATIONS CREATED IN SOME VILLAGES AND NOT IN OTHERS?	259
9.2.1 <i>The agronomists</i>	261
9.2.2 <i>The new landowners</i>	265
9.3 HOW DIFFERENT OR SIMILAR ARE THE ASSOCIATIONS FROM THE OLD COLLECTIVES?	276
9.4 SUMMARY OF FINDINGS	284
CHAPTER 10 : CONCLUSIONS - LAND REALLOCATION DURING TRANSITION	287
10.1 CHOOSING BETWEEN INSTITUTIONAL ARRANGEMENTS FOR FARMING: A REVIEW OF FINDINGS	290
10.2 LESSONS FOR POLICY MAKING	293
10.3 AREAS FOR FUTURE RESEARCH	297

LIST OF TABLES

Table 2-1: Contrasting views of group functioning	38
Table 3-1: Arable land as a percentage of total agricultural land by agro-regions.....	48
Table 3-2: Rural Development Index by agro-regions	50
Table 3-3: Poverty rates in the rural areas in 2002 by agro-regions	50
Table 3-4: Key descriptive statistics from household surveys	55
Table 3-5: Main characteristics of the sample	57
Table 3-6: Sampling design by stages.....	57
Table 3-7: Summary statistics from the commune questionnaire (2006).....	59
Table 3-8: Production measurement conversions.....	60
Table 3-9: The sample distribution by agro-region, communes and villages in 2006	61
Table 4-1: Employment by sectors in 1921 by countries (% from total labor force).....	83
Table 4-2: The structure of agricultural farms in Moldova and Muntenia (Old Romania/Vechiul Regat) in 1918	86
Table 4-3: The level of land expropriation and the number of peasants that benefited from land redistribution in 1938.....	88
Table 4-4: Agricultural collectivization in Romania (1949-1962)	94
Table 4-5: The evolution of property forms during collectivization 1950-1965 (%).....	95
Table 4-6: Share of agricultural land per tractor	97
Table 4-7: Average size of collective farms and state farms by region in 1966.....	98
Table 4-8: Zonal variation in agricultural investment*	99
Table 4-9: Land property structure in 1989 (%).....	101
Table 4-10: Downsizing of corporate farms in CEE (average size in hectares)	105
Table 4-11: Land property titles issued between 1991 and 1999	107
Table 4-12: Land fragmentation in Romania: 1998 and 1948 compared (%)	110
Table 4-13: Farm structure in 1992.....	111
Table 4-14: Land fragmentation for selected Balkan countries	111
Table 4-15: Average size of all farms as well as share of small and large farms in total land cultivated by country.....	112
Table 5-1 Comparative indicators on the agricultural sector in the EU countries	120
Table 5-2: Farm size in Romania, EU-15 and NMS-10 in 2005	121
Table 5-3 Comparison of selected commodities yield level relative to Romania (averages for 2000-2003	122
Table 5-4: Agricultural employment by occupational status in 2002.....	125
Table 5-5: The extent of irrigation in agriculture.....	128
Table 5-6: Approximate increases in some agricultural costs and incomes, South-Central Transylvania, 1994-2000	129
Table 5-7: The structure of agricultural holdings in 2005	134
Table 5-8: Demographic dependency ratio in the rural areas	138
Table 5-9: Household revenues for employees, peasants, and pensioners	139
Table 5-10: Household expenditures for employees and farmers by categories (% from total)	139
Table 5-11: Migration rate from rural areas abroad by historical regions in 2002	145
Table 6-1: Descriptive statistics for the 1996 and 2006 surveys	155
Table 6-2: Distribution of farms based on landholding size in 2006 (%)	156
Table 6-3: Distribution of farms based on landholding size in 1996 (%)	157
Table 6-4: Distribution of farms based on landholding size by counties in 2006 (%)	158
Table 6-5: Land fragmentation in 2006 (%)	159
Table 6-6: Land fragmentation in 1996 (%)	159
Table 6-7: Physical assets in 2006	160

Table 6-8: Physical assets in 1996	160
Table 6-9: Market participation by landholding size in 2006.....	161
Table 6-10: Share of households that invested in any of the following categories in 2006 (% of surveyed households that investment in a particular activity).....	162
Table 6-11: Income sources for the households surveyed in 2006	163
Table 7-1: The pattern of land reallocation at the national level between 1993-2005	172
Table 7-2: The pattern of land reallocation into different institutional arrangements by year and agro-region (%)......	173
Table 7-3: Average land and share of land in farming associations	178
Table 7-4: Key descriptive statistics by property rights arrangements.....	192
Table 7-5: Cumulative figures for extra-vilan land sales.....	201
Table 7-6: The market value of the farmland in different European countries, 2001-2004 (EURO/ha)	202
Table 7-7: The reasons for not engaging in land sales (% of households listing a particular reason)..	204
Table 8-1: Research hypotheses by decision tree	209
Table 8-2: Summary stats for the dependent variables used in the discrete choice models.....	216
Table 8-3: Summary statistics for the variables included in the analysis	217
Table 8-4: Farm types based on crop mix (%).....	222
Table 8-5: Physical assets weights determined by PCA.....	224
Table 8-6: Estimation results (2006)– Logit Regression: Individual farming (1) vs. Alternative arrangements (0) (marginal effects)	230
Table 8-7: Estimation results (2006) – Logit Regression: Associations (1) vs. Leasing-out (0) (marginal effects).....	231
Table 8-8: Estimation results (1996)– Logit Regression: Individual farming (1) vs. Alternative arrangements (0) (marginal effects)	232
Table 8-9: Estimation results (1996)– Logit Regression: Associations (1) vs. Leasing-out (0) (marginal effects).....	233
Table 8-10: Testing the difference between the two years (1996 and 2006) along the independent variables in the two choice models.....	234
Table 8-11: The probability of choice and confidence interval for high and low values of land-adult ratio	238
Table 8-12: The probability of choice and confidence intervals for high and low values of household productivity.....	243
Table 8-13: The probability of farming individually by agro-region and primary occupation	244
Table 9-1: Factors affecting the formation of farming associations following land reform in the 1990s	260

LIST OF FIGURES

Figure 1-1: A schematic illustration of the factors affecting the choice of farming arrangements.....	16
Figure 3-1: Map of Romania's counties with the two agro-regions highlighted and superimposed on the historical regions	62
Figure 3-2: Map of the Western Plain and the Central Romanian Plain	62
Figure 3-3: Map of land utilization in Romania	63
Figure 4-1: Historical regions of Romania	83
Figure 4-2: The share of small farms (less than 5 hectares) in total private land ownership (%) in the Inter-War Europe	88
Figure 4-3: Lorenz curve for land distribution in 2002	108
Figure 5-1: Share of agriculture, industry and services in total employment during the transition period.....	124
Figure 5-2: The contribution to GDP by sectors between 1985-2005	126
Figure 5-3: Agricultural production (goods and services) and agricultural investments during transition (billion lei in constant prices)	127
Figure 5-4: The number of tractors and the arable area per tractor since 1989	129
Figure 5-5: Agricultural price index, the industrial price index for inputs necessary in agriculture, and the Price Scissors between 1991-2001	130
Figure 5-6: The Malmquist Index for the change in Total Factor Productivity between 1992-2004.....	132
Figure 5-7: Average Malmquist TFP yearly change.....	133
Figure 5-8: Poverty rates between 1995-2003.....	136
Figure 5-9: The distribution of households based on their capacity of covering expenses in 2005, by occupational status	140
Figure 5-10: Net in-migration in the rural areas.....	145
Figure 5-11: Rural to urban net out-migration rate	144
Figure 6-1: Regional Gross Domestic Product in real terms, billion constant prices (1990=100).....	149
Figure 6-2: The share of employment in non-agricultural occupations by counties in 2002	150
Figure 6-3: Crop production per employment	153
Figure 6-4: Crop production per hectare	153
Figure 6-5: Farming structure by regions in 2002	152
Figure 6-6: Percentage of land sold from total agricultural land in the commune (red bars are communes in the Western Plain and green bars are communes in Central Romanian Plain).....	153
Figure 6-7: Earned incomes in the Western Plain in 2006.....	166
Figure 6-8: Earned incomes in the Central Romanian Plain in 2006.....	164
Figure 6-9: Overall perceptions in 2006 regarding specific changes as compared to a year ago in the Western Plain	165
Figure 6-10: Overall perceptions in 2006 regarding specific changes as compared to a year ago in the Central Romanian Plain.....	165
Figure 6-11 Cadastral map showing the degree of land fragmentation in a Western Plain village.....	167
Figure 7-1: Farming associations between 1996-2006 in the Western Plain and Central Romanian Plain	178
Figure 7-2: The distribution of formal associations by agro-region and years.....	180
Figure 7-3: The entities to whom landowners leased out land to in 1996 and 2006.....	186
Figure 7-4: The distribution of informal associations by agro-regions and years	195
Figure 7-5: Land sales and average sales prices between 1998-2005	201
Figure 8-1: Landowners' decision tree in respect to land reallocation	210
Figure 8-2: Availability of land reallocation alternatives throughout the transition period	211
Figure 8-3: Kernel density distribution for the length of time since the household joined associations and leased out, respectively (2006 data).....	220

Figure 8-4: The Kernel density of household productivity in 1996 and 2006	223
Figure 8-5: The probability of farming individually and land fragmentation by agro-region in 2006	236
Figure 8-6: The probability of choosing to farm individually and in alternative arrangements, at different levels of land-adult ratio in 2006	238
Figure 8-7: The probability of choosing to farm individually and land-adult ration by agro-region ..	239
Figure 8-8: The probability of choosing alternative farming arrangements by different levels of age and land-adult ratio levels	240
Figure 8-9: The probability of farming individually by age levels	241
Figure 8-10: The probability of joining associations and leasing at different levels of land fragmentation in 2006	249
Figure 8-11: The probability of joining associations along different age levels in 2006	250
Figure 9-1: Site location for interviews and participatory observation	258

LIST OF APPENDICES

Appendix 3-1: 2006 Household Survey Questionnaire.....	65
Appendix 3-2 : Commune Questionnaire.....	79
Appendix 7-1 : Informal associations during transition	195
Appendix 7-2 : Land sales during transition	198

LIST OF BOXES

Box 4-1: The main legislation for the post-socialist land reform in Romania	102
Box 7-2: The profile of households that purchased land in the Western Plain and Central Romanian Plain	200

Chapter 1 : Introduction

1.1 Post-Socialist transition and land reform

The fall of the Berlin Wall, symbolizing the demise of communism, ushered a process of change unmatched in its scale and speed in economic and political history. Neoliberal reformers were anxious in promoting their ideological agendas for the transition to a market based system. These agendas, embraced by international lending institutions, called for eradicating former institutional structures and for replacing them with western capitalist institutions. Soon, however, it became obvious that the transformation of these countries was growing out of the “ruins of communism” in close interdependence with the former institutional structures, historical legacies and systems of values and beliefs (see Stark 1996; Eyal et al. 1998; and edited volumes such as Pickles and Smith 1998; Burawoy and Verdery 1999), rather than achieving a fully bloomed market capitalism as the Neoliberal transition advocates expected.¹

The first and most comprehensive institutional reforms in the early 1990s were implemented in the agricultural sector, signaling a major ideological change – the transfer of property rights in land from the state to the individuals. The social and economic changes generated by these reforms were unprecedented in complexity and scale. This dissertation analyzes the process of post-socialist transformation in the context of land reform.

Agriculture and land reform received a renewed interest among development scholars in the past two decades.² The 2008 Human Development Report is centered on the agricultural sector, after 25 years of “silence” in the policy arena on the role of agriculture in development. The World Bank (2007b p. 1) argues that “it is time to place agriculture afresh at the center of development agenda, taking account of the vastly different context of opportunities that have emerged.”

A confluence of events brought land back on the policy agenda of international development institutions, changing the overall focus of land reform and the perceptions of rural livelihoods (Gwayne and Kay 2004). Currently there is a deeper understanding that agricultural growth plays a major role in pursuing sustainable development, in poverty alleviation, and that access to land is critical (Timmer 2005 p. 78; World Bank 2007b). Another major factor that called attention to the agricultural sector has been the fall of communist regimes in Europe and Asia, the subsequent

¹ These countries did not perform like “wind-up toys lumbering through” (Hirschman 1981 p. 24) the various stages of reform single-mindedly. Soon, instead of a pure western capitalism, terms such “pseudo-capitalism” (Amsden et al. 1998), varieties of capitalism, “recombinant property” (Stark 1996) or “capitalism without capitalists” (Eyal et al. 1998) emerged.

² Nevertheless, as Ronald Herring (2003) claims, while land reform was taken off the policy agenda of national governments and international agencies, it always remained on the political agenda of peasants and their organizations.

property rights reforms in land, and the restructuring of state and collective farms. At the same time, however, the Neoliberal transition paradigm that emerged in the 1990s, led to a shift in the development perspective from state-led to market oriented land policies focused on land individualization, titling, and privatization (Borras et al. 2007), quite different from earlier land reform policies in Latin America (de Janvry 1981).

Analyzing the process of post-socialist transformation in the rural context poses significant challenges. Scholars point to an inherent rigidity to change in rural institutions (Geertz 1968; Connell and Lipton 1977) and to the complexity of rural societies (Verdery 1983). Moreover, an abundance of literature shows the great variation in speed and direction of change across countries and regions following the fall of communist regimes (Swinnen 1999; Meurs 2001; Rozelle and Swinnen 2004; Akram-Lodhi et al. 2007a). Despite far-reaching commonalities imposed by the communist policy agenda on the Central and Eastern European (CEE) countries, and on agriculture in particular, deep cultural, social, and economic differences remained. This variation led to the adoption of different reform strategies reaching different outcomes despite starting from a common heritage and aspiring to common goals (Lerman 2000; Rozelle and Swinnen 2000; Lerman et al. 2004). Explanations for these unexpected outcomes suggest that there is no best-outcome and “no uniform lessons to be learned” (Akram-Lodhi et al. 2007b) about how to enhance agricultural production and implement land reforms, calling for more in-depth country specific analyses to understand the specific historical and institutional context that led to certain outcomes.

In Romania, the post-socialist land reform marked the beginning of a series of transformations in the ownership structure and in the production system in agriculture. By 2005 almost 95% of land was in private ownership as compared to only 9% in 1990, at the start of transition. Collective farms were dismantled, land was successfully restituted to former owners based on the 1940s land records, and state farms were slowly reorganized into large corporate farms. Almost overnight more than four million new landowners were created, establishing an unprecedented level of private property. However, the slow pace of implementing institutional reforms for the newly created small and medium farms resulted in extreme land fragmentation, limited access to markets and, in effect, strong challenges to transition from subsistence farming to more commercially oriented production.

1.2 Dissertation objectives and research questions

This dissertation examines, what seems to be, an unexpected outcome of post-socialist agricultural transformation. Contrary to the expectations of transition policy-makers, and despite the reallocation of land to the individual sector, various forms of associations widely persisted throughout the former communist countries following de-collectivization. In the CEE countries nearly 40% of agricultural land is managed by different associations, collectives, or corporate farms, while in the Commonwealth of Independent States (CIS) nearly 80% do so (Lerman et al. 2004 p. 223).

In Romania, by 1993 more than 40% of land has been voluntarily returned to associations, despite rapid de-collectivization and land titling (Brooks and Meurs 1994). The reallocation of land in associations has occurred while this institutional arrangement is widely criticized in the literature and individual farming is portrayed as panacea for the agricultural sector in the former socialist countries. The persistence of associational arrangements is even more intriguing since in the second half of the 1990s the opening up of land markets made way to alternative farming arrangements, such as leasing and sales. Small farmers were presumed to resort to land transactions in order to consolidate scattered plots and to release assets to more productive users. In addition, wide regional differences exist within the country with respect to land reallocation patterns. While in the West most landowners chose to farm the land individually, in the South associations predominate.

Given this context, the following questions frame the dissertation:

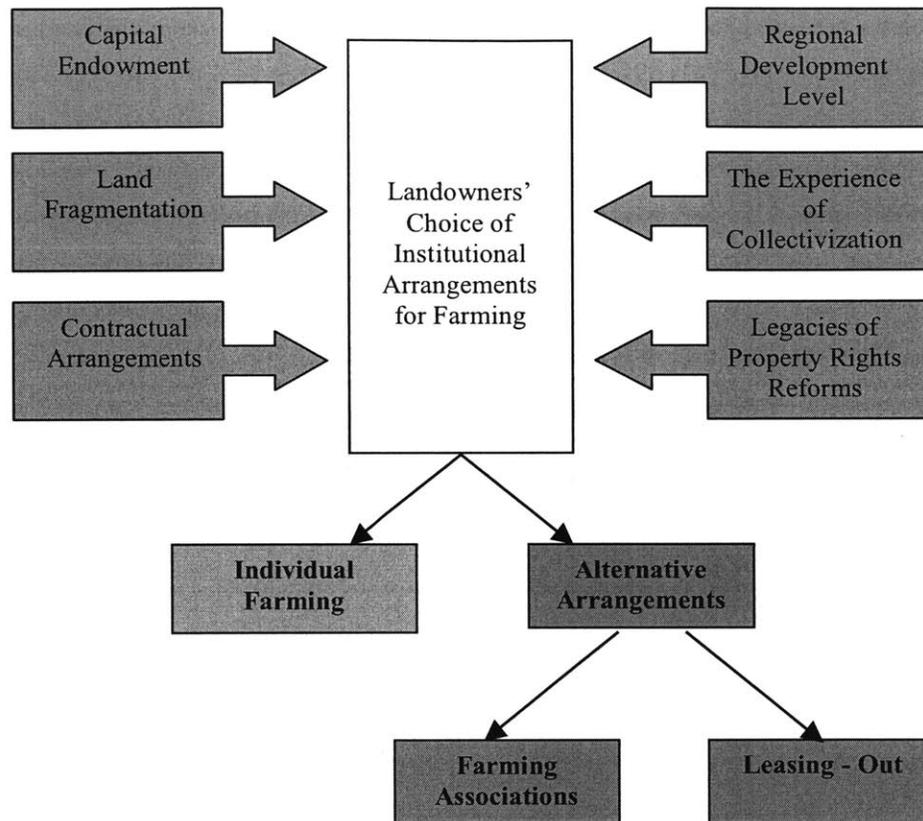
- (1) Why do associations still persist in farming decisions in Romania, despite perceived collective action problems and the availability of leasing as a close alternative for land reallocation?
- (2) How can we explain regional differences in land reallocation during the transition process?

To fully answer these questions, a accompanying questions will be explored:

- (a) Why do households seek alternative farming strategies instead of farming the land individually?
- (b) What are the factors that affect landowners' choices between associations and leasing?
- (c) Why have associations emerged in some regions and not in others?
- (d) How closely do farming associations resemble the socialist collective farms?

Figure 1-1 shows the main factors hypothesized to affect landowners' decisions for land reallocation. One of the main hypothesis is that the current institutional configuration around land reflects the choices made by landowners given market imperfections, constraints specific to transition and household characteristics. Capital endowment (referring to social, human and physical capital) is the most widely researched factor to explain the choice of farming arrangements. However, I expand the analysis to include other aspects related to the physical characteristics of land (i.e. land fragmentation), and the contractual arrangements for each alternative.

Figure 1-1: A schematic illustration of the factors affecting the choice of farming arrangements



In addition, I hypothesize that current patterns in land reallocation can also be explained by exogenous factors such as regional development level and path-dependent processes. I find that historical legacies from earlier land reforms and the experience of collectivization affect the choices landowners make with respect to farming institutions in different regions. Understanding why certain choices were made, why expectations such as increased land market participation were not met, and what are the potential benefits and drawbacks from these outcomes, contributes to promoting informed policies and to the literature on institutional change during transition. The Romanian experience with land reform is not unique to post-socialist countries or even to the developing world. Hence, findings from this study have relevance to other transition or developing countries undergoing institutional change.

To examine these research questions, I focus on the large segment of household farms, for whom land is still the main source of income, aiming to investigate the process by which landowners reallocated land assets during the transition from a socialist production system to a market economy based on private individual property.

A note on terminology

A few specifications have to be made on some key terms I use in the dissertation. Due to the complex nature of agricultural transformation during transition, I use the term *land reform* with a broader meaning. Aside from restitution (and privatization) of land from the state to the individuals, I use land reform to reference changes in agricultural organization (commonly referred to as agrarian reform).

Given the focus of this research, the term *landowners* refers to small farmers (part-time or full-time) who received land titles following restitution in 1991 and own at least 0.5 hectares. Most of these new landowners were former workers on the communist collective farms. I use the term interchangeably with household (or family) farms.

I sometimes use the term *institutional arrangements* instead of *farming arrangements* to denote different alternatives for land reallocation. The term “institutional arrangements” provides more specificity in terms of variation in the rights and responsibilities embedded in each form of land reallocation: individual farming, associations, leasing arrangements.

1.3 Research contributions

By analyzing the persistence of farming associations throughout the transition, despite the availability of leasing as a close substitute, this research diverges from the literature that emphasizes the benefits of land market participation over farming associations. I explain why, and under what conditions, farming associations are the optimal choice for landowners. Going beyond the capital constraints argument, I account for physical characteristics of land (i.e. land fragmentation), contractual arrangements, and for path-dependent aspects embedded in the legacies of property rights reform and collectivization. The choice between alternative farming arrangements (why landowners choose associations instead of participating in land markets) has not been previously researched. Following property rights reforms emphasis has been placed on explaining why landowners choose individual farming, as the ultimate goal of agricultural transformation. Nevertheless, the emerging pattern of land reallocation shows that the choices individuals make are far from reformers’ initial expectations, requiring a multifaceted inquiry into the alternatives that were deemed temporary (i.e. associations) but proved to persist throughout the transition.

Moreover, this research contributes to the literature on post-socialist transition and institutional change by revealing the variety of institutional arrangements during land reform at national and, most importantly, at regional level. Based on my findings, theories of institutional change that view transition as a homogeneous and a-temporal process across and within countries do not fully capture the interdependencies between different factors that shape individuals’ response to the incentives and constraints imposed by transition.

Analyzing regional differences in land reallocation during transition is interesting for theoretical and policy reasons. From a theoretical point of view, this disparity suggests that the reform of property rights creates a different set of incentives for farmers in different regions, conditions on historical legacies, economic opportunities, and the social environment. Regional disparities are also important for policy reasons because they highlight that policies need to be flexible enough to allow the emergence of local solutions to land reallocation. In addition they suggest that different regions may require different policies to make the transition to a market economy.

Lastly, this research provides policy recommendations especially for land consolidation efforts, at a time when the Romanian agriculture (and that of other countries in the region) is confronted with large inefficiencies from land fragmentation. Given high transaction costs for participating in land markets, farming associations should be strongly emphasized as a channel for achieving land consolidation. Support measures, such as improved access to credit and marketing channels, can provide enhanced conditions for the associations to maintain competitiveness.

1.4 Introducing Romania as a case study

Romania stands out as a particularly interesting case to study agricultural transformation during transition for several reasons. First, during the communist regime, Romania had among the lowest share of private property rights. “Tacit de-collectivization” (Hann 1993) that started in Hungary and other CEE countries in the 1970s and 80s had no precedent in Romania, which followed strictly the Soviet model of large (Kolkhoz) collective and state farms. Nevertheless, after a decade of transition, more than 90% of the agricultural land was in private hands.³ This massive transfer of ownership had dramatic outcomes not only on the economic structure but also on the social fabric of the local communities.

Second, by late 1989, Romania ranked the poorest among the members of the Council of Mutual Economic Assistance (Shen 1997), making the transition process much more difficult as compared to its peers. Built-in structural rigidities and functional inefficiencies pervaded the Romanian economy in the 1990s, while its newly formed government was still in embryonic form.

Third, the approach to land reform in Romania was in many ways more complex than in other countries in the CEE. Policy-makers in Romania pursued both land privatization and restitution based on the pre-communist land records and location. Only a few other countries underwent such a comprehensive land reform in the region (e.g. Hungary) (Lerman et al. 2007). Moreover, restitution was not limited only to land but it extended to physical assets and livestock, coupled with dismantling the former socialist collective farms.

³ Tacit de-collectivization, as experienced in Hungary, Poland, and former Yugoslavia, has been entirely rejected by the communist cadres in Romania, being considered a threat to the very core of socialist ideals.

Lastly, but probably the most important reason for the purpose of this dissertation, is the distinctiveness of Romania's agricultural sector among the European Union (EU) countries, posing significant challenges to the European Common Agricultural Policy (CAP) and to the Romanian agricultural producers entering a more specialized market with higher quality standards. Romania has the largest agricultural area in use after Poland (14,324 thousand hectares as compared to 16,301 thousand hectares in Poland), and 30% of the total number of farms in the EU (4,485 thousand farms in Romania as compared to 15,021 thousand farms in the EU) (Eurostat 2007). However, farm size is the smallest (an average farm size of 3.2 hectares⁴ in Romania as compared to 4.2 hectares in Bulgaria, 5.6 hectares in Hungary, 7.8 hectares in Poland, and 74.9 hectares in the Czech Republic) and the share of civilian population employed in agriculture is the highest, 33% (European Commission 2006b). Another striking difference comes from the much higher contribution of the agricultural sector in Gross Domestic Product (GDP), 12% as compared to a range of 1-5% in the rest of the EU countries. All these indicators show that agriculture plays a significant role in the Romanian economy (as well as relative to the EU), but that productivity levels remained low during the transition period as compared to the rest of Europe.

Equally important are the regional differences that emerged following land reform. This outcome is not specific only to Romania (Lerman et al. 2004). Nevertheless, there is almost no research that examines the socio-economic and political factors assumed to have triggered unequal responses to the incentives and constraints generated by land reform.⁵ In Romania, despite a uniform policy implementation, institutional outcomes with respect to property rights and land market development vary most significantly between the West and the South regions. I hypothesize that different historical legacies and economic conditions contributed to this variation in outcomes.

All these characteristics make Romania a distinctive case to explore especially at this point in time when the CAP subsidies were reduced and the role of the state was drastically curtailed following the Neoliberal transition.

1.5 The structure of the dissertation

The complex endeavor of post-socialist transformation and the diversity in outcomes call for a multifaceted theoretical framing of the problem under study. Hence, **Chapter Two** reviews several strands of literature revolving around the process of institutional change, the core of the transition from a centrally planned economic system to a market based economy. Mainstream theories of institutional change cannot fully account for the complexities of post-socialist transformation. Rather,

⁴ On average, 95% of the farms are smaller than 5 hectares, which after Bulgaria (97%) is the highest proportion. In addition more than 75% of the farms in Romania are categorized as subsistence and semi-subsistence according to EU criteria (European Commission 2006b).

⁵ Allina-Pisano (2004b) contributes to such regional analysis by examining two regions that were part of Former Soviet Union, which currently are located in Ukraine and Russia.

the theoretical framework should be expanded to incorporate a historical and social perspective on institutions. This approach provides a better “tool kit” to explain the persistence of institutions, such as institutional legacies and social capital. The specific literature areas that I examine, given the main research questions, are: 1) the issue of individual choice; 2) private property rights; 3) land tenure; 4) associations and collective action; 5) land market participation. Lastly, I show that while there is an abundance of literature on why landowners choose to farm the land individually, there is limited research on why landowners choose to join farming associations rather than to participate in land market transactions (i.e. leasing).

Chapter Three discusses the research design and methodology used in addressing the research questions. I start by describing the two regions on which most of the analysis is based, the Western Plain and Central Romanian Plain. The data for this research derives from two household surveys, in 1996 and 2006, providing a unique panel across villages. The survey strategy and the questionnaire is discussed at length in this chapter. The analysis of landowners’ choices of institutional arrangements for farming requires a blend of theory, modeling, and knowledge of the historical and social context to understand how certain institutions persisted and changed over time. Hence, the methodology comprises of statistical analysis as well as qualitative research based on interviews and participatory observations.

One of my main hypotheses is that current institutional outcomes are embedded in a historical framework. Accordingly, reform outcomes are path-dependent on the legacies of the communist regime, and also on pre-communist institutional structures. Hence, in **Chapter Four I** review the chronology of land reforms that altered property relations in Romania from the end of the 19th century until the last land reform in the 1990s. Using historical data I show how earlier institutional arrangements tend to replicate themselves and to adjust to new economic and political circumstances. In addition, I trace regional differences in land reform (and in property rights implementation) along different historical periods, in order to explain the current regional heterogeneity in land reallocation among different farming arrangements.

After a historical perspective, in **Chapter Five I** examine the current socio-economic outcomes of land reform and post-socialist transition at macro level. I start by discussing the so-called “Neoliberal Myth” of transition (the wide gap between initial expectations and later outcomes of the post-socialist transformation), with particular emphasis on land reform. Then, I place Romania’s agricultural sector in the larger European context, and I discuss its major role in the national economy. Given the wide social implications of post-socialist transformation, I evaluate the effect of transition on rural poverty and migration. I argue that the overall environment plays a key role in influencing the decisions that landowners make in respect to land reallocation.

While an aggregate evaluation of reform outcomes is very valuable, in-depth, micro level evidence can unearth more subtle nuances in the consequences of post-socialist transformation on small farmers. Hence, **Chapter Six** disaggregates this analysis to the regional and household level.

The goal of this chapter is to show the diversity of land reform outcomes when we hone in to the receiving end of transition policies. Using secondary statistics and household surveys, I show that there is substantial regional variation in terms of economic development, urbanization level, income opportunities, resource endowment, and household characteristics (i.e. age, education, farm size). In addition, I point to regional variation in farming arrangements: mostly private individual farming in the West, and mostly farming associations in the South. A close familiarization with the regions and the types of small farmers existing in Romania, allows me to provide a better understanding of the choices landowners make under different socio-economic and historical circumstances.

While in the previous chapter the landowners were at the center of the analysis, in **Chapter Seven** I elaborate on the institutional arrangements currently available to Romanian farmers: private individual farming, formal associations, and leasing transactions. I examine these arrangements from different angles: the type of households that engage in each arrangement, the way they are organized, the rights and obligations embedded in each arrangement, contractual terms, and the main benefits and drawbacks associated with each alternative. By evaluating how formal associations operate and the underlying aspects of land markets, I can distinguish and interpret the factors that affect the persistence of associations during transition. Hence, this chapter generates research hypotheses on the choice of farming arrangements and the persistence of associations, to be tested in the next two chapters.

Having laid out the economic, social, and institutional background for land reallocation, **Chapter Eight** introduces the analytical part of the dissertation. Using statistical analysis (choice-based models), I inquire into the choices between different farming arrangements, evaluating factors related to capital endowment (i.e. human and physical capital) and farm characteristics between 1996 and 2006. Based on landowners' decision structure, I divide the analysis into two sections. First, I examine why landowners choose alternative farming arrangements rather than farming all land individually. Second, I inquire into the persistence of farming associations throughout the transition, as an alternative to participating in land markets. I find that capital constraints affect the choice of alternative farming arrangements, but that the degree of land fragmentation, the age of landowners, and the availability of alternative sources of income determine the choice between joining associations and leasing-out land.

Statistical analysis can capture only certain factors that play a role in the decision process. Hence, in **Chapter Nine** I expand the analysis to alternative explanation for the choice of, and for regional differences in farming arrangements. Using qualitative research (interviews with farmers and participatory observations in villages), I explore other sources of motivation for landowners to engage in farming associations. I argue that focusing only on the capital constraints argument to describe land reallocation patterns can be shortsighted given the complexities of transition. Rather, additional layers complete the narrative: the legacies of collectivization, the role and interests of different actors directly affected by land restitution and de-collectivization, and the specific way in which farming institutions

are embedded in the local community. In addition, given the critique in the literature on the close resemblance of associations with the old collective farms, I show that there are important aspects that differentiate the two institutional forms, such as the rights and obligations that households have as owners of land, and the monitoring of the production process.

In the concluding chapter I summarize the main findings and contributions to the topic of land reallocation during the transition, and in particular to explanations on the persistence of farming associations following land restitution and the liberalization of land markets. Regional differences provide a challenging angle to analyze this process, strengthening the argument that there is wide heterogeneity in transition outcomes. Therefore, I argue that theoretical approaches to transition should be expanded to accommodate variation in institutional legacies, past experiences with markets and social capital. In addition, I point to policy recommendations that emerge from these findings, and I suggest future areas for research.

Chapter 2 : Literature Review and Analytical Framework

The uniqueness of post-socialist transformation and the diversity in outcomes calls for a multifaceted theoretical framing of the problem under study. As Hirschman (1981) claimed, understanding transition requires the ability to trespass from one social science domain to another and beyond. My dissertation seeks to explain two important phenomena. First, I explore why farming associations persisted throughout the post-socialist transformation when other institutional arrangements, such as land leasing, became available. Second, I seek explanations for regional differences in farming institutional arrangements and land market participation following the 1990s land reform in Romania.

In examining the process of post-socialist transformation and specifically the way farmers shape their farming practices and market behavior, I draw on literature addressing the issue of institutional change, individual choice, benefits and constraints from collective action, land tenure and land market participation, emphasizing social embeddedness and path-dependence processes. Since the concept of property rights is at the core of post-socialist agricultural transformation, the literature review also addresses the role of formal and informal institutions (social norms, values and traditions associated with land) in explaining transition outcomes, drawing on the experiences of East Asian and Central and Eastern European (CEE) countries.

In the past decade, having agreed that “institutions⁶ matter,” as “engines of growth” (North 1990) and, more recently as “engines of history” (Greif 2006), significant headway was made in inquiring into the process of institutional change by incorporating cognitive processes in individual and collective decision making (Mantzavinos 2001; Mantzavinos et al. 2004; North 2005), as well as historical elements to emphasize the impact of past institutions on subsequent institutional development (Greif 2006). This created fascinating opportunities for understanding not only the variety of reform outcomes in transition and developing countries, but also the mechanism of market creation.

As Currie (1981) argues, neither the Classical, nor the Neoclassical treatment of land is satisfactory for examining different aspects related to property rights (institutional arrangements) in the agricultural sector. First, the Classical theory (as shaped by Ricardo, Mill, and Malthus), offers large simplifications and abstractions by regarding the agricultural sector as one large farm. However, this conceptual approach obscures many aspects related to land ownership and institutional arrangements.

⁶ Institutions are generally understood as “formal rules, informal constraints (norms of behavior, conventions, and self-imposed codes of conduct) and the enforcement characteristics of both (North 1993, 2005). Greif (2006 p. 382) provides another definition of institutions as a “system of social factors that conjointly generate a regularity of behavior.”

Second, the Neoclassical theory offers a different type of abstraction, by analyzing ownership and rental markets for land on the assumption that land comprises perfectly divisible and homogenous land plots. But, an abundance of research on the agricultural sector in developing and transition countries shows that this assumption is far from reality. As an example, land fragmentation became a widespread reality, meaning that location of different plots matters, and, therefore, land is not homogenous.

In addition, lessons drawn mostly from the East Asian transition experiences and more recently from CEE countries resulted in broad consensus that mainstream neo-liberal approaches centered on notions of rational behavior and complete liberalization are only partially explaining transition patterns (Borras et al. 2007; Amsden 1993). These countries experienced unparalleled processes of economic, social, and institutional change that cannot be captured by mainstream theories that are more static in nature. The most debated sources of growth for China, for example, (in contrast to the CEE “comrades”) were the unorthodox policies departing from the Washington Consensus and the hybrid institutional structures enacted by the Chinese government in support of reform (Rawski 1996; Brezis and Schnytzer 2003; Rozelle and Swinnen 2004). Changes in the structure of incentives for farmers, coupled with an innovative set of public-private institutions triggered sustained growth (e.g. Town Village Enterprises in China) (Rozelle and Swinnen 2004, among others). The differences within the CEE countries as well as relative to China were attributed to several factors: the degree to which farm management was restructured (Lerman et al. 2004), initial conditions (Roland 2000), and the level of state support (Rawski 1996).

This chapter is organized as follows. Since institutional change is at the core of post-socialist transition, I start by contrasting the “new” and “old” institutionalist schools, arguing that earlier institutionalist theories of change, in the Veblenian tradition, are more appropriate for explaining the transition process. The emphasis, in Section 2.1 is on the necessity to view institutions as “the structure that influences behavior, including behavior leading to new institutions” (Greif 2006). Section 2.2 focuses on the issue of individual choice, conceptualizing the main assumptions in this dissertation and assessing the main aspects that were raised by scholarly work on the subject, with relevance to small farmers and agricultural transformation. In Section 2.3 I review the main literature on the role of private property rights in land reform and agricultural transformation. Because the choice of farming arrangements revolves around the concept of tenure relations, in Section 2.4 I review some key theoretical aspects on tenancy arrangements (e.g. share-cropping). In addition, I stress that during transition a different process emerged, that of reverse tenancy, which has been less researched. In Section 2.5 I review the main research on farming arrangements during transition. Lastly, in Section 2.6 I point to the fact that the choice between alternative farming arrangements (farming associations and leasing) has not been sufficiently explored in the literature. Hence this dissertation makes one step to fill this gap in the literature.

2.1 Transition and the Institutional theories

Since the end of Cold War, post-socialist economies became intense research laboratories in social sciences for experimenting with the capitalist market economy. The breakdown of a strong, rigid, and overall ineffective economic system, created conditions for a fresh start in adopting the only other recognized system in mainstream economics, the market economy.⁷

However, the diversity in outcomes after more than fifteen years of transition, as well as the less successful results than those expected in the beginning of transition, raised intense intellectual debates about the fit of Washington Consensus prescriptions for these countries. As Ibrahim and Galt (2002) argue, the type of institutional changes suggested were strictly based on those operating in the Western market economies. That model stressed the importance of private property rights, liberalization of markets and the creation of exchange systems that would minimize transaction costs. This approach drew extensively on the “new” institutional economics, guided by the neoclassical economic theories. There was very little emphasis on the socio-economic and historical settings in the transition countries. To a certain degree, the Neoliberal institutional reform assumed *tabula rasa*, a void in the earlier institutional legacies that would make the transition to market economy instinctive.

The main theoretical goal of this dissertation is to argue that mainstream theories of institutional change cannot fully account for the complexities of post-socialist transformation. Rather, the theoretical framework needs to be expanded to include aspects related to the evolutionary nature of institutions established along the lines advocated by the “old” institutionalists (Ibrahim and Galt 2002; Powell and DiMaggio 1991; Greif 2006). As Murell (2003) also argues, the unique historical experience of transition offers lessons of importance to the new institutional economics literature, strengthening, or perhaps reshaping existing knowledge. The New Institutional literature sees the “pure market” as the inevitable end result of the transformation phase, while the whole process should actually be seen as “open-ended” without a pre-determined trajectory (Smyth 1998).

Institutional change is important and has been strongly emphasized by the “new” institutional economics approach. Nevertheless, the limited institutional recommendations that this approach promotes tend to ignore the unprecedented changes that occurred over time in countries such as Romania. As Ibrahim and Galt (2002) argue, such cases are better viewed from the “old” institutionalist approach, which draws more attention to the difficulties of embedding a market-based economy in countries where such system has not operated for decades or never at all.

In an innovative approach (comparative and historical analysis of institutions), Greif (2006) combines several strands of literature (historical institutionalism in political science (Hall and Taylor 1996; Pierson and Skocpol), path-dependence (David 1994; Arthur 1988), and the study of culture

⁷ Murell (2003) claims that “twenty-eight countries were free to choose their own economic and political institutions.” To a certain extent I disagree with this statement. The pressure from the Bretton Woods Institutions (i.e. World Bank, IMF) through loan conditionalities, as well as the pressure from the European Union, gave little leeway for these countries to choose what institutions would better match their particular culture and economic history.

(Swidler 1986)), to analyze institutional dynamics as a historical process.⁸ This approach assumes that “past institutions influence the timing of institutional change, the manner in which they change, and the details and implications of new institutions” (Greif 2006 p. 15). This historical perspective of institutions, which provides a better “tool-kit” to explain the persistence of institutions, includes elements of social capital⁹ and culture, and hence departs from the mainstream new institutional economics approach. In this view, which I share in my analysis, institutions are shaped by social and cultural legacies, and they contain norms and behavioral beliefs. In turn, these elements “reflect the cognitive models, knowledge, and coordination that were generated through a historical process of interactions, socialization, learning, experimentation, and leadership” (Greif 2006 p. 380).

2.1.1 Limitations of the “new” institutionalist approach

New institutionalism, with its emphasis on transaction costs, property rights, and contractual behavior, adopts the neoclassical concept of rational, self-interested, utility maximizing individual (Coase 1937; Williamson 1985; North 1987, 1994). This approach sees the development of institutions as an outcome of individuals’ behavior (Ibrahim and Galt 2002). Moreover, economic agents act “within a framework of institutional cooperation to reduce transaction costs and secure property rights” (Vandenberg 2002 p. 222). In this respect, the economic agent is expected to act upon changing the institutions towards more efficient cost structures (to maximize choices). Nevertheless, Powell and DiMaggio (1991) argue that the “new” institutional economics improves the standard microeconomic assumptions: “individuals attempt to maximize their behavior over stable and consistent preference orderings, but they do so in the face of cognitive limits, incomplete information, and difficulties in monitoring and enforcing agreements.”

The new institutionalists view the economic system in terms of contracts and exchange relations. The organizational structure that arises as a result is seen to minimize transaction costs. The policy implications for the transition process are that the structure of the economy is changed by “creating firms that adopt the role of the market rather than combating the structural rigidities that might exist within the economy” (Ibrahim and Galt 2002 p. 106-107). Moreover, new institutionalists see markets and privatization as the only guarantee that efficient organizations can replace the less efficient ones.

Another related aspect is that “there is no recognition in the new institutional approach that markets may fail for reasons other than transaction costs” (Ibrahim and Galt 2002). Rather than responding to market stimuli, firms may continue to operate at a limited scale, or they can just close

⁸ Greif (2006 p. 16) views this process by explaining that “institutions can remain stable in a changing environment and can change in the absence of environmental change, while past institutions – even those that are no longer self-enforcing – can influence the details of subsequent ones.”

⁹ Social capital is generally defined as “features of social organization, such as trust, norms, and networks, that can improve the efficiency of society by facilitating coordinated actions” (Putnam 1993 p. 167 – making democracy work).

down (Nelson and Winter 1992, Murell 1992). Therefore, as Ibrahim and Galt mention, rather than concentrating on transaction costs issues, “a more detailed focus is needed on how emerging institutions respond to issues such as the legacy of central planning, the collapse of the traditional markets, the rigidities associated with production and the lack of technology.”

2.1.2 Revisiting the contributions of the “old” institutionalist approach

In contrast to “new” institutionalists, the “old” institutionalists (Veblen 1898, Commons 1934) place greater emphasis on the socio-economic framework within which institutions form, shaping individual behavior. Evolutionary theory grew out of the main tenets of old institutionalism.¹⁰ According to this approach to economic development, individual behavior is path-dependent on previous circumstances and behavioral responses. As Ibrahim and Galt (2002) argue, “replacing one institutional form with another, which does not take into account the habits of individuals, is not likely to be successful, at least in the short run.” Moreover, Landesmann and Abel (1995) claim that representing transition as a simple automatic adjustment, as the new institutionalist approach does, ignores the dynamics that such a process entails.

That history matters and can give rise to alternative paths for development has been recognized by North (1990) also, who despite his general adherence to transaction costs analysis, asserts that “if the process by which we arrive at today’s institutions is relevant and constraints future choices, then not only does history matter but persistent and poor performance and long-run divergent patterns of development stem from a common source.”¹¹ Greif also argues that institutional elements inherited from the past influence subsequent institutions and calls for the need to use contextual (historical) information in studying institutions (2006 p. 21). For example, Romania’s reform process after 1989, reflected a muddled strategy, more than in other CEE countries, followed by “an institutional vacuum where market institutions struggled to get established in an environment that had not been sufficiently prepared for their imposition” (Ibrahim and Galt 2002 p. 109). Among other authors, Stark (1996) and Clark and Soulsby (1999) adopted an approach that recognizes the evolutionary outlook by arguing that during transition institutions were built “on the ruins of socialism,” process in which social networks and ties from the previous regime were critical for post-socialist restructuring.

Legacies of the past derive not only from the communist times, but also from the inter-war period. The outcomes of land reform are illustrative in this sense. Restitution of land based on the pre-communist land records transposed on the current social and economic conditions not only a whole

¹⁰ Veblen’s perspective on economic change is that of an evolutionary process. The conception of the economy is that of an evolving system in historical time, subjected to processes of cumulative causation, a constant friction between habits of thought generated by a new material condition and the habits and institutions more appropriate to an earlier phase of development.

¹¹ Hodgson (1998 p. 185) claims that North’s work now exhibits a “degree of convergence” with the old institutionalism, with a strong emphasis in history, cognitive constraints, and ideology.

set of past formal institutions but also social (informal) institutions that were suppressed during the communist rule. The way these institutions interact with each other in the new environment and under constant pressures for change, makes the post-socialist transformation a very multidimensional and dynamic process.

In the old institutionalist approach, market and non-market institutions are socially constructed, suggesting that economic activities cannot be solely explained by individual hedonistic motives (Veblen 1898 p. 73). Explanations of socio-economic evolution must involve individual agents as well as institutions and structures (Veblen 1897).

The complex and dynamic view of the economic system advocated by old institutionalists led to its critiques of being too descriptive and lacking an overarching theoretical framework (Hodgson 1994). Nevertheless, the transition process requires such a complex conceptual approach given that “new” institutional interpretations tend to ignore the heterogeneity of Eastern European countries, as well as regional differences within countries.

Another relevant aspect of old institutionalism is the emphasis placed on the process of change. “The question,” Veblen (1934) wrote, “is not how things stabilize themselves in a ‘static state,’ but how they endlessly grow and change.” Veblen stressed the importance of habit and routine (hence culture) in shaping institutional change. He argued that when these norms are enforced within a society or group, individual habits assume the form of socioeconomic institutions. As a result, in the old institutionalist perspective, the conception of economy is of an evolving, open system in historical time, subject to cumulative causation, instead of approaches to theorizing focusing on mechanical equilibrium, as the neoclassical theory claims. Drawing on the old institutionalist approach, Greif (2006 p. 17) also argues that in analyzing the process of institutional change, individuals’ “shared cognitive models,” in the form of rules, beliefs, and norms inherited from the past affect feasible institutional alternatives. This argument is highly relevant for the analysis of land reallocation in post-socialist countries where I hypothesize that the experience of collectivization and the perception of market processes were critical to whether landowners joined farming associations or participated in land markets.

Given the complexities of post-socialist agricultural transformation, the varieties of institutional arrangements to which individuals resorted following land restitution, and the regional differences in these outcomes, a larger conceptual approach is needed, one that views institutions from a dynamic perspective, as embedded in the social and historical structure. The social structure and historical legacies play an important role selecting among alternative institutions in new socio-economic and political circumstances. This approach allows me to explain the persistence of institutions perceived to be inefficient, and the apparent rigidity to adapt to new market conditions. Moreover, it also allows to identify policies that are better meshed with the socio-economic realities of transition and developing countries, by taking into account the importance of institutions (formal and informal) inherited from the past and the interests of specific actors involved in the process.

2.2 The issue of individual choice: conceptual aspects

A theory of economic change is inevitably concerned with the way choices are made. Hence, the issue of choice runs through many aspects of this dissertation. People (as individuals or collective entities) make decisions about every aspect of life. When a major process of economic change is underway, choices affect the direction in which change will occur. Therefore, understanding the criteria based on which individuals choose between different alternatives, is critical.

The gist of this dissertation is to explain the factors that differentiate between farmers choosing different institutional arrangements. Why did some farmers choose to leave part of their land in associations and others did not? What factors affected the decision to lease out land? Why is participation in land markets higher in some regions than in others? The answer to these questions is embedded in the concept of choice and is strongly influenced by the system of values of beliefs as well as the external economic environment.

The main assumption in this analysis is that individuals strive to maximize their own utility. Utility maximization is different from the concept of rationality of action, which has mainly a normative character. As Mantzavinos (2001) argued, under the name of “rationality” (whether perfect, or bounded), diverse theoretical considerations on human behavior are hidden. The problem then becomes one of how to better explain rational behavior (Lane et al. 1996), tightly linked to how human beings reason and choose (Mantzavinos et al. 2004).

In the discussion of individual choice, especially within the context of peasants (or small farmers), the literature has shown a constant tension between categorizing the behavior of small farmers (mainly subsistence farmers) as rational or irrational. It was Schultz (1964) who first responded strongly to the argument that peasants are poor because of their unwillingness to modernize and adapt new practices, deemed as a reflection of their irrationality. Lipton (1968) rephrased this response in more realistic terms, claiming that “farmers are reasonable, but they cannot always be efficient,” given the unpredictable nature of the environment in which they operate.

But, as Stiglitz (1989) argues, economic models which assume that peasants are working within rational and efficient institutions are as inadequate and misleading as the ones which assume that peasants are irrational, bounded by traditions and non-economic principles. The view I adopt, which has been articulated by Stiglitz (1989 p. 2), is that “peasants are rational but are not fully informed” about the consequences of either their actions, or about the institutions in which they operate. As a result, because of imperfect information (including transaction costs), there are higher constraints to competition, institutional rigidities, and the persistence of seemingly inefficient institutions. Therefore, if we assume that leasing can provide higher productivity (or returns),

information asymmetries could offer part of the explanation for why peasants were slow to adopt these alternative institutional arrangements.¹²

When we explore the concept of utility maximization in the context of subsistence and semi-subsistence farmers, differentiations need to be made as compared to other economic agents. The small farmer is risk-averse and profit maximization is not primordial in the decision making process, being replaced by the need to balance the utility of output (Chayanov 1966; Swain 1985; Rabin 1998; Liu and Zhuang 2000; Spoor 2007).¹³ Moral economists, such as James Scott, argue that the small farmer's actions are mainly driven by the "safety-first" principle. Hence, in economic terms, the tenant prefers to minimize the probability of loss rather than to maximize his average return (Scott 1976). Todaro and Smith (2003) also argue that risk-averse farmers prefer traditional technologies that combine low yields with low variance, to new technologies that offer higher yields but also pose higher risks. The political economy view, advanced by Popkin (1979 p. 31), suggests that peasants consider both short and long-term investment decisions, making choices which they believe will maximize their expected utility. Rationality, in this view, is not limited to material wellbeing, but is associated with preferences and values, closer to the economic theory assumptions. Nevertheless, in the case of subsistence farming, the use of premium of investment is high also because the use of savings for investment denied farmers consumption smoothing benefits (Eswaran and Ashok 1989). Interestingly, field research suggests that in rural communities we find both types of behavior: more traditional farmers and farmers that are less risk-averse. Understanding the underlying causes that lead to these differences is critical.

Closely related to the aspect of choice, scholars point to the differences in work ethics in capitalist societies as compared to peasant societies. As Chayanov (1966) argued in his classic study of Russian smallholders, and as more recent research in the post-socialist countryside confirmed (Hann 1993; Verdery 2003), when there are no job alternatives and there are shortages of capital and labor, peasant families must work unimaginably hard and long for the smallest increments in production. Chayanov calls this "self-exploitation."¹⁴ Such behavior of self-exploitation can be seen as driven by both risk-aversion and utility maximization and is widely seen in the Romanian countryside.

In the past decade, elements from cognitive science have been successfully used to complement the assumption of rational choice in order to understand human behavior and its effect

¹² By using this argument, Stiglitz (1989) claims that the "Pareto-efficient markets" is an entirely inadequate framework to understand farmers' behavior in rural economies (and generally in the context of developing countries). Not only does Pareto-efficiency assume perfect competition, but it also requires perfect information and a complete set of markets, conditions which are obviously not fulfilled in less developed countries (not even in developed economies for that matter).

¹³ As Mullainathan (2004 p. 20) argues, "insight about loss aversion can also help understand why policy change is so difficult in developing countries."

¹⁴ When this pattern prevails in an economy, a so-called process of "agricultural involution" (Geertz 1963) sets in.

on economic and social processes.¹⁵ Individuals are constantly in a process of problem solving in order to increase their utility. Choice is part of this process. “Choice is the creative stage or conscious mental probing of alternatives before proceeding to the trial of the one judged the best” (Mantzavinos 2001, p. 54). It is a process of reflection before action in close connection to the environment, which takes place in the human brain. In effect, individuals are rationalizers, not rational human beings. This argument is similar to Veblen’s (1914 p. 30-32) claim that individuals have a basic instinct of engaging in purposeful action.¹⁶

Economists generally assume that agents strive to rationally maximize their utility function, while sociologists believe that agents’ behavior is dictated by norms. On the other hand, a central hypothesis of the cognitive approach (and classical institutionalism), which I share in my analysis, is that individuals learn from past problems, and that problem solving is a dynamic process in constant “communication” with the environment.

Another aspect related to the issue of choice, aside from risk-aversion and profit maximization, which assumes an explanation based on the availability of resources, is the concept of “collective memory.” This concept, primarily discussed by the sociologist Maurice Halbwachs (1992), postulates that choices are based on past memories, which the mind reconstructs under the pressure of society. Nevertheless, there is “incongruity in many respects between the constraints of yesterday and those of today” (p. 50), suggesting that choices made in the present are not entirely path-dependent, but that they are shaped by the new social and economic environment. At the same time, reliance on this argument should be made with caution since, as Halbwachs (1992 p. 182) claims, various groups in the society “most frequently distort the past in the act of reconstructing it.” However, the issue of collective memory can be a useful concept especially in explaining regional differences in the choice of institutional arrangements following land restitution. The concept becomes less binding as compared to the path-dependent argument to explain the institutional outcomes in the post-socialist context.

2.3 Private property rights

In the neoliberal theory, privatization is the sine-qua-non condition for the well functioning of market economies (Ho and Spoor 2006). Accordingly, incomplete land rights are likely to impose constraints on the smooth development of land markets. Moreover, having property titles reduces private enforcement costs, provides security and collateral for long-term investment in land

¹⁵ As Mullainathan and Thaler (2001) argue from a behavioral economics point of view, while neo-classical economics has defined itself as explicitly anti-behavioral, more recently there is mounting “empirical and experimental evidence against the stark predictions of unbounded rationality.”

¹⁶ As Vandenberg (2002 p. 223) argues, Veblen suggests that individuals are operating within a culture of habits and established patterns of thought, that they are instinctively engaged in purposeful action and that such action is guided, to some degree by intelligence.

improvements, and promotes development of land markets. All these activities are wealth-enhancing (Alston 1996).

The neo-liberal policy of transforming public into private property, widely implemented in the former communist countries, appealed to the larger population and political class not only because of its role in creating markets. Its ideological character was the centerpiece of transition. The re-creation of private property aimed to erase decades of communist injustices, by acknowledging the concept of entitlement and responsibility.

Land titling and registration plays a critical role in property rights reform in transitional countries. Demsetz (1967) and Deininger (2003) argue that property rights that do not contain the right of alienation are often considered to be ill defined and are likely to lead to inefficiencies. Nevertheless, Larson and Bromley (1990) challenge this view, and claim that there is a need for much more information on the type of property rights and other social or economic barriers to land market participation, before such judgments can be made.

At the final stage in land redistribution, land registration involves “defining and recording the various rights to a given plot of land” (Ho and Spoor 2006 p. 2). According to the property rights school of thought, secure property rights (achieved mainly through titling), is the sole most efficient and secure institutional arrangement, it is the means to increase transfers to more productive farmers thereby putting land to its best use, and to increase investments (Dorner 1972; Feder et al. 1988; Feder and Feeney 1991; Besley 1994; Harrison 1987; Hayes et al. 1994).

However, it is now understood that privatization is insufficient for creating properly functioning markets (Bromley 1997; Dale and Baldwin 2003; Amsden 1993) and this argument becomes even more evident for land markets (Wallace and Williamson 2006). The concept of exclusive property rights is insufficient to understand post-socialist transformation, investment behavior, and market creation (Field 2005; Kim 2004). Do and Iyer (2007) also show that titling by itself does not lead to higher land market participation, or investment. Complementary policies are needed to increase the functioning of these markets.

Similarly, rights over land do not explain much if they are not embedded into a system of social relationships and if the broader institutional structure does not allow full exertion of these rights (such as easy access to capital and labor). Collectivization took away the rights over land but it provided other social rights such as wage-labor employment, education, or medical provision. This is one reason why earlier studies found that despite lack of property rights, collective farms were still productive (Swain 1985; Boyd 1987; Amelina 2000) and de-collectivization was not embraced unanimously at the start of transition (Hann 1993).¹⁷ This shift from a collective system to a more open economy entails a loss of protection (welfare and insurance provided by collective farms) and an expectation of change in mentality from a collective orientation to an individualist, market orientation.

¹⁷ The highest dismissal of private property has been seen in Russia (Tho Seeth et al. 1998; Lerman et al. 2004).

The degree and circumstances under which this shift occurred creates challenging research opportunities to be examined in greater detail in the larger dissertation.

Nevertheless, the property rights school remained influential in mainstream academic and policy circles, and most transition reform programs incorporated this perspective especially in their analysis of land markets. Miceli et al. (2000) claim that “one of the least controversial principles in the economics of land markets is the notion that the more clearly defined property rights are, the greater the land market efficiency.” The empirical evidence, however, has questioned the confidence in this assertion. For example, several studies on African countries show that, mainly due to the high cost of titling, the effects of land tenure security are contrary to expectations (Atwood 1990; Lanjouw and Levy 1998).

Despite controversial evidence, there seems to be agreement on at least one critical advantage from having secure land titles, and that is access to credit. Nevertheless, even if land rights are secure, if the credit markets are not adjusted to the needs of the small farmers, the benefits from private property rights will be slow to occur (Do and Iyer 2007). On a similar note, aside from the security of tenure, another aspect which has been widely researched by the anthropologist Katherine Verdery, relate to the relationship between the values embedded in property rights, and market imperfections during transition (2004). Verdery’s argument is that when market imperfections prevent landowners from exerting their rights and obligations over land, property rights became irrelevant, being hollowed out of their real meaning. Hence, land reforms that strictly target property rights restitution, without simultaneously extending the opportunities for access to markets, labor, and capital, are very likely to undermine the actual purpose of property rights reforms.

But, as the previous section underlined, to understand the transformation of post-socialist economies, we should appeal to an analytical framework that incorporates social, cultural, and political relations that inquire rather than assume the nature of property conceptions (Verdery 1997). Property rights are intrinsically social and political relations, they are tied to social and political status (Hall 1993), and can be conceived as “maps of human relations” (Shanin 1990). In peasant societies, property rights are not clearly vested in the individual but rather in the family, and “sentimental attachments to family land run deep” (Hann 1993 p. 302).

Property is also a reflection of different meanings shaped by community, kinship, and history. Within this context, land restitution is a channel through which the rural population regain meaning for their lives, which were significantly emptied (devalued) with collectivization. As Verdery (1997) argues, “all the villagers and especially the elderly, who lived through the devastating experience of collectivization that many felt as life amputation, are struggling to recast and revalorize the past 40 years.” Hence, work, position, social embeddedness and community are vital for understanding the outcomes of land reform. There is a personal investment in things, and a sense of worth entailed in these investments (Verdery 1997).

2.4 Land tenure

The fundamental difference between the owner-operators and tenant farmers is that rather than enjoying full ownership over land and assets, the tenant farmer has only a right of temporary occupation in return for which he pays rent to the owner. From this point of view, both farming associations and leasing arrangements are forms of land tenancy. The differences between them, however, are largely unexamined.

Land tenure research agendas vary extensively across regions and socio-economic circumstances. As Tibako (2003) claims, in Africa where land has been perceived as a relatively abundant factor of production, most research was focused on the relationship between tenure security and productivity. In Asia and Latin America, where land is scarce and unequally distributed, emphasis was placed on inequality aspects of tenure relations (Maxwell and Wiebe 1998).

In the CEE countries in transition, very limited research has been carried out on what seems to be a very different tenure system in an entirely new context. Land restitution in the former communist countries in Europe resulted in a so-called process of “reverse tenancy,” situation in which a poor landowner contracts with a rich tenant, quite different from the canonical model of sharecropping (Bellemare 2006).¹⁸ Nevertheless, conceptual and theoretical aspects of the classical tenure system contribute to our understanding of the choice for different institutional arrangements during transition.

In Romania, the unanimous restitution of private property rights resulted in a large share of absentee landowners, part-time and poor inexperienced farmers, in a context of dramatically changed market conditions. As a result, these outcomes contributed to increased incentives for reverse tenancy, seeking alternative (or mixed) property rights arrangements. This outcome was quite different from the period before and between the World Wars in Romania (or in Latin American case of land reform) where, to the most part, large rich landowners were seeking poor tenants to rent part of their land.

The literature on tenancy arrangements is very rich on issues of contractual choice (fixed or share contracts) and risk sharing (Shaban 1987; Ghatak and Pandey 2000; Pandey 2004; Alland and Lueck 1992). Other related aspects of land tenure arrangements refer to transaction costs, incentives, risk aversion, and imperfect information (Cheung 1969; Allen and Lueck 1993; Stiglitz 1974). However, as Bellamare (2004) found, most sharecropping models are inconsistent with the phenomenon of reverse tenancy, mainly because the poorer landowner no longer holds comparative advantage in risk-bearing over the tenant.

¹⁸ Bellemare (2006) summarizes that reverse tenancy received some attention lately due to its prevalence in Lesotho (Lawry 1993), South Africa (Lyne and Thomson 1995), Ethiopia (Tikabo and Holden 2003), Bangladesh (Pearce 1983), Malaysia (Pearce 1983), Mexico (Colin and Bouquet 2001), India (Pearce 1983) and the Philippines (Roumasset 2002).

Currie (1981 p. 66) argues that the behavior of the tenant will depend on his rights and obligations under the contractual arrangement, for two main reasons. First, the nature of property rights may affect the set of legally feasible courses of action available to him. Second, property rights will influence the nature of incentives, that is, the extent to which the costs and benefits of particular actions accrue to him, rather than to the landowner. Of these, the later is more important. The extent to which costs and benefits are internalized will depend on the nature of rental payments, on the duration and security of tenure, and on the form of provisions, if any, for compensatory payments at the termination of the tenancy.

Moreover, I hypothesize that the benefits from different tenancy arrangements also depend on the security of tenure (i.e. the sort of activities that a tenant farmer would pursue would depend on the duration and security of his tenure). The security of tenure can be affected by factors endogenous to the contractual arrangement, as well as determined by market conditions. If the tenant does not have easy access to credit, and cannot have a guarantee that he will be able to keep part of the production, he will not engage in long-term investments on the plot, and he will feel more insecure over his contractual arrangements. Moreover, short-term leases also mean that the tenant has interest only in his own revenue, not in the long-term enhancement of the land plot. He would have no incentives to undertake long-term improvements of the property, since all or most of the benefits would accrue to the landowner (Currie 1981 p. 69-70). In addition, if the tenant hopes to renew the lease at the end of the period, he will have an interest in the state of the property at the end of the lease. Given the legislative changes that were enacted for leasing contracts in Romania after 1994, I hypothesize that the length and type of tenancy contracts affect the choice that landowners make for reallocating land to associations or in leasing transactions.

Nevertheless, security of tenure is not affected only by economic factors, such as the extent of property rights over land or the length of tenure. Other factors such as social capital (the relationship between the landowner and the tenant) also affect the perception of tenure security. These factors, however, are less explored in the literature. In this study, I argue that institutional arrangements are embedded in the social structure at community level, and as a result, social capital plays an important role in the decisions that landowners make.

As Singh (1989 p. 34) claims, it is almost impossible to come up with a theory of sharecropping or any other form of land tenancy because of the different realities in the field and inconsistency of different institutional arrangements overtime.¹⁹ Nevertheless, sharecropping can be viewed as a consequence of the disparity between the distribution of human resources (labor) and physical resources (land and capital) (Stiglitz 1989 p. 25). On a more general note, sharecropping is a

¹⁹ The author uses the different aspects of sharecropping as an example, and he argues that there are variations overtime in terms of productivity, share payment, economic status of the tenant, and types of crops produced under this arrangement, which makes it very unlikely to predict it under a theoretical framework.

response to uncertainty and asymmetries of information, as well as a response to different types of market failures in labor, insurance, credit, and capital markets (Singh 1989).

Nevertheless, the institutional outcomes (the current equilibrium, in economic terms) of land tenure can only be understood if we examine the historical determinants, “the processes by which we arrive at where we are” (Stiglitz 1989 p. 26). Historical forces create an important asymmetry of information in which individuals know more about the institutions and conventions they experienced in the past than about the more recent institutions. Therefore, given that change brings uncertainties, risk aversion itself can lead to the preservation of past institutions.

2.5 The choice of different institutional arrangements for farming

Current literature on the choice between different institutional arrangements for farming has been couched in terms of stark choices between farming individually or not. There is quite a lot of research done on the question of why landowners farm the land themselves rather than collectively, as well as on the question of why farmers engage in land transactions (leasing and sales). Nevertheless, there is significantly less, if any, research on the factors that determine landowners to choose between farming the land in associations (i.e. collectively) rather than leasing (i.e. land transactions).

The main factors discussed in the literature highlight that resource constraints and transaction costs are at the core of the decision process on farming arrangements. However, more recent evidence shows that any evaluation of land regimes must go beyond material well-being, to incorporate aspects of social capital, social embeddedness, and institutional legacies (collective memory) (Verdery 2004). This section highlights the main theoretical and empirical findings on these aspects, especially with reference to the post-socialist context, and points to the gap in the literature on the choice between alternative farming arrangements. In Section 2.5.1 I review the literature on associational forms of production and collective action. Then, in Section 2.5.2 I review the literature on land market transactions, as alternative institutional arrangements for farming.

2.5.1 Farming associations

As I mentioned in the introductory chapter, despite the initial emphasis on private individual farming during the post-socialist transformation, soon it became evident that alternative institutional arrangements, such as farming associations, started to emerge. Associations were created either on the structures of the old collective farms, or were endogenously formed among kin or neighbors. As a result, issues of collective action became highly relevant in explaining current outcomes of land reform. Nevertheless, there is little discussion of the tenure arrangements that lie in between private and state ownership, such as associations or collective ownership, despite their prevalence in the CEE context.

For neo-classical economists, who dominated the policy scene during transition, groups remain for the most part on anomaly: “the rational maximizing individual continues to be the central actor and group activity as something to be explained as a response to ‘market failure’ not as a natural phenomenon” (Stewart 1996 p. 10). In addition, one reason for the “neglect” of groups articulated by Mearns (1996), is that “the meaning of terms such as ‘collective action’ and ‘common property’ has been tainted” by the failed experience of socialist agriculture. Stewart (1996 p. 24) also mentions that the failure of communism is being used to deny the critical importance of groups and collective action in development. The downgrading of the term was made both by policy makers and by former workers in collective farms. For policy makers, the failure of socialist agriculture model was a clear proof that the collective arrangement was fraught with inefficiencies (i.e. free-riding, moral hazard), or “opportunism” (Williamson 1985 p. 47)²⁰. At the same time, former workers on the collective farms associated collective action with the exploitative approach of the socialist state, the hierarchy, control and the extractive character of the old socialist farms. As a result, relations of trust and reciprocity (social capital) seem to be “lacking precisely where they are most needed” (Mearns 1996) following land restitution.

The most important contributions to the theory of collective action were made by Buchanan (1965)²¹, Ostrom (1990)²² and Olson (1995)²³, addressing questions on what type of goods or resources could be managed in private or cooperative type of arrangements, how large an ownership group should be, what are the advantages and disadvantages of one form of ownership over another, and in what circumstances would collective action prevail. The seminal work of Hardin (1995) and Demsetz (1995) argue through the lens of cost-benefit analysis, that private property as opposed to communal property is the most justifiable ownership form.

One common explanation for collective action is the existence of market imperfections. Imperfect information leads to high transactions costs, suggesting that individuals cannot produce certain good and services efficiently for themselves (Nugent 1986).

However, while in these explanations the main incentive to act collectively revolves around efficiency considerations, evidence from the field indicates that the situation is more complex, and that

²⁰ Williamson groups the problems such as free-riding, principal-agent issues, shirking, into a more general category called opportunism, which is defined as “self-seeking with guile,” being the central element on his interpretation of institutionalism.

²¹ Buchanan’s main contribution is the theory of clubs based on which collective action can emerge only if the motivation for joining in sharing arrangements is economic, that is, if choices are made on the basis of costs and benefits. The theory assumes that for any good and service, the utility that an individual receives from its consumption depends upon the number of other persons with whom he must share the benefits.

²² Ostrom has made clear differentiation between communal property, in which resources are restricted to members of a particular community and are subject to regulation under community norms and rules, and open access, in which resources are open to all (true commons). Previously, Demsetz, which is considered the father of property rights theory distinguished private property, state property, and communal property, the last of which he appeared to equate with open access.

²³ Olson’s core argument is that collective action can be achieved only if groups are smaller, and if coercion is applied.

non-efficiency criteria should be taken into account as well. Understanding the historical trajectories in institutional change in a particular setting is one of the most widely discussed explanations for choosing a particular institutional structure based on non-efficiency criteria. The theory of path dependence offers part of the theoretical context for these debates.

Stewart (1996 p. 14) provides a schematic representation of the mainstream neo-classical view and of alternative views on the role of groups (see Table 2-1). In his alternative view, Stewart sees groups as being evolutionary, influenced by society and history, with wider goals of satisficing rather than solely maximizing. In my analysis of farming associations I adopt a similar approach by which past institutional legacies are as important as efficiency considerations to explain the persistence of farming associations during transition.

Table 2-1: Contrasting views of group functioning

	Neo-classical	Alternative
Individual goals	Exogenous	Evolving, influenced by society and history
	Maximizing	Satisficing
	Egotistical	Commitments to group as well as self
Norms	Must be enforced externally; developed to increase efficiency	Some norms internalized; developed via tradition as well as efficiency
Group functions	To enhance efficiency (NIE)	To enhance efficiency; to enforce claims
	To constrain trade (rent-seeking view)	Historic/evolutionary
Effect of society (i.e. class structure)	Neutral, except via factor availability and hence prices	Strongly influences group norms, power, structure
Group characteristics	Functionalist/efficiency raising	Evolutionary/contingent, with functionalist elements; increases power and resources of members

Source: Stewart (1996 p. 14)

Lerman et al. (2004 p. 223-229) enumerates few factors that could explain the persistence of associations in the former socialist countries in Europe. Individual risk preferences provide one explanation. As the authors argue, an association (collective or cooperative farm) may provide lower income but it offers a relatively safe, non-volatile environment. Another explanation related to land restitution which created a large share of landowners who were too old to farm or living in the urban areas. Lerman et al. (2004) argue that this category of landowners has no immediate personal use for the restituted land, but they would like to keep the land in ownership. This argument, however, does not explain why these landowners do not lease out the land instead of joining associations.

Therefore, while there are both economic and non-economic incentives for being in any organizational form, the existing evidence is conflicting as to whether individual private farms are able to generate more productive output than associative types of farms. First, discussions over cooperative versus individual arrangements in agriculture referred both to the level of production and to the service related activities in agriculture (input supply, marketing, credit, processing, technology) (Deininger 1993). It is argued that service related activities in agriculture are more sensitive to economies of scale and hence could perform better in cooperative forms of ownership (Deininger

1995; Leonte and Alexandri 2001). Currently there is a large consensus that economies of scale in agricultural production are very limited.²⁴ However, Mathijs (1998) argues that when market imperfections in access to credit and inputs persist (especially in the initial phase of transition), this conclusion does not hold anymore.²⁵ Lerman et al. (2004 p. 226) claim that in an imperfectly competitive environment, large farms may have easier access to input supplies, product marketing channels, and credit facilities.

Another explanation for the persistence of farming associations derives from a political economy argument. Lerman et al. (2004 p. 227) claim that there is a symbiotic relationship between the management of large collective (associations) and corporate farms, on the one hand, and the regional authorities, on the other hand. It is easier for the regional authorities to deal with a small number of large farms than with a large number of small and fragmented farms. The authors further argue that “in return for the rents and payoffs that the local authorities extract from the large collective farms, their managers are rewarded with preferential access to inputs and credits, as well as personal prestige and other prerequisites.” This symbiosis between the regional authorities and the associations (collective farms) acts to preserve the existing farm structure, preventing other private entrepreneurs from entering the sector.

The main critique of cooperative forms of production in agriculture is related to problems of free-riding and principal agent concerns. It is argued that the cost of monitoring labor is too high for associations and shirking tends to prevail. Hence, the incentives for efficient use of resources and profit maximization are much lower as compared to individual private farming, which maximize family welfare rather than individual welfare and hence face no incentives to shirk (Pollak, 1985; Carter, 1984).²⁶ Individual farming not only reduces the instances in which people need to be watched, but it also makes the task much simpler (Ellickson 1993).

However, some authors argue that production cooperatives can solve their agency problems by setting up the right labor contract structure (Johnson 1983; Putterman 1985). Lin (1990) offers as a solution the self-enforcing contract for members, but such contract can be sustained only in cooperatives that provide the right to exit. Brooks and Meurs (1994) argue for cooperative ownership structures in production on the grounds of institutional economies of scale. Collective forms of

²⁴ Empirical evidence shows that there are no increasing returns to size in agriculture production beyond a certain minimum size which can be captured by (larger) family farms, both in developing (Berry and Cline, 1979; Hayami and Ruttan, 1985) and in developed countries (Kislev and Peterson, 1991; Peterson, 1997). The long-run, average cost curve in agricultural production is L-shaped under long-run competitive equilibrium conditions (Hallam, 1991).

²⁵ Mathijs (1998) argues that in the beginning phase of the transition there are plenty of opportunities for scale economies at any level.

²⁶ Ellickson (1993 p. 1327) argued that “the parcelization of land is a relatively low-transaction cost method of inducing people to ‘do the right thing’ with the earth’s surface, the vernacular for avoiding deadweight losses.” As a result, private property tends to equate the personal product of an individual’s actions with the social product of those actions.

production can serve the role of risk-sharing (Carter 1987) land reallocation, or can provide benefits in bargaining with persisting monopolies (Brooks and Meurs 1994).

While several other studies showed empirical evidence in favor of cooperative forms of property rights (Johnson 1983; Boyd 1987; Brada and King 1993; Beckmann and Hagedorn 1997; Mathijs et al. 1997) their time frame is the pre-transition period. Boyd (1987) finds that large collective production farms in Yugoslavia had higher rates of growth in labor and land productivity than private producers. Hence, he argues that collective farms are not inherently inefficient and can outperform private producers. Both types of producers were responding to their environment and the constraints they each faced. Collective farms exhibited technology adoption behavior similar to non-socialist enterprises elsewhere.²⁷ Similarly, Brada and King (1993) conclude that in Poland, between 1960-1975, there was no difference between technical efficiency of state and private farms, although the variation in efficiency levels is greater among state farms than among private farms.

One factor used to explain the diversity of farming arrangements during transition is farm productivity explored extensively by Johann Swinnen and his co-authors across several CEE countries. Mathijs and Swinnen (2001b) show that in East Germany farmer associations²⁸ are more efficient than either individual or former collective farms. But, they argued that the inefficiency of the collective farms declined during the transition period. Sabates-Wheeler (2002) draws a similar conclusion for the case of Romania. These results suggest that stages in transition (which may involve changes in the set of incentives) as well as more sector specific variables are important for unraveling the relationship between property rights and productivity. Additionally, Mathijs et al. (1997) conclude that for the case of Czech and Slovak agriculture, being a member of a cooperative or partner of a company, positively affects the efficiency level of family farms once production inputs become easily accessible.

Brooks and Meurs (1994) observe that in Romania, in the beginning of land reform, landowners tend to engage more in farming associations, explained in part by the slow development of competitive markets, and the low availability of machinery. However, the authors argue that associations appear less responsive than private farming to market stimuli, which may impede agricultural restructuring. Rizov et al. (2001) found that individual farming in Romania is influenced by several household characteristics, such as human capital endowments and access to financial resources.²⁹ Moreover, the authors point to striking differences in the process of individualization of land ownership between regions, which could be due to their distinct history of private property, as highlighted by the path dependency argument.

The only study that examined the issue of household choice between different farming arrangements (or property rights arrangements) was Sabates-Wheeler (2005) on the Romanian case.

²⁷ These results however, might incorporate some bias due to inaccuracies of the published statistics during the communist regime.

²⁸ In the case for East Germany these farming institutions are actually called partnerships.

²⁹ Welch (1970) argues that education can affect the quality of direct labor inputs as well as allocative decision making.

Assuming an ordered preference for formal associations, family associations, mixed strategies, and individual farming, the author found that differential resource endowments largely explain farming choices. Farmers with higher levels of their own resources are more likely to farm individually than those with fewer or no resources. However, I argue that while this conclusion points to the structural factors affecting choice, highly relevant during transition where market imperfections are pervasive, it leaves out other critical factors that shape individual decision-making. Historical legacies of private property in land, and embeddedness of land in social relations are critical for explaining property rights arrangements and land market participation.

Given the circumstances of post-socialist transition and the structural factors that make associations a preferred alternative to individual farming, Mathijs and Swinnen (2001) argue that these arrangements are an intermediary alternative to farming. So does Davidovici (2002), who claims that associations are a transitory organizational form until ownership rights are finalized and land markets develop. Ellickson (1993) also argues that especially when it comes to land, increasing returns and concerns about risk sharing, create a better environment for collective action (group land ownership), but that later on there is an inevitable switch to private land tenure.

2.5.2 Land market participation

Since the beginning of transition, the literature on land reform and farm restructuring has been abundant. However, most studies focused on the role of land rights and institutions for land exchange in development (Binswanger et al. 1995; Deininger 2003b). There has been little written on the development of land markets, and the determinants of active participation in land transactions in the post-socialist context. The institutional changes in the post-socialist countries were unprecedented in the past two decades, when several countries in Europe and Central Asia reformed their land tenure systems and liberalized land exchanges (Spoor 2003; Lerman et al. 2004).

One reason for the limited emphasis on explaining land market participation in these countries is the scarcity of data. Therefore, more recent empirical studies just pieced together the available information on country by country basis (see Lerman and Shagaida (2007) on Russia; Vranken et al. (2004) on Bulgaria; Vranken and Swinnen (2006) on Hungary; Swinnen and Vranken (2007) in rental markets on a group of transition countries). Because land rental markets were established after land was restituted and privatized, most studies are concerned with the distributional outcomes, and with the economic and social effects from leasing transactions. Land sales markets are certainly still thin in most countries in comparison with leasing markets.

Participation in land markets was emphasized as a channel for adjusting the size of land holdings and allocating resources to the most efficient producers. In line with the neo-classical school of thought, it is believed that over time land markets alone should determine the most efficient size of farming operations in different regions of the country (Duncan and Prosterman 2000). Nevertheless, the functioning of land markets is highly affected by market imperfections in credit access, input,

product, and insurance markets, in strong connection with the development of the economy as a whole (Swinnen and Vranken 2007). Yet, regional differences prevail even where there is little economic development variation (Swinnen 2002; Swinnen and Vranken 2007), which cannot be entirely attributed to market or economic differences. Swinnen and Vranken (2007) argue that variation in land markets is strongly influenced by the relative importance of different farm organizations in various countries.

While restrictions on land transferability are a barrier to the flow of resources from less efficient to more efficient producers and thus an impediment to agricultural growth, some scholars argue that temporary restrictions on buying and selling of land (especially in the transition countries) may be necessary for political or social considerations (Lerman et al. 2004, Banerjee 2001). There is concern that land market liberalization leads to re-concentration of land, especially when access to information, capital, and markets is asymmetric (Lerman et al. 2004). The ban on land transactions in Romania has been justified on these grounds, at a time when land reform was viewed as a “cushion” against the hardships of transition. Nevertheless, Deininger (2003a) argues that restrictions on land sales often resulted in weakening of property rights, increase in transaction costs, and rise in informality.

In general, in agricultural markets there are “push” and “pull” factors that effect land transactions (Spoor 2007 p. 14). Examples of push factors are the persistence of poverty, and legislative encouragements of land sales, along with low capacity for production and need for liquidity. Pull factors derive from an increased entrepreneurial behavior of some farmers, tendency for land concentration, and speculative purchases in the expectation of higher land prices. Therefore, several factors are hypothesized to affect land market participation, such as land titling, transaction costs, household characteristics, productivity levels, off-farming employment opportunities, and credit markets.

Transaction costs

Transaction costs impede land market development especially when there are market imperfections (Lipton 1968). Transaction costs constrain access to land for rural households willing to consolidate land plots, to enlarge their farm, or to start up a farming enterprise, leading to the persistence of large scale corporate farms (Dale and Baldwin 2000; Lerman et al. 2004; Ciaian and Swinnen 2006; Swinnen and Vranken 2007). Transaction costs include costs incurred from bargaining with the farm management, asymmetric and inadequate information on land valuation, from obtaining information on land and tenure regulations, delineating land boundaries and dealing with inheritance and co-owners (Mathjis and Swinnen 1998; Prosterman and Rolles 2000; FAO 2005; Ciaian and Swinnen 2006). Boucher et al. (2005) use the term “neo-structural” to describe the effect that imperfect information has on market development through transaction costs.

In addition, other costs incurred by land transfers are notary fees, taxes, and other administrative charges. Studies on Poland, Bulgaria, Lithuania, and Romania estimate these costs to be 10-30% of the value of land transaction (OECD 2000; Prosterman and Rolfes 2000; World Bank 2001a). Hence, due to low land prices and high transaction costs land sales generate little, if any, profit.

Another source of high transaction costs is land fragmentation, common to the CEE countries. Fragmentation of land increases per unit transaction costs because plot size is small and some of the costs are fixed (Duke et al. 2004; Ciaian and Swinnen 2006). The high level of transaction costs often leads to the development of “black” (informal) land markets, as is the case in Romania and other CEE countries (FAO 2005).

Risk aversion

Despite secure property rights, small household farms might still be reluctant to participate in land markets. Aversion to risks is a general characteristic of subsistence farmers who suffer the most from any change in economic or weather conditions. Small farmers prefer to use land as a fallback option, being reluctant to even use land as collateral, as indicated by World Bank surveys earlier in the transition process (Razzaz 1995). Sale of land raises risks as well as expected income. Hence, it is unlikely that a farmer that is risk averse would sell land if he is concerned for the future of the household. Moreover, the attitude towards risk is highly dependent on the overall macroeconomic and legal environment, the availability of non-farming jobs, and the prospects for future. Therefore in the early stages of market development, one strategy for making transactions more secure is leasing instead of selling (Razzaz 1995).

Household characteristics

Specific household characteristics such as household size, human capital (education, age), and occupational status, were found to determine the degree of participation in land markets. For small household farms, these indicators measure, to a certain degree, farm management capacity. Vranken and Swinnen (2006) found that better education is correlated with leasing-in land, and older age with leasing-out. Similarly older age increases land sales if the welfare outcomes are higher than leasing out transactions. Moreover, I expect that human capital plays a much more important role in land sales than in leasing operations. When market imperfections are so pervasive as in the transition context, and land is a critical source for subsistence, landowners resort to land sales when their physical ability is severely impaired, or their education level allows them to find better income opportunities in the non-farming sector.

Household size, as an indicator of labor supply, affects the degree of engagement in land transactions. As monitoring costs make hired labor more expensive, the availability of household labor will positively affect decisions to lease in or to buy land. In addition, the small size of individual

household farms suggests that larger households might have to acquire more land in order to satisfy household consumption.

In a perfectly functioning market, efficient farmers (regardless of their wealth) should be able to engage in land transactions to expand their farms and increase production. Nevertheless, when conditions such as those discussed above increase transaction costs and limit access to capital and financial resources, it becomes difficult for poor but efficient producers to acquire land through the sales market (Carter and Mesbah 1993; Deininger 2003a). Moreover, in such an environment distress sales by poor and technically efficient farmers can occur, but they could result in negative equity and efficiency impacts (Cain 1981; Kranton and Swamy 1999).

Resource access

Access to affordable credit, as well as to other markets (i.e. capital and labor) is hypothesized to affect participation in land market (Binswanger et al. 1995; Carter and Barham 1996; de Janvry et al. 2001; Deininger 2003c, 2003a). However, even if the importance of these markets has been widely emphasized, this recognition was virtually absent from policy measures in the CEE countries. Under the neo-liberal policy panacea the mainstream assumption was that market institutions (i.e. for credit) would evolve to fill these gaps (Boucher et al. 2005). However, surveys have shown that even if affordable credit was available farmers would not necessarily resort to loans (FAO 2005). The reality is that banks are reluctant to accept farmland as collateral (Razzaz 1995) mostly because prices are still low compared to urban land, and in some cases property rights are incomplete. When banks do offer loans, they tend to be short-term and with high interest rates.

2.6 The missing link

While there is a plethora of research on the factors that constrain or enable farmers in developing and transition countries to farm the land individually as opposed to joining associations or to participating in land markets, there are no studies specifically examining the factors that affect the choice of landowners between alternative institutional arrangements. Associations and land leasing are both alternatives to farming the land individually, widely used by farmers in the post-socialist context. Earlier literature shows that the most common reason for landowners seeking alternative arrangements is lack of capital and labor for farming, as well as high transaction costs.

Drawing on the case of Bulgaria and Hungary, Meurs (2001) argues that there is a social cost of experimenting with new institutional arrangements, and that landowners prefer to rely on familiar arrangements especially when market imperfections are pervasive. Given that the experience with markets was extremely limited during the communist regime, this explanation provides a valid hypothesis for why farming associations persisted throughout the transition.

Based on ethnographic research in Transylvanian, Verdery (2004) claims that leasing arrangements are likely to provide higher rents for the land in tenancy as compared to associations. Nevertheless, following on Meurs' argument (2001) the social costs from experimentation are likely to offset the higher rents from leasing. To date, however, research on rent differentials between associations and leasing arrangements is inconclusive.

Another factor that was discussed in the literature (especially with reference to the choice for individual farming) is the role of networks. Because most farming associations were created on the institutional structure of the former socialist collective farms, associations are likely to benefit extensively from the web of production networks inherited from the previous regime. Such networks (for input markets, information access, product distribution) provide associations with a "first mover advantage" over the new institutional arrangements that are currently in formation (Meurs 2001).

Lerman et al. (2004 p. 225) puts forth another factor that could explain why associations persist in landowners' choices. The authors argue that leasing to individuals may be perceived as riskier than leasing to a larger organization, which is regarded as a more reliable source of rental payments. However, they do not go deeper to explain why this might be the case.

This research aims to fill the gap in the literature with respect to the choices between alternative farming arrangements, in order to explain the persistence of farming associations during transition in different regions. I hypothesize that leasing provides a viable farming alternative only for landowners that are older and capital constraint, and for landowners having non-farming income opportunities, assuming that productivity levels outside farming are higher than from farming.

Moreover, because of the fragmentation of land plots, created by the restitution of land on the 1940s land records, I hypothesize that institutional arrangements (associations and leasing) respond differently to consolidation efforts. Specifically, because of high transaction costs, leasing arrangements are more costly than associations that do not require formal land registration.

Lastly, I argue that regions where private property rights were not institutionalized in earlier land reforms and where collectivization was enforced in a less forceful manner, landowners were more likely to join farming associations rather than to engage in market transactions. For them, the social cost of engaging in new institutional arrangements is higher than for other farmers that went different experiences.

Chapter 3 : Research design

3.1 Setting the scene

This moment in time may be ideal to study the Romanian land reform experience for different reasons. The time that separates us from the beginning of the transition process (more than 15 years) allows today's research to take into account longer-term economic and social effects of reform in a way that earlier assessments could not. More than 95% of the agricultural land has been successfully redistributed and privatized, the legislation for land leasing transactions were streamlined, and land sales were formally institutionalized. Moreover, the recent integration in the European Union (EU) economic and political structures has created a sense of inevitability for institutional change. EU enlargement creates a unique momentum for concerted efforts from the political arena to improve the rural economy.

This chapter covers the research design used in exploring the research questions behind this dissertation. However, before going into the more technical and descriptive aspects of the dissertation methodology, I will briefly discuss the two regions that form the basis of comparison throughout this dissertation.

Since the issue of land reallocation into different institutional arrangements and the persistence of farming associations is very complex and multifaceted, single methods are not able to capture all the factors that could play a role in these decisions. Therefore, my methodology comprises of both statistical analysis based on household surveys, as well as qualitative research based on interviews and participatory observations. As Greif (2006 p. 4) argues, "institutional analysis requires going beyond traditional empirical methods in social sciences that rely on deductive theory and statistical analysis." Such research requires a blend of theory, modeling, and knowledge of the historical and social context to understand how certain institutions persisted and changed over time. The set of data I am using is a unique panel across villages between 1996 and 2006, which allows me to trace changes in the social and economic condition of farmers in the selected villages, and to evaluate their decisions on land reallocation over a period of time when significant institutional changes were implemented.

3.2 The two regions: Western Plain and Central Romanian Plain

In analyzing the pattern of land reallocation during transition, I had to make a choice between breadth (analyzing Romania as a whole), or depth (selecting two regions that would allow for a more varied interpretation of reform outcomes). Because regional differences are important in the

Romanian case, I chose the latter. Following preliminary research in 2005, I selected for fieldwork two agro-regions³⁰ that concentrate most of the agricultural production in Romania, are similar in terms of geo-physical characteristics but provide challenging contrasts in terms of institutional changes following land reform. These two agro-regions³¹ are the Western Plain and the Central Romanian Plain, both located in the rich land plains (see Figure 3-1 and Figure 3-2). Given their location, throughout the dissertation I will use interchangeably the term West for the Western Plain and South for the Central Romanian Plain.

Central Romanian Plain has a drier climate, it is flatter, being more suitable for grains cultivation, while the geography and climate makes agriculture in the Western Plain appropriate for both grains and vegetables (see Figure 3-3). Nevertheless, while these differences in climate are marginal, the two regions are very similar in having the highest land quality as compared to the rest of the country.

Table 3-1 illustrates that Central Romanian Plain has the largest share of arable land. Even if the Western Plain is not the second largest region in terms of arable land, its share of arable land is above the national level and its production mix, land quality, and climate, make it the closest comparison with the Central Romanian Plain.

Table 3-1: Arable land as a percentage of total agricultural land by agro-regions

	2004
Central Romanian Plain	94.0
Low Danube Delta	84.6
South Oltenia	79.0
Plateau Moldova	71.7
Western Plain	68.9
Hilly Moldova	56.7
South Sub-Carpathians	53.0
Transylvania	38.1

Source: Calculations based on data from the Romania National Institute of Statistics (NIS 2005).

³⁰ Romania's administrative units, counties (judete), can be grouped into eight agro-regions. Agro-regions are clusters of counties that have similar patterns of agricultural land use (arable land, pastures, vineyards, and orchards) (Sandu 1999 p. 17). According to Sandu, using the agro-region as a unit of analysis allows one to connect the information on land use to economic and social characteristics of the area (Idem p. 17). In addition, there is a very close match between the agro-regions and the historical Romanian provinces: Western Plain is part of the larger region of Transylvania (made out of Banat, Crisana, and part of Maramures), and Central Romanian Plain includes the most area of the oldest historical region of Romania, Muntenia. However, another advantage of grouping the counties in agro-regions rather than historical regions is that it extends the classification criteria to socio-cultural and demographic characteristics as well.

³¹ Based on cluster analysis eight agro-regions were identified: Transylvania (Caras-Severin, Hunedoara, Alba, Cluj, Salaj, Maramures, Bistrita-Nasaud, Mures, Harghita, Covasna, Brasov, Sibiu), Western Plain (Timis, Arad, Bihor, Satu-Mare), Hilly Moldova (Suceava, Neamt, Bacau), Plain Moldova (Botosani, Iasi, Vaslui), Danube Delta Plain (Braila, Galati, Tulcea, Constanta), Central Romanian Plain (Ialomita, Calarasi, Ilfov, Giurgiu, Teleorman), South-Sub Carpathians (Gorj, Valcea, Arges, Prahova, Dambovita, Buzau, Vrancea), and South Oltenia (Mehedinti, Dolj, Olt).

Critical differences between the Western Plain and Central Romanian Plain that are of interest for the purpose of this study derive from three main sources (which will be explored in greater detail in later chapters):

- differences in the stage of modernization and institutional legacies in land rights in the pre-communist period;
- differences in the social and cultural values attached to land;
- differences in regional economic development.

As I discuss in more details in Chapter 4, because of different individual legacies in land rights in the pre-communist period, ownership structures were very different in these regions, as were the property relations between peasants and the aristocracy (the large landowners). I hypothesize that these factors partially contributed to different choices of institutional arrangements and land market participation. Moreover, historical differences in property rights led to variation in land valuation, the social meaning of land, and as a result in the response to de-collectivization and land restitution. Therefore, a cultural and historical layer is critical in exploring regional differences.

Western Plain³² has been historically under the Austro-Hungarian Empire from 1867 to 1947 period in which individual property rights in land have been granted to the population and the process of industrialization has begun much earlier than in other regions of Romania. Aside from a longer history of property rights, for the Romanian population living in Transylvania land had a deeper significance being intertwined with issues related to national identity. I hypothesize that this aspect was influential in the post-socialist de-collectivization and the quest for land in this region.

Central Romanian Plain differs significantly from this aspect. The region is part of old Romania, also called Muntenia (Tara Romaneasca) or Valahia³³, and for the most part its land relations were shaped by feudalism almost up until the 1920s. Here traditional agriculture predominated and property rights have been granted only for a limited period of time. Nevertheless, large land estates dominated the organizational structure and private plots for farmers were too small to suffice their subsistence needs. Therefore, property rights were hollowed of their meaning and peasants continued to be laborers on large hacienda estates. Not having cadastral maps and clearly specified property titles (as in the Western Plain region), the efforts to reconstruct the new properties after the 1990 land reform based on pre-collectivization land structures were very feeble. Most landowners preferred to only receive the title on the amount of land they contributed with at collectivization, which differed from the Western Plain where the new owners pushed hard for getting back the land on the exact location. These differences form the basis for further explanations of land reallocation choices in the two regions during transition. As Table 3-2 shows, regional economic development clearly differentiate the two agro-regions.

³² The counties included in the Western Plain agro-region are part of the larger historical region called Transylvania, which extends from the west, north-west and the center of the country.

³³ Valahia is the larger region formed by Oltenia (to the west) and Muntenia (to the east).

Table 3-2: Rural Development Index³⁴ by agro-regions

	1992
Western Plain	63.55
South Sub-Carpathians	63.47
Plateau Moldova	62.80
South Oltenia	61.37
Low Danube Delta	61.35
Central Romanian Plain	61.18
Transylvania	59.31
Hilly Moldova	58.57

Source: Calculations based on data from Harta Saraciei, CASPIS (2002).

The West has been traditionally more industrialized and currently enjoys one of the highest levels of economic growth in Romania. Its diverse economic base and its location on the border with Central and Western Europe, was able to attract significant amounts of foreign investment in the past decade. Unemployment rates have been the lowest and average real incomes were maintained above the national average.

Central Romanian Plain, despite its location around the dynamic capital Bucharest, exhibited lower levels of development and higher poverty levels along with Hilly Moldova (see Table 3-3) (World Bank 1998). Its economy is less diversified and unemployment rates are higher. These differences are salient in shaping the outcomes of land reform since they affect market size as well as economic diversification.

Table 3-3: Poverty rates³⁵ in the rural areas in 2002 by agro-regions

	2002
Western Plain	0.33
Transylvania	0.35
South Sub-Carpathians	0.40
Central Romanian Plain	0.43
South Oltenia	0.45
Low Danube Delta	0.46
Hilly Moldova	0.48
Plateau Moldova	0.51

Source: Calculations based on data from NIS (2005)

³⁴ In the report from the National Commission for Poverty Reduction and Promotion of Social Inclusion (Comisia Anti-Saracie si Promovare a Incluziunii Sociale) (CASPIS 2002), rural development is measured by an index based on the hypothesis that the development level in a commune depends on the levels of education, employment, age groups, population density, a better endowment with housing and infrastructure, and location closer to regional development centers. It does not however, take into account the economic structure in the community nor the type of institutions and organizational arrangements present at the local level for administering these resources.

³⁵ For a note on the calculation of poverty rate, see the report prepared by the Bucharest University and the National Institute of Statistics for The National Commission for Poverty Reduction and Promotion of Social Inclusion (CASPIS 2002).

3.3 Research design

In general, studies in the rural areas pose significant challenges for researchers mainly due to the prevalence of subsistence practices, where quantifications of production and consumption patterns are difficult to make. Important behavioral characteristics of farmers are unquantifiable and incommensurable, while others can be readily measurable. Hence, reliance on only one methodological tool (quantitative or qualitative) prevents social scientists from understanding the rural society in its complexity, generating conclusions that only partially explain reality.

To move beyond a surface-level analysis, I aim at a more comprehensive analysis of the small farmers in their effort to adapt to institutional changes during the post-socialist reforms by using a combination of quantitative and qualitative research approaches. As Hulme (2007) argues, in international development studies there is an emerging consensus that combined approaches and mixed methods, or “Q-squared methods” as they are more recently named (Kanbur and Shaffer 2007), can create knowledge that is socially useful and can contribute to more effective policy (Udry 2003).³⁶ Hence, I adopt a more ecumenical approach and argue that no research method is superior to the other, but rather some techniques or combination of techniques are more appropriate based on the problem being investigated.

As Sieber (1973) argues, integrating research techniques opens enormous opportunities for mutual advantages in research design, data collection, and data analysis. A special issue of *World Development* from February 2007, was dedicated to this topic, where several articles served as examples of the “value-added associated with mixing” (Kanbur and Shaffer 2007), such as: interpreting counterintuitive or surprising findings from household surveys, explaining the reasons behind observed outcomes, probing motivations, underlying observed behavior, or suggesting the direction of causality. Kabeer (2004) also provides one such example in which a combination of methods can lead to findings that could not be reached with confidence by a single approach. By using a combination of quantitative and qualitative methods, I enhance and expand the interpretation of findings from the household surveys and I probe motivations for the observed behavior.

The specific research methods I use in this study comprise of household surveys, in-depth qualitative interviews, and participatory observation in the two regions. The data from the household surveys is analyzed using statistical analysis, i.e. discrete choice regression analysis and descriptive statistics. Each method (quantitative and qualitative) has strengths and limitations, but used together and bounded by a theoretical framework, they complement each other.

³⁶ Even if significant progress has been made towards the use of mixed methods in international development research (especially poverty), the “process of mixing is not seamless but, at bottom, tensions remain,” especially with respect to epistemology and normative theory (Kanbur and Shaffer 2007).

Survey research, as a positive approach³⁷, allows to observe changes in variables that are easily quantifiable, and to measure the strength of the hypothesized relationships. However, the specific methodology requires a certain degree of isolation (detachment) from the situation we study through standardizing and “bracket[ing] external conditions” (Burawoy 1998). On the other hand, in-depth qualitative interviews and participant observation are part of what Burawoy (1998) calls “reflective models of science”. This approach promotes engagement in the local environment, and “extraction of local knowledge (Geertz 1973, 1983) through “indigenous narratives” (“thick descriptions” to use Geertz’s terminology) that are guided by cognitive maps based on theory. The reflective approach deploys multiple dialogues to reach explanations of empirical phenomena, and has the social context as its point of departure. In the end, the qualitative (ethnographic) methods will complement and enrich the interpretation of statistical relationships, and the clarification of puzzling findings in the specific socio-historical context (Jick 1979).³⁸ The convergence or agreement between the two methods “...enhances our belief that the results are valid and not a methodological artifact” (Bouchard 1976 p. 268).

3.3.1 Qualitative methods

Qualitative research was carried out during several months in the summer of 2005 and 2006. I conducted preliminary research in the summer of 2005 when, through semi-structured interviews³⁹ and participant observation, I identified the main problems that the agricultural sector, and small farmers in particular, were confronted with, as well as the regional sites where to conduct my larger research. A second round of interviews was carried out during the summer of 2006.

The interviews were conducted with several small landowners in different villages in the two agro-regions (Western Plain and Central Romanian Plain), and with a total of fourteen agrarian engineers, eight policy makers from the Ministry of Agriculture and research institutions, four academics and five local cadres. The interviews with landowners inquired into the incentives and constraints that they face in operating in a new economic environment of transition to a market economy, and the reasons behind their choices for different institutional arrangements and participation in land markets. The goal was to detect more subtle factors than what could be learned through structured survey techniques, by extracting meaning from social relations around land and farming, and from perceptions on market creation. The interview technique was based on semi-structured and open-ended interviews allowing for a two-way communication. One advantage of semi-structured interviews is that oftentimes the information obtained provides not just answers, but the reasons for the answers as well.

³⁷ According to Rorty (1979), “the purpose of positive science is to promote the most accurate mapping of the workings of the external world, to mirror the world” (cited in Burawoy 1998, p. 10).

³⁸ “Reflexive methods become the handmaidens of positive methods” (Burawoy 1998, p. 29).

³⁹ The advantage of using semi-structured interviews is that the questions and observations can be refined by what has been learned from earlier work.

Aside from small landowners, I also interviewed medium and large farms in the two agro-regions (three farms in the Western Plain, and five farms in the Central Romanian Plain). These interviews contributed greatly to my understanding of a different class of farmers and their interaction with the household farms. Most of these farms (associations or private corporate farms) were created as a result of restructuring the former socialist collective farms, and institutionalizing land leasing transactions. In almost all cases the leadership stayed the same, which at times could be both an advantage (in terms of easier access to markets) as well as a constraint (inability to operate based on market based principles).

I have also conducted participant observation by spending time with farmers in their work and social environment over extended periods of time in the past three years, in order to understand the specific social and economic dynamics in farming communities, and the motivations behind different individual and collective choices related to land. The specific techniques I used are direct observation, participation in the life of the community and farming practices, and collective discussions. Most of this research has been conducted in the West, due to a higher personal familiarity with the area, which made it easier to become immersed and integrated in the community.

3.3.2 Survey research methods

Despite past research efforts, it is reasonable to acknowledge that we know little about the effect of transition reform policies on small farmers, their motivation and response to market-oriented policies. The limited number of earlier survey studies provided only cross-sectional snapshots at national or regional level, at different points in time, without allowing one to consistently observe changes over time following major policy reforms.⁴⁰ Resurveys are costly and governments are rarely able or willing to finance long-term research while other projects already in operation are considered more important (Connell and Lipton 1977). However, because they give a formal time dimension and ease the task of hypothesis testing, resurveys (or follow-ups) are of greater value to policy and theory than a series of cross-sectional surveys.

Primarily because of the above reasons, I am using two household surveys supplemented with secondary statistics. These two surveys are unique in the Romanian context because they allow the examination of changes over time in the same communities, which is critical to understanding reform outcomes and changes in household behavior.

The first survey was conducted in 1996 on a sample of 1,650 households at national level with joined funding from the Romanian Government, the European Commission (EC) and the World Bank. For the purpose of this dissertation, I use a sub-sample with households from Western Plain and

⁴⁰ Two national surveys, conducted in 1996 and 1998 with funding from the European Commission, the World Bank, and the Romanian Government, attempted to offer a time comparison by resurveying in 1998 some households from the 1996 survey. Nevertheless, several limitations (i.e. different questionnaire having an entirely different focus, with a different set of questions) made comparisons across time hard to establish. In addition, the time difference between the two surveys was too small to capture major changes in policy or individual behavior.

Central Romanian Plain (a total of 246 households, 105 in the Western Plain and 141 in the Central Romanian Plain).

In order to account for the impact of policy changes on private farmers, in the summer of 2006 I conducted a re-survey in villages where the first such household survey was implemented in 1996. I implemented the survey in 45 villages⁴¹ (619 households) in the two agro-regions (316 in the Western Plain and 303 in the Central Romanian Plain). I used the same sampling strategy as in 1996, and the same research instruments (with few additional questions and slight changes in the earlier version), in order to allow comparisons to be made.

An earlier analysis that I conducted in 2005 on productivity differences between different farming arrangements on the 1996 and 1998⁴² household surveys, suggested that data limitations do not pertain to very sophisticated econometric methods. However, while some of these limitations are specific to research on the subsistence sector, others could be overcome by a more focused survey instrument and better formulated questions. It is specifically this drawback that I tried to address with the new 2006 survey.

As Connell and Lipton (1977) argue, a period of five years is minimum between two rural surveys in order to capture effects of fairly unspecific changes. Therefore, a decade after the first survey, I was able to capture important changes in farming practices and the rural economy, period in which major policy reforms were implemented. Some of these policy reforms were: finalizing the property restitution, elimination of state subsidies in 1997, opening up land markets in 1998, higher commitments for structural reforms under the prospects of EU enlargement from 2001 onwards, and privatization of former state-owned farms.

In addition to household surveys, I applied a questionnaire to the agricultural specialists in the communes (or the mayor in some cases) to gather information at commune level on land use, labor market, land market, and institutional constraints for private farmers. More details on the sampling strategy are provided in the next section. Table 3-4 summarizes key descriptive statistics collected in

⁴¹ In Romania the rural area is organized in 2,688 communes, which are administrative units set up according to Law 2/1968 (article 5) on the administrative and territorial organization. One commune consists of one or several villages. In total, there are 12,751 villages in Romania. Administratively, the 42 judets (counties) represent the basic administrative units that are headed by administrative staff. "Comuna" is the territorial administrative unit comprising of rural population united by common interests and traditions. A comuna is composed by one or several villages, according to economic, social, cultural, and geographical conditions. The organization of the commune ensures the economic, social, cultural, and administrative development of the rural localities. There is an average of 4.7 villages per commune. More than half of the communes (55.4%) consist of 1 to 4 villages and 6.2% have more than 10 villages. Villages are characterized by a great diversity in terms of population. Village dimensions vary, from those with only a few inhabitants, to villages with more than 7,000-9,000 inhabitants. Villages with only a few inhabitants prevail, the average number being around 800 people.

⁴² In 1998 a national survey was conducted by the World Bank, using a different survey instrument, focused mainly on land market issues, but attempting to build a panel data on a sub-sample of the households surveyed two years earlier. However, because the questionnaires were not similar, it was mainly background information (household characteristics) that were directly comparable with the 1996 survey data. In addition, given that this was a national survey, the re-surveyed households in the Western Plain and the Central Romanian Plain were too few to conduct a meaningful analysis.

the two household surveys (in 1996 and 2006). A more detailed discussion of regional differences and survey findings can be found in Chapter 6.

Table 3-4: Key descriptive statistics from household surveys

	Western Plain		Central Romanian Plain	
	1996	2006	1996	2006
Household size (nr. pers.)	3.9 pers.	3.3 pers.	3.1 pers.	3.00 pers.
Age of the household head (yrs.)	53 yrs.	57 yrs.	64 yrs.	64 yrs.
Gender of the household head (% male)	74.0%	57.0%	74.5%	63.0%
Education of the household head (% who completed 8 years)	69.5%	63.0%	84.4%	79.0%
Main occupation (% in agriculture)	64.8%	52.0%	85.8%	86.0%
Secondary occupation (% in agriculture)	24.0%	25.0%	12.7%	6.0%
Occupational status (% pensioners)	54.3%	55.0%	79.3%	69.0%
Average landownership (ha)	3.9 ha	4.0 ha	3.9 ha	4.0 ha
Land fragmentation (# of plots)	3.8 plots	3.8 plots	3.2 plots	4.0 plots
Final ownership title (%)	49.5 %	86.7%	42.6%	93.3%
Joined farming associations (% of households)	21.9%	4.1%	56.7%	35.6%
Leased-out land (% of households)	8.6%	10.4%	12.1%	29.7%
Leased-in land (% of households)	0%	4.4%	3.5%	2.3%
Sold land (% of households)	n.a.	22.2%	n.a.	3.3%
Bought land (% of households)	n.a.	18.4%	n.a.	4.0%
Own tractor (% of households)	9.5%	21.1%	8.5%	4.3%
Sold agricultural products (% of households)	98.1%	40.2%	87.2%	24.4%
Sample size (N)	105	316	141	303

Source: Household surveys, 1996 and 2006.

n.a. = not available. Since land sales were formalized only in 1998, no data was collected on land sales and purchases in 1996. Nevertheless, as I show in Chapter 7, informal land transactions were recorded even prior to 1998.

Sampling and questionnaires

The type of available data did not allow me to build a true panel dataset with the 1996 and 2006 surveys, as I initially expected. Past organizational problems, lack of coordination among the institutions involved in previous surveys, as well as lack of long-term vision at a time of major economic instability and political uncertainty, led to loss of contact information for the households surveyed in 1996.

The organization that administered the 1996 survey was the Center for Urban and Regional Studies (CURS). CURS is one of the most important survey and pooling agency in Romania, conducting research in a variety of fields spanning from economic, social, political, and market research. For the 2006 survey I worked with the same agency, which generated major advantages. Having already a team of field-interviewers familiar with the rural context and farming issues proved to be essential in ensuring a good understanding of the questionnaire while collecting the data. Another institution that I collaborated with in preparation and implementation phase was the Institute

for Agricultural Economics (IEA) from Bucharest. IEA is a prominent national research agency affiliated with the Ministry of Agriculture and the Romanian Academy of Sciences, having first class researchers and policy makers working on critical aspects related to the agricultural sector and rural development.

Not having the list with households interviewed in 1996, I decided to implement the household level questionnaire in the same villages that were surveyed a decade ago, based on the same sampling strategy. This approach ensured comparison at the village level, rather than at the individual level. Nevertheless, given that the average age in the rural areas is high⁴³, the probability that farmers interviewed in 1996 would still be around and able to farm, was anyway small.

Consequently, in the summer of 2006 a sample of 619 rural households was selected at random from 45 villages in eight counties in the two regions: 316 households in the Western Plain and 303 households in the Central Romanian Plain (see Table 3-9). One person from each household, the household head, was interviewed.⁴⁴ The sampling procedure was carried out in two stages with stratification in the first stage. Sample strata were a function of the agricultural profile of the commune and the development level of the county (*judet*) in which the communes are located.

The primary sampling unit in this case is the household, private individual farm (see Table 3-5). A household is considered (potentially) agricultural if it owns at least 0.5 hectares of agricultural land. Owning less than 0.5 hectares reduces very much the probability of using land as a source of income or as a primary occupation. Even if agricultural activities are also present in urban communities⁴⁵, the selection included only rural farms.

The main hypothesis of the sampling design is that agricultural activity at the commune level is a function of: (a) the pattern of land use measured by the percentage of arable land cultivated with grain; (b) the soil quality measured by a specific index ('bonitare' GEO); and (c) the labor and social pulling profile of the community, measured by the temporary net migration rate for 2002.

⁴³ The share of the population 50 years and older in total population in the rural areas, is 1.6 times higher than for the urban areas (Dumitru et al. 2004).

⁴⁴ During the interviews data were collected on other members of the household as well, although for the purpose of this report only responses from the household head are used.

⁴⁵ The percentage of the population occupied in agriculture, living in urban communities is reported to be of 8% out of the total population occupied in agriculture, in the third trimester of 1996, according to the survey of the National Commission of Statistics, "Ancheta asupra fortei de munca in gospodarii (AMIGO)", Trimestrul III 1996.

Table 3-5: Main characteristics of the sample

Representativeness for:		Rural agricultural households
Type of sampling design		Two stage random sample with stratification in the first stage
Stratification criteria		1. Commune type strata 2. County development level (2 strata)
Sample size	designed	650
	accomplished	619

Source: MAA, EC and WB (1997)

Table 3-6: Sampling design by stages

Stage 1		
Inputs	Selection units	Rural communes
	Stratification criteria (2*2*3*2=24 strata)	<ul style="list-style-type: none"> • GEO soil quality (2 classes) • MIG migration attraction (2 classes) • GRAIN land use pattern (3 classes) • County development level (2 classes)⁴⁶
	Sampling frame	Farm survey data file with all the communes of the country, built on the basis of National Commission of Statistics NCS data (1994), Agricultural Economics and Sociology Institute and 2002 published census data
Operations	Stratifying the sample	The distribution of the agricultural active population in the 24 cells of the stratification table is the basic structure of the sample.
	Distributing the sampling points (=communes) by strata	The sample of 619 households is divided by strata according to the proportion of active labor force in agriculture. The number of the communes by stratum is given by the division of the strata sub-sample by 14 (=the number of farms to be interviewed by commune)
	Randomly the communes by strata	From the total number of communes by strata we selected randomly a number of communes according to the number of sampling points by stratum determined above.
Stage 2		
	Selection units	Agricultural households
	Sampling frame	Local agricultural registry ("Registrul Agricol")
Operations	Selection of the farms for the survey	Random selection of farms having at least 0.5 ha of agricultural land, from the Agricultural Registry (<i>Registrul Agricol</i>) in each village.

Source: MAA, EC and WB (1997)

The stratification criteria did not change since 1996 (see Table 3-6) and therefore I did not have to change the distribution of sampling points (the communes) by strata and randomly selecting the communes. I used the same communes and villages that were surveyed in the previous years, but I

⁴⁶ Using the classification from (Ramboll Consultancy 1996).

had to do a new selection of the households, using the local agricultural records available in each commune. A random selection of farms was made based on the total number of questionnaires in each commune and the total number of households in the commune/village. The refusal rate, that is, the number of respondents who refused to participate in the survey or who were not at home repeated times, was less than five percent (12 households in the Western Plain and 29 in the Central Romanian Plain).

Questionnaires

I collected data from two survey units: households, and communes. In order to ensure comparability with earlier data, the household questionnaire was based on the 1996 survey instrument to which I added few questions and took out some in order to keep it within a reasonable interview time frame. Feedback from a pretest on 20 households, before implementing the full survey, suggested that the questionnaire had to be maintained within a manageable size in order to ensure reliability and completeness of collected data. The questionnaire consisted of more than 100 questions. The questionnaire I used for the 2006 household survey is presented in Appendix 3-1.

Interviews were conducted person to person by a research team from CURS. Two training sessions were conducted by myself and CURS, one in Bucharest for 12 field interviewers from the Central Romanian Plain, and one in Oradea for 8 field interviewers in the Western Plain. I participated in part of the data collection during the fieldwork.

Random field checks were performed at the end of the surveying procedure for ensuring accuracy of data collection. Due to lack of phone lines in most of the rural areas, field trips were made in randomly selected villages. Having the contact information for the surveyed households (name and address) we were able to trace them back and inquire as to whether a field operator from CURS approached them recently with questions about their farm operations. Random questions from the questionnaire were also posed in order to verify the accuracy of information.

The *household questionnaire* has the following sections: background information on the household members (age, education, occupation); land ownership; land market participation (leasing in, leasing out, sales, purchases); size of the livestock; agricultural production; capital and buildings; participation in product market; purchases of inputs; investment and credit access; labor force; sources and levels of income; changes in wellbeing.

The *commune questionnaire* was administered to mayors⁴⁷ or agricultural secretaries in 19 communes (8 in Western Plain and 11 in Central Romanian Plain), and gathered information on: distance to the closest urban center, age level in the commune, land market participation, share of

⁴⁷ In many cases the mayor was the same person as the agricultural representative, which eased the process of data collection.

land left fallow, traditional market for agricultural products, labor migration, and problems faced by farmers in the commune. The commune questionnaire is presented in Appendix 3-2.

Table 3-7: Summary statistics from the commune questionnaire (2006)

	Western Plain	Central Romanian Plain
Distance to the closest city	16 km	18 km
The largest age group	45-54 years	55-60 years
HH sold land in the commune	100%	91%
Share of land sold in total arable land	13%	4%
Average price for sold land	2,888 RON/ha	2.565 RON/ha
Average wage for hired labor	33 RON/ha	20 RON/ha
Share of land left fallow	25%	14%
Peasant market in the commune (% yes)	25%	27%
Share of youth that left for work abroad	22%	20%

Source: Commune questionnaire, 2006.

3.3.3 Data limitations

The type of data used for this research calls for a clear specification of the main limitations. As mentioned earlier, this study is based on a “pseudo-panel” dataset, on two cross-sectional surveys at village level. Therefore, while comparisons between the two years are still possible, such an attempt faces several constraints. First, in a time-series set-up, the unit of comparison is the village or the commune. Hence, since this is not a national level study, the number of observations is too small for a very thorough analysis (i.e. 49 villages, or 19 communes). Therefore, more complex analyses, such as the estimation of long-term household productivity, become highly controversial from a methodological point of view. Consequently, in the statistical analysis, Chapter 8, I will spell out all the robustness tests (though different methods and techniques) that I performed in order to choose the specific methodology I am using.

Another limitation comes from the type of data that was collected. Because of time, budget, and ethical constraints, I had to limit the length of the household questionnaire. As a result, I was not able to capture the full spectrum of information from the households. For example, I did not collect data on agricultural production at plot level, and on land quality at plot level. Therefore, I use household aggregate values for agricultural production, and commune level land quality data. In addition, I was not able to fully capture the amount of rent paid to the households that were leasing-out land or were farming land in associations because of the type of contracts signed with these different farming institutions. Some households were receiving between 20 to 50% of the harvest, while others were receiving a fixed payment each year. Moreover, for other households the association was keeping almost the entire production to cover the expenses with land preparation and harvesting. For these reasons it was difficult to accurately estimate the level of production and revenues received from alternative farming arrangements.

Moreover, production estimates were hard to make in general because the survey was aimed at small household farms that are mostly producing for subsistence needs. Hence, it is difficult to know exactly how much they produced in conventional measurements (kilograms or tones). Therefore, in the 2006 questionnaire, I allowed respondents to report their output in traditional measurements (such as carriage, wagon, basket), which then I approximated to kilograms, based on references from IAE in Bucharest. The traditional measurements varied by regions and conversions were made by crop type (i.e. one carriage from corn is different in quantity than one carriage of wheat because of density variation). Despite allowing me to get more specific and accurate production quantifications, this approach is not entirely perfect either. For example, there are differences between a kilogram of corn on the cob and a kilogram of corn kernels that vary with the density of the kernel and the weight of the cob. Therefore, a carriage of corn on the cob will weight a bit more than a carriage of corn kernels. Nevertheless, when farmers harvest the corn they bring it home on the cobs, and that's when they know how much they produced. When sold, most of the time the corn kernels are separated from the cob, which gives a different, more accurate, estimate (generally slightly lower) of the production. But, since only a few households in the sample claimed to have sold part of the production, I used the corn on the cob production estimate. Table 3-8 summarizes the approximate conversions I made based on responses in the household questionnaire on production levels by types of crops.

Table 3-8: Production measurement conversions

Traditional unit	Crop type	Kilograms
Carriage (<i>caruta</i>)	corn	420 kg
	wheat, barley	550 kg
Trailer (<i>remorca</i>)	corn	4,500 kg
Sack (<i>sac</i>)	corn*	40 kg
	wheat	43 kg
	oats	30 kg
	grapes	40 kg
<i>Maje</i> **	corn	100 kg
Wagon (<i>vagon</i>)	corn	10,000 kg
Balot (<i>bundle</i>)	hay	25 kg
Basket (<i>cos</i>)	corn	22 kg
<i>Duble</i> ***	corn	14 kg
	wheat	15 kg
	barley	13 kg
	oats	10 kg

Source of estimates: Institute for Agrarian Economics (IEA), Bucharest.

* When the corn is kept in sacks, usually it is corn kernels (without cobs).

** *Maje* is a measurement used only in the western part of the country.

*** *Duble* is a measurement used only in the southern part of the country.

Table 3-9: The sample distribution by agro-region, communes and villages in 2006

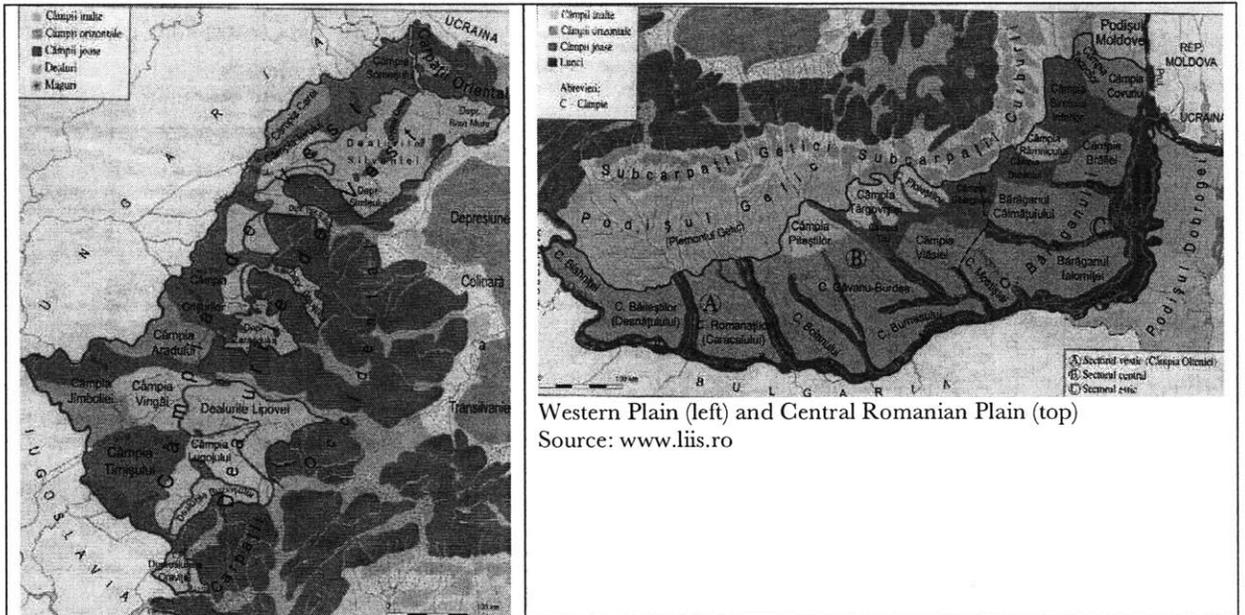
Agroregion	WESTERN PLAIN	N	Agroregion	CENTRAL ROMANIAN PLAIN	N
County	Arad	69	County	Calarasi	54
<i>Commune</i>	<i>Barsa</i>	27	<i>Commune</i>	<i>Vlad Tepes</i>	26
Village	Barsa	14	Village	Vlad Tepes	26
Village	Aldesti	8	<i>Commune</i>	<i>Ulmeni</i>	28
Village	Hodis	3	Village	Ulmeni	28
Village	Voivodeni	2	County	Giurgiu	84
<i>Commune</i>	<i>Zarand</i>	42	<i>Commune</i>	<i>Daia</i>	28
Village	Zarand	22	Village	Daia	11
Village	Cintei	20	Village	Plopsoru	17
County	Bihor	42	<i>Commune</i>	<i>Gostinu</i>	28
<i>Commune</i>	<i>Bors</i>	42	Village	Gostinu	28
Village	Bors	14	<i>Commune</i>	<i>Joita</i>	28
Village	Santaul Mare	4	Village	Joita	17
Village	Santaul Mic	6	Village	Bacu	11
Village	Santion	18	County	Ialomita	56
County	Satu Mare	81	<i>Commune</i>	<i>Barcanesti</i>	28
<i>Commune</i>	<i>Agris</i>	21	Village	Barcanesti	14
Village	Agris	14	Village	Condeesti	14
Village	Ciuperceni	7	<i>Commune</i>	<i>Valea Macrisului</i>	28
<i>Commune</i>	<i>Botiz</i>	21	Village	Valea Macrisului	20
Village	Botiz	21	Village	Grindasi	8
<i>Commune</i>	<i>Gherta Mica</i>	39	County	Teleorman	109
Village	Gherta Mica	39	<i>Commune</i>	<i>Lita</i>	28
County	Timis	124	Village	Lita	28
<i>Commune</i>	<i>Belint</i>	43	<i>Commune</i>	<i>Didesti</i>	28
Village	Belint	23	Village	Didesti	11
Village	Babsa	4	Village	Insuratei	7
Village	Chizatau	12	Village	Satu Nou	10
Village	Gruni	4	<i>Commune</i>	<i>Dracsenei</i>	28
<i>Commune</i>	<i>Darova</i>	39	Village	Dracsenei	13
Village	Darova	21	Village	Dracsani	7
Village	Hodos	5	Village	Odobeasca	6
Village	Sacosu Mare	13	Village	Satul Vechi	2
<i>Commune</i>	<i>Giulvaz</i>	42	<i>Commune</i>	<i>Pietrosani</i>	25
Village	Giulvaz	16	Village	Pietrosani	25
Village	Crai Nou	7	TOTAL		303
Village	Ivanda	9			
Village	Rudna	10			
TOTAL		316			

Figure 3-1: Map of Romania's counties with the two agro-regions highlighted and superimposed on the historical regions



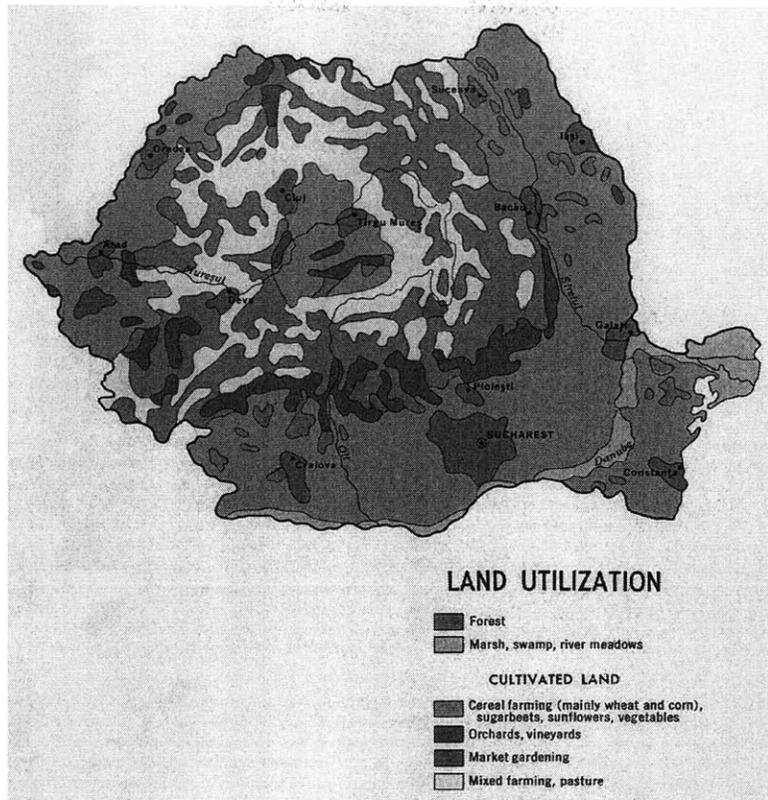
Source: http://en.wikipedia.org/wiki/Counties_of_Romania

Figure 3-2: Map of the Western Plain and the Central Romanian Plain



Western Plain (left) and Central Romanian Plain (top)
Source: www.liis.ro

Figure 3-3: Map of land utilization in Romania



Source: <http://www.lib.utexas.edu/maps/romania.html>. Map produced by the U.S. Central Intelligence Agency

Appendix 3-1: 2006 Household Survey Questionnaire

Date of the interview (month/day)_____

Duration of interview (minutes)_____

Enumerator code_____

	Basic rules for the interviewer:
1.	MENTION TO THE PERSON YOU TALK TO THAT: <ul style="list-style-type: none"> • “YOU WERE SELECTED AT RANDOM, SIMILAR WITH A LOTERY”; • “WE ASURE YOU THAT THE INFORMATION WILL BE HELD CONFIDENTIALY; COMPUTER DATA PROCESSING WILL BE USED AT THE END OF SURVEY” • “THIS IS A VERY IMPORTANT SURVEY TO HELP US UNDERSTAND THE PROBLEMS FACED BY FARMERS” • “YOU CAN HELP SOLVING THESE PROBLEMS BY ANSWERING THIS QUESTIONNAIRE”
2.	SELECT FOR THE INTERVIEW THE <i>HOUSEHOLD MEMBER WHO IS MOST INVOLVED IN AGRICULTURE</i>
3.	EACH QUESTION SHOULD BE MARKED WITH <i>ONLY ONE ANSWER</i> . IT IS SPECIFIED IF THE OUESTION CAN HAVE MORE THAN ONE ANSWER . THE ANSWERS ARE MARKED WITH A PEN
4.	A CELL OF A TABLE IS FOR THE ANSWER TO A QUESTION. IF A WHOLE TABLE OR BLOCK OF CELLS COULD BE LEGITIMATELY SKIPPED, YOU SHOULD MARK IT BY A LARGE X. THE BLOCKS OR THE BUNCH OF QUESTIONS THAT CAN BE MARKED BY X IN THIS WAY ARE PRECEDED BY AN INSTRUCTION SPECIFYING THIS POSSIBILITY AND ARE BORDERED BY A BOLD FRAME
5.	INSTRUCTIONS FOR THE INTERVIEWERS ARE WRITTEN WITH CAPITALS. THOSE ARE ONLY FOR INTERVIEWERS’ USE
6.	AT THE END OF THE INTERVIEW, CHECK IF YOU ASKED ALL THE QUESTIONS
	FOR LARGE TABLES THE HORIZONTAL ARROW \longrightarrow INDICATES THAT YOU SHOULD ASK QUESTIONS ROW BY ROW; THE VERTICAL ARROW \downarrow INDICATES THAT YOU SHOULD ASK COLUMN BY COLUMN
7.	ALL QUANTITIES SHOULD BE RECORDED IN INTEGERS, EXCEPT IN THOSE CASES WHICH HAVE TWO DECIMALS
8.	FOR THE WHOLE QUESTIONNAIRE “YOU” MEANS “YOUR HOUSEHOLD”
9.	TO ENSURE ACCURACY, THE QUESTIONNAIRES WILL BE CHECKED IN THE FIELD, ESPECIALLY FOR THE “FILTER” QUESTIONS , BY RANDOM SELECTION
10.	SYMBOLS: NA = NON ANSWER NC = NOT THE CASE

B. BACKGROUND

B1. How many persons live in your household , including those temporary out? _____

B2. How many of them are children of 14 years old or less? __

Household members of 15 years old and more.					I. Respondent	II	III	IV	V	VI
B3. Status in relation to the head of household	1. Head 3. Child	2. Spouse 4. Parent	5. parent in law 6. daughter/son in law	7. other						
B4. Age										
B5. Gender	1. male 2. female									
B6. Highest level of education completed	1. elementary uncompleted 2. elementary 3. gymnasium 4. non-agricultural high school 5. agricultural school 6. non-agricultural technical school 7. agricultural technical school 8. undergraduate non - agricultural studies 9. undergraduate agricultural studies 10. other 11. uncompleted, going on (student, pupil)									
B7. Primary occupation (taking most of the working time) is in (without occupation=X)		Agriculture	Industry + Construction	Services	Agroindustry					
	Household/Own firm	11	21	31	41					
	Private/other owner	12	22	32	42					
	Informal association	13	23	33	43					
	Legal association	14	24	34	44					
	State sector	15	25	35	45					
	Cooperative	16	26	36	46					
B8. Second occupation is in	(USE THE SAME CODES AS FOR B7. IF NO SECOND EDUCATION, MARK WITH X)									
B9. If no occupation, what is your status?	1. unemployed 2. pensioner 3. housewife 4. child/pupil/student 5. other									
B10. What is your job location?	1. same commune 2. another commune 3. city 9. no job									
B11. Type of work for primary occupation	1. manual non-qualified 2. manual qualified 3. non-manual non-qualified 4. non-manual qualified X = NC									
B13. Did you return to the village after 1989?	1. yes, from a city 2. yes, from a village; 3. did not leave									
B14. Intention to migrate in the next 5 years and destination	1. decided for city 2. decided for other village 3. decided for other country 4. undecided 5. no intention 9. NA									

P. OWNERSHIP

P1. What is the legal status for the land your household owns? (several choices are possible)

legal title of ownership; 2. user certificate; 3. other (which)

P2. How much land do you own? _____ ha

(including the land in informal or legal association)

	I.	II.	III.	IV.	V.
	in own household, not leased	in family association	in legal association	leased out	leased in
P3. How much of the land you own is cultivated?	_____ha	_____ha	_____ha	____ ha	
P4. In how many parcels is the agricultural land you own and/or you lease in, divided?	_____#	_____#	_____#	_____#	_____#
P5. How much land does your household plan to cultivate next year	_____ha	_____ha	_____ha		____ha

P6. How large are each of the plots you own?

Plot 1 _____ha Plot 3 _____ha Plot 5 _____ha

Plot 2 _____ha Plot 4 _____ha Plot 6 _____ha

P7. How much of the land you own is...? (use 2 decimals)

1. Arable _____ha

4. Hay _____ha

2. Orchards _____ha

5. Grazing _____ha

3. Vineyards _____ha

6. Forest _____ha

7. Unused _____ha

T. LAND TRANSACTIONS

LEASING-IN

T1. In the last two years did you or someone in your household work land from someone else (through leasing or other arrangements)?

1. Yes 1. No (if No, GO TO T8)

T2. If yes, how much land do you work that is owned by other households? _____ ha

T3. Are you (or someone in your household) responsible for this land on the basis of:

1. lease contract certified by a public office

2. informal agreement with the owner

3. formal agreement with the owner but uncertified by a public office (notary)

T4. What year did you lease-in the land? _____

T5. Until when do you have a commitment to work the land? _____

T6. Who is covering the cost of working the land?

1. you

3. you and the owner

2. the owner of the land

4. there was no need for payments

T7. How do you pay the owner? (several choices possible)

- | | | |
|---|---------|-------------|
| | I. cash | II. in kind |
| T8.1 percentage of the crops, per year | % | % |
| T8.2 a fixed amount, per hectare per year | lei | kg |

LEASING-OUT

T8. Did your household lease out land to be cultivated by others?

(Not including the land given to associations)

1. Yes 2. No If "No", mark the block with X and GO TO T16)

T9. How much land did you lease-out to others for cultivation? _____ ha

T10. If yes, who is cultivating your land?

- | | |
|---|----------------------|
| 1. a family association in which you are not member | 5. private firm |
| 2. a legal association in which you are not member | 6. other individuals |
| 3. a state owned farm | 7. others _____ |
| 4. relatives | |

T11. Under what type of arrangement do they cultivate your land?

1. lease contract certified by a public office
2. informal agreement with the owner
3. formal agreement with the owner but uncertified by a public office (notary)

T12. What year did you lease-out the land? _____

T13. What is the length of the lease? _____

T14. Who is covering the cost of working the land?

- | | |
|-----------------------------------|-------------------------|
| 1. you | 3. you and the owner |
| 2. the one who leased-in the land | 4. no need for payments |

T15. How are you paid by the person cultivating your land? (several choices are possible)

- | | | |
|--|---------|-------------|
| | I. cash | II. in kind |
| T16.1 percentage of the crops, per year | % | % |
| T16.2 a fixed amount, per hectare per year | lei | kg |

LAND SALES

T16. Have you sold any hectares of land?

1. Yes 2. No

T17. If yes, how much did you sell in...:

	Before 1998	1998	1999	2000	2001	2002	2003	2004	2005	2006
ha										

T18. What was the price for which you sold the land in...:

	Before 1998	1998	1999	2000	2001	2002	2003	2004	2005	2006
Lei/ha										

T19. Are you planning to sell more land?

1. Yes 2. No

T20. If YES, why?

- 1. need money
- 2. lack of mechanical implements
- 3. health problems
- 4. unprofitable
- 5. moved out of the village
- 6. not interested in farming anymore
- 7. other reason_____

T21. If NO, why?

- 1. I do not have enough
- 2. lack of mechanical implements
- 3. health problems
- 4. unprofitable
- 5. moved out of the village
- 6. not interested in farming anymore
- 7. other reason_____

LAND PURCHASES

T22. Have you bought any hectares of land?

- 1. Yes
- 2. No

T23. If yes, how much did you buy in...:

	Before 1998	1998	1999	2000	2001	2002	2003	2004	2005
ha									

T24. How much did you pay for the land you bought in...:

	Before 1998	1998	1999	2000	2001	2002	2003	2004	2005
ha									

T25. Are you planning to buy more land?

- 1. Yes
- 2. No

A. LIVESTOCK

As. Do you have any animals in your household?

- 1. Yes
- 2. No (check using test questions, if there are animals before go to U)

If 'No' mark the block of questions with X and go to U

	I. Total number in 2005	II. Have you changed the livestock in your household in the past 10 years? 1. yes, increased 3. no, kept the same 2. yes, decreased 4. don't know
A1. Dairy cows		
A2. Calves		
A3. Bulls		
A4. Horses		
A5. Pigs and piglets		
A6. Sheep, lambs, goats		
A7. Poultry		
A8. Bees		
A9. Others (please specify)		

A9. Please estimate the proportion of the animal feed do you purchase (hay, green fodder, straws, beet, etc.)? %_____

A10. Please estimate the percentage from your production that you use to feed your livestock? %_____

C. CROPS

Cs. What do you cultivate on the land you work (owned and leased)?

Type of crops		I. Cultivated area (ha)	II. The total production obtained, sold or not (in any unit of measurement)	III. Do you plan to change the cultivated area in the coming year? 1. yes, increase 2. yes, decrease 3. no, keep the same 4. undecided	IV. If you gave land to an informal association how much of each products did you receive/will you receive?	IV. If you gave land to a formal association how much of each products did you receive/will you receive?
C1.	maize					
C2.	wheat					
C3.	vegetables					
C4.	sunflowers					
C5.	fruits					
C6.	barley, oat					
C7.	sugar beets					
C8.	hay, lucerne, clover					
C9.	soy					
C10.	barley					
C11.	grapes					
C12.	Others ____					

U. CAPITAL

	I. Do you own?		II. (In NO for I) Do you intend to purchase in the next 5 years?		III. Did you use any of these equipments in 2005?		IV. (If YES for III) How many days did you use these equipments?	V. Who supplied the services? 1. other households 2. informal association 3. formal association 4. state farm 5. other private source
	Yes	No	Yes	No	Yes	No		
U1. Truck/ARO	1	2	1	2	1	2		
U2. Tractor	1	2	1	2	1	2		
U3. Plough for tractor	1	2	1	2	1	2		
U4. Combine for grains	1	2	1	2	1	2		
U5. Carriage	1	2	1	2	1	2		
U6. Seeder	1	2	1	2	1	2		
U7. Irrigation equipments	1	2	1	2	1	2		
U8. Equipments for food processing	1	2	1	2	1	2		
U9. Stable for animals	1	2	1	2	1	2		
U10. Storage for crops	1	2	1	2	1	2		
U11. Storage for tools	1	2	1	2	1	2		

SALES

Vs. Did you sell any agricultural products or animals in 2005?

1. Yes 2. No

If 'No', skip this block of questions and go to INPUTS.

1.wholesale state agency
2.other farmer
3.private trader

5.private processor
6.state processor
7. other (AVICOLA)

SALES C = contract N = non-contract

Did you sell in 2005	I. Sold 1. yes, for cash 2. yes, for barter 3. no	If "yes" (= code 1 or 2 in column I)						
		II. Sold quantity		III. How much did you get for it in 2005		IV. Largest buyer		V. (If formal contracts exist)
		C	N	C	N	C	N	
V1. maize			kg					
V2. wheat			kg					
V3. sunflowers			kg					
V4. barley, oats			kg					
V5. sugar beets			kg					
V6. hay, lucerne, clover			kg					
V7. soya			kg					
V8. vegetable			kg					
V9. fruits			kg					
V10. pigs, piglets								
V11. sheep, lambs, goats			head					
V12. cattle/horse			head					
V13. poultry			head					
V14. meet			kg					
V15. milk			l					
V16. eggs			pieces					
V24. How much did your household earn in 2006 by selling agricultural products? _____ thou. lei								

Payments were made

1. before delivery
2. after delivery, on time
3. installments, before and after delivery
4. 1 month delay
5. 1- 3 month delay
6. more than 3 month delay

I. INPUT PURCHASE

Did you buy in 2005:	I. Bought		II Quantity or value	III Where did you buy from (several choices possible)	IV How much did you pay?	V Did you buy on: (several choices) 1.cash 2.contract-products 3.credit 4. barter 5.other _____	VI. IF you had CONTRACTS Delivery was: (several choices possible) 1. on time 2. later, <1 month 3. later, > 1 month
	yes	no					
I1. Seeds	1	2	kg				
I2. Fertilizer	1	2	kg				
I3. Insecticides, herbicides	1	2	kg				
I4. Grain for feed	1	2	kg				
I5. Hay	1	2	kg				
I6. Fuel for machinery	1	2	l				
I7. Parts for machinery	1	2	lei				
I8. Building and raw materials	1	2	lei				
I9. Veterinary medicines	1	2	lei				
Did you pay for services:							
I10. Mechanical services (plough, seeding, etc.)	1	2	lei				
I11. Maintenance	1	2	lei				
I12. Veterinary	1	2	lei				
I22. How much did you spend on purchased farming inputs and services in 2005? _____ lei?							

- | | |
|--------------------------------|-----------------------|
| 1. other householder | 7. private source |
| 2. production state enterprise | 8. family association |
| 3. COMCEREAL | 9. legal association |
| 4. SEMROM | 10. other |
| 5. MEC IF "yes" in column I | |

FI. FINANCE, CREDIT, INVESTMENT

- Source of funds:
1. own savings from selling agric. products
 2. own savings from other sources
 3. borrow from relatives
 4. borrow from other individuals
 5. loans from state owned bank
 6. loans from private bank
 7. credits from ANPA, processing factories
 8. other sources; 9. NC

FI. Did you spend money in 2005 to:	If he had invested		
	I. Money spent Yes No	II. Most important source	III. How much lei did you spend for it (X = NC)
FI1. buy agricultural equipment	1 2		
FI2. buy livestock	1 2		
FI3. buy land	1 2		
FI4. build new annexes/improve old ones	1 2		
FI5. develop non-agricultural private enterprise	1 2		
FI6. develop a private food processing enterprise	1 2		
FI7. build a new house/improve housing conditions	1 2		
FI8. buy a car/track/ ARO	1 2		
FI9. children education	1 2		

FI1s. Did your family take loans in the last two years?

1. Yes 2. No If 'No', GO TO FI18.

FI12 IF "yes", from whom did you borrow the most money: (several choices possible)

1. a state bank
2. a private
3. an association
4. a relative
5. a non-relative private person

FI13 For what did you take the largest loan (several choices possible):

1. to buy farm machinery
2. to buy land
3. to pay hired – labor
4. to pay mechanical works (services)
5. to buy livestock
6. other agricultural expenses
7. to buy processing equipment
8. to pay debts
9. to pay for tree planting
10. other reasons _____

FI14. What was the amount of the largest loan? _____ lei (USD/Euro)

FI15. How many months did/do you have for repayment? _____

FI16. What interest rate do you pay per month (in %)? _____

F117. Did you provide any collateral for the loan? (several choices possible)

- | | |
|-------------------|--------------------------|
| 1. yes, land | 5. yes, crops |
| 2. yes, livestock | 6. yes, car, truck |
| 3. yes, house | 7. no guarantees needed |
| 4. yes, jewels | 8. other guarantees_____ |

F118. In case you need to borrow money, whom would you ask for help? (several choices possible)

- | | |
|--------------|------------------------------------|
| 1. relatives | 4. banks |
| 2. friends | 5. wealthier people in the village |
| 3. neighbors | 6. I don't know |

F119. If you had more money, how would you use it?

- | | | |
|-------------------------------|--|-------------|
| 1. buy agricultural machinery | 6. buy electronic/electrical durable goods | 11. trips |
| 2. buy animals | 7. start a private business | 12. other__ |
| 3. buy land | 8. children's education | |
| 4. buy car/ truck/ARO | 9. buy food | |
| 5. buy/ renovated house | 10. buy clothes | |

L. LABOR AND EMPLOYMENT

On average, how many members of your household, including yourself, cultivate your land?

- | | |
|--------------------------------|-------|
| L1. full time | _____ |
| L2. half of their working time | _____ |
| L3. less than half | _____ |

Do you use the following type of labor on your farm:

	I. Use		II. If "Yes" How many persons?	III. How many days/year did each one work on average?
	1. Yes	2. No		
L4. regular hired workers				
L5. seasonal/temporary hired worker				
L6. relatives by exchange				
L7. non-relatives by exchange				

If "Yes" to L4 and L5

L8. For which of these activities do you use hired workers? (several choices possible)

- | | |
|--|----------------------------------|
| 1. planting | 4. taking care of livestock |
| 2. harvesting | 5. selling agricultural products |
| 3. between planting and harvesting works | 6. other activities_____ |

L9. How much in all did you spend on hired labor in 2005 (in cash or in kind)?

In 2005 did you make use of any of the following organizations in your farming activities?

	I. Used		(IF YES to I) Are you satisfied with their service?			III.(IF NO) Why? 1. too expensive 2. unavailable 3. bad quality 4. not needed 5. other reasons 9. NC	IV. Do you expect to intend to use their services in the future?	
	yes	no	yes	no	NC		yes	no
L10. Agricultural Chamber	1	2	1	2	9		1	2
L11. Independent agricultural engineers	1	2	1	2	9		1	2
L12. Veterinary doctors	1	2	1	2	9		1	2
L13. Private agricultural firm	1	2	1	2	9		1	2
L14. Agricultural association	1	2	1	2	9		1	2
L15. Private individuals	1	2	1	2	9		1	2

VEN. INCOME

VEN1. What was your household income obtained by your household in June (salaries, pensions, allowances)?

- | | |
|-------------------------------|---------------------------------|
| 1) less than 3,000,000 lei | 7) 10,000,001 – 15,000,000 lei |
| 2) 3,000,001 – 3,500,000 lei | 8) 15,000,001 – 20,000,000 lei |
| 3) 3,500,001 - 4,000,000 lei | 9) 20,000,001 – 25,000,000 lei |
| 4) 4,000,001 – 5,000,000 lei | 10) 25,000,001 – 30,000,000 lei |
| 5) 5,000,001 – 7,000,000 lei | 11) more than 30,000,000 lei |
| 6) 7,000,001 – 10,000,000 lei | |

What are the sources of income in your household	I. Is a source		II. What is the most important source of income for your household? (RANK)	IV. What is the monthly amount of income from this source (thou. lei) X = NA
	yes	no		
VEN2. sale of agricultural products	1	2		
VEN3. income from agricultural association	1	2		
VEN4. leasing land	1	2		
VEN5. salaries	1	2		
VEN6. from a non-agriculture company	1	2		
VEN7. pensions				
VEN8. other state allowances (children, student etc.)	1	2		
VEN9. Money from relatives	1	2		
VEN10. Other sources	1	2		
Total				

S. CHANGES

Do you think that a year ago the following conditions were better, the same, or worse than now?

		Beter	Same	Worse	NR
S1.	Financial situation	1	2	3	9
S2.	The possibility for selling agricultural products	1	2	3	9
S3.	Contracting with the state for selling products	1	2	3	9
S4.	The possibility to purchase equipments	1	2	3	9
S5.	Joining in mechanical works with others	1	2	3	9
S6.	Hiring workers for farming	1	2	3	9
S7.	Purchasing seeds	1	2	3	9
S8.	Purchasing fertilizer and other chemical products for farming	1	2	3	9

RELATIONS WITH THE AGRICULTURAL ASSOCIATION

Are you a member of:

	Yes	No
1. Informal association	1	2
2. Formal association	1	2

If the household **IS NOT A MEMBER** in a family or legal association:

AS1. Do you intend to become member of an agricultural family association?

1. yes 2. undecided 3. no 9. NA

AS2. Do you intend to become member of a legal agricultural association?

1. yes 2. undecided 3. no 9. NA

If the household **IS MEMBER** in a family or legal association, fill AS3 - AS17. If not, mark the section with X.

AS3. What year did you join the association? _____

AS.31	Why did you join the association? (do not read the answers) (several choices possible)	1. lack of labor to work the land 2. lack of money/means for mechanical work 3. hope to get more than by working alone 4. followed my neighbors/relatives 5. persuaded by the association leaders 6. other reasons
AS.32	Do you intend to stay in the association	1. yes 2. undecided 3. no 9. NA/NC
AS.33	Are there conflicts between leaders and the members	1. frequent 2. rare 3. not at all 9. NA/NC
AS.34	Are there conflicts between the association' members	1. frequent 2. rare 3. not at all 9. NA/NC

AS4. How do you participate in the association? (several choices possible)

- | | |
|--------------------------------|----------------------------------|
| 1. with land | 3. with manual work |
| 2. with agricultural machinery | 4. as an agricultural specialist |

AS5. How are you paid by the association? (several choices possible)

- | | | |
|--|------------|---------------|
| | I. in bani | II. in natura |
| AS5.1 percent from the yearly harvest | _____ % | _____ % |
| AS5.2 fixed quantity, per ha, per year | _____ lei | _____ kg |

AS6. How many members are in the association you are member in? _____ nr. of families

AS7. How many days of work did you put in the association in 2005? _____

How are decision in the association made in respect to:		only by the leader	by the leading body	by the general assembly	by the household affected by the decision	by the leader and members	NA
AS8.	what to plant on the land	1	2	3	4	5	9
AS9.	distribution of the production	1	2	3	4	5	9
AS10.	buying agricultural machinery	1	2	3	4	5	9
AS11.	hiring agricultural machines	1	2	3	4	5	9
AS12.	getting loans						
AS13.	buying seeds, fertilizer	1	2	3	4	5	9
AS14.	selling agricultural products	1	2	3	4	5	9
AS15.	hiring in	1	2	3	4	5	9

Appendix 3-2 : Commune Questionnaire

FC1. What is the distance to the closest city? |__|__| km

FC2. What is the largest age group in the commune?

- | | | |
|--------------------------|--------------------------|------------------|
| 1. Under 15 years | 4. Between 35 - 44 years | 7. Over 60 years |
| 2. Between 15 - 24 years | 5. Between 45- 54 years | |
| 3. Between 25 - 34 years | 6. Between 55 - 60 years | |

FC3. Did anyone in the commune sell land?

1. Yes 2. No

FC4. If YES, how many hectares? _____

FC5. What was the average price for the land sold in the commune? _____ lei/ha

FC6. What is the average rent for leasing 1 hectare of arable land in the commune?
_____ lei/ha

FC7. What was the average payment for hiring agricultural workers in the summer of 2005? _____ lei / day

FC8. Approximately what percent of the agricultural land in the commune is left fallow?
_____ %

FC9. Do you have in the commune...?

	I.		II. If "YES", how many?
	Yes	No	
FC91. Informal associations	1	2	
FC92. Formal associations	1	2	

FC10. Do you have in the commune market for selling agricultural products and animals?

1. Yes 2. No

FC11. If NO, how far is the closest market? _____ km

FC12. Did youth leave the village/commune for work abroad?

1. Yes 2. No (If "NO", Go to FC14)

FC13. If YES, approximately what percent of the youth left? _____ %

FC14. What are the main problems that farmers in your commune confront with? Rank based on relative

importance (1-the most important, 7 – the least important).

Problems	Rank
1. Transport and marketing	
2. Not enough agricultural machinery, including tractors	
3. Natural disasters, including drought/floods	
4. Limited access to credits	
5. Limited access to inputs	
6. Lack of knowledge for using new technologies	
7. Other difficulties (specify)? _____	

Chapter 4 : The chronology of land reforms in Romania

4.1 The “never-ending” story of land reform

Scholars of the social sciences neglect too often to analyze and evaluate the results of development processes within a historical framework (Kornai 2006). Among the conceptual frameworks that theorists of transition brought forward is the issue of “legacies,” or path-dependent rationale, based on which past institutional frameworks are being reinterpreted, and re-organized in order to adjust to new socio-economic and political conditions.

To move away from the rigidities that often a path-dependent approach offers, a more nuanced assessment of the concept should account for the role of institutional legacies and mental constructs in influencing present outcomes in a historical continuum. This view suggests that institutions are “carriers of history” (David 1994) and therefore history matters in the functioning of market and non-market economy. As Verdery (1983 p. 2) claims, “rural populations are bound up with events of international scope extending far back in time.”

Within the context of post-socialist countries in CEE, Stark (1996) explained the diversity of capitalist paths with the concept of “recombinant property.” He argued that reform outcomes depend on the legacies of the communist regime, and also on pre-communist institutional structures. Based on this rationale, he argues that, the process of change that these countries underwent should not be labeled “transition” (which implies a pre-determined destination) but rather “transformation” as changes spring from “the ruins of socialism” and the end-destination is unknown (Stark and Bruszt 1998).

I content that the same argument can be made for the case of land reform in Romania, whereby regional differences, the choice of institutional arrangements, and the persistence of farming associations in the post-socialist period can partially be explained by historical patterns in property rights in different regions during the inter-war period, and the intensity of communist collectivization process.

Hence, to understand current regional patterns in land reform outcomes, a brief chronology of the main land reforms is needed. While the scope of this dissertation does not allow for an exhaustive list of historical facts, I intend to focus on some key aspects of the historical legacies from earlier land reforms that are important for the outcomes of post-socialist land restitution.

Agriculture has always played a dominant role in the Romanian economy. Before the First World War agricultural land represented 55% from the whole territory, and for 80.3% of the population, agriculture was the only source of income (Sandru 2005). Moreover, Romania was one of the largest exporters of grains in the region. In the last three years before the war (between 1911-1913) 74.6% of all

Romanian exports were grains, suggesting a strong capacity for growth in the agricultural sector (Patrascanu 1978).

Property rights, and social and economic relations in the rural areas, played a critical role in the formation of Romania as a nation and in its economic development. Not having a diversified rural economy, successive land reforms radically changed property relations in the countryside. Over the past century and a half, land tenure has constantly shifted between peasants, large landlords, and the state, every thirty to forty years, a process described by Cartwright (1994) as “reversing history.” The term “de-collectivization” is used by anthropologists such as Sampson (1995) to suggest this circular historical process.

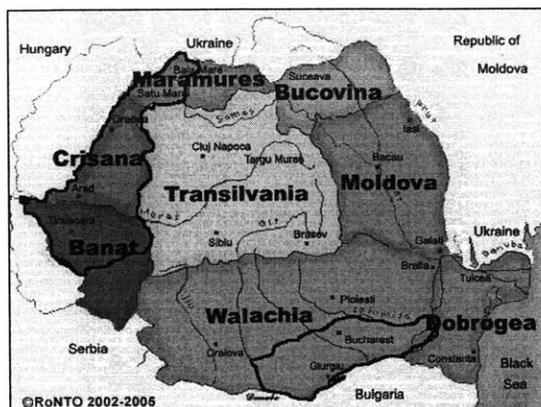
The chronology of the most important land reforms in the history of Romania starts from 1864 and ends in the 1990s, period in which four radical changes in ownership occurred. The first reform was implemented in 1864, before Romania was granted independence from the Ottoman Empire in 1877-1878⁴⁸, followed by another reform in 1918. In 1948 the Communist regime took power and reshaped again the property structure. Lastly, in 1991 land privatization and farm restructuring were implemented following the overthrow of the centrally planned economic system.

In both the nineteenth and twentieth centuries, the agrarian question frustrated the efforts of reformers. Interestingly, over the years, one can observe intriguing similarities between the political and economic context for land reform, as well as the recent outcomes. Therefore, path-dependence is an appropriate conceptual element, in a larger framework, to think about the economic, social, and political context in which land reforms were implemented. It appears that political leaders tended to repeat past mistakes, partly because they were under the same structural pressures that existed after the First World War and the communist takeover (van Meurs 1999). Modernizing the agricultural sector (in terms of physical capital, infrastructure, market orientation) and achieving economic sustainability became lower priorities as compared to political tactics and suppressing upheavals.

In the following sections I highlight the key aspects of agrarian reforms since the post-war period with emphasis on the two agro-regions analyzed in this study, Western Plain and Central Romanian Plain (part of the historical regions Transylvania and Muntenia, respectively) (see Figure 4-1).

⁴⁸ Between 9-21st of May 1877, Mihail Kogalniceanu, the ministry of foreign affairs at the time, declared the independence of Romania from the Ottoman Empire. After fighting the War, Romania's independence was finally recognized by the Central Powers (Germany, Austria-Hungary, the Ottoman Empire, and Bulgaria) on 13 July 1878.

Figure 4-1: Historical regions of Romania



Source: http://www.romaniatourism.com/hist_reg_map.html

Note: The boundaries highlighted in black show the relative location of the agro-regions analyzed in this research.

4.2 The 1918-1921 land reform

Reforming the agrarian system in the CEE region remains one of the main consequences of the First World War, strongly influenced by the Bolshevik revolution in Russia (Patrascanu 1978). At the time, the gap in the level of economic development between the eastern part and the rest of Europe was significant. Moreover, in the interwar period, the Romanian peasants had one of the lowest standards of living in Eastern Europe. Agrarian reform, with its emphasis on land individualization and deep institutional changes, aimed to increase the level of development in this mostly agrarian part of Europe, to decrease poverty levels for the population, and to improve competitiveness of the agricultural production.

Over a period of approximately 50 years the rural population in Romania accounted for 75 to 80% of total population. As Table 4-1 illustrates, the share of agricultural employment in Romania in 1921 was much higher as compared to countries in Western and Central Europe, denoting a more traditional economy. At the same time, the industrial and service sectors were insufficiently developed, unable to absorb the large share of rural population.

Table 4-1: Employment by sectors in 1921 by countries (% from total labor force)

	Agriculture	Industry	Other sectors
Romania	80%	8%	12%
England	9%	52%	39%
France	40%	36%	24%
Germany	37%	41%	22%
Italy	56%	28%	16%
Bulgaria	82%	6%	12%

Source: Axenciuc (2000 p. 207).

The driving motive for the 1918 land reform is not to be found in the unequal distribution of land (between the landlords and the tenants) but mainly in the social and economic relations of servitude and control by feudal lords (“semi-iobagie”). This constant quest for “land and freedom” was strongly evoked in the literary works of the time (Negrici 2005). Consequently, the 1918 agrarian reform involved both land redistribution (from hacienda landlords to peasants) as well as major changes in the economic and social relations.

Land reform was announced at a time when the country was significantly weakened from the war and the population was severely impoverished. Changing the land structure was considered a critical step to avoid mass uprisings. Nevertheless, as soon as the economic conditions stabilized and the revolutionary influences from Russia tempered (Patrascanu 1978), the government gave up the idea of land reform obliging landlords to lease out land to tenants. But, in the end, international circumstances forced Romania to undergo an ample land reform. Frightened by what the state and the ruling elite saw as an impending socialist revolution, the ruling class introduced a reform that only temporarily appeased the peasants’ desire for land, and yet, “they had neither the courage nor the conviction” to bring in the reforms that would have allowed such a peasant-based sector to develop (Mitrany 1930).

These back and forth commitments to land reform and to the shift from feudal to capitalist relations are to be found in every successive effort to reform the agricultural sector in the following decades.

4.2.1 Legacies from earlier land reforms

Private property and communal ownership based on equal access to land existed in the Romanian provinces until early 17th century. The subsistence economy and limited exposure to markets maintained an equalitarian society in which land was evenly distributed among the rural population. Up to the mid-19th century, a feudal system was dominant in the regions where later the modern state of Romania was created. Peasants provided labor, or paid rents in agricultural products or money, in exchange for the use of a piece of land from the local landlord. In 1864, the first major land reform⁴⁹ gave peasants real ownership of their land parcels and formally ended the feudal relations between peasants and large landlords. Feudal obligations on production and marketing of agricultural products were also dismantled. Nevertheless, constraints from reform implementation led to further dissatisfaction of the peasants and to deteriorated economic conditions in the countryside.

First, the land distributed to peasants was barely sufficient to satisfy consumption needs for the rural families – approximately 3.86 hectares (Patrascanu 1978 p. 27). At the same time, however, a bi-

⁴⁹ The land reform was adopted based on the Law for the Regulation of Rural Property Relations (“Legea pentru regularea proprietatii rurale”) from 15 August 1864, published in Codul General al Romaniei, Vol. II, Bucharest 1907.

modal agriculture persisted, i.e. 77% of the farms were small and fragmented (under five hectares) while the rest were medium and large farms. Second, land reform did not create communal meadows and pastures and all the forests were privatized to the large landlords or shifted into state ownership. Third, and probably most important, the land was inalienable for 20 years (and then extended until 1916). These restrictions on land transactions prevented the development of mid-level farms, increased again dependence on large landowners, and in the end led to land fragmentation. More so, in 1866, through additional contractual arrangements, the large landowners tightly controlled the small farmers (Oțiman 2002). Restrictions were placed on labor force and migration, and the use of military force for fulfilling harsh contractual obligations was common. Additionally, land taxation was much higher for small farmers than for large estates.⁵⁰ Land taxes, along with very high land rents paid to landlords, made it impossible for the peasants to improve their economic performance, particularly in the southern region (Mitrany 1930 p. 70). Therefore, one could argue that the state became “captured” (Stigler 1971) by the interests of the rural elite to the detriment of small farmers. Over this period of time, massive migration from Old Romanian regions to Transylvania, Bulgaria, and Serbia was reported, due to insufficient land and abuses by the state and the rural elite (Mitrany 1930). Unrest and dissatisfaction culminated in the peasant revolt of 1907, which made it clear that further land reforms in Romania were inevitable.

Even if Romania was one of the largest exporters of grains in Europe at the time, between 1911-1914 the country recorded the lowest level of production per hectare. Moreover, physical assets were very scarce. This meant that agriculture was very labor intensive, suffering from a lack of technical endowment both on the large and the small farms. At the same time, the level of rent for leasing-in land increased by more than 50% in only two years (Patrascanu 1978 p. 44). The increase in land rents and land prices without an equivalent increase in production and prices for agricultural products made way to a stronger exploitation of the peasants by the rural elite.

One of the peculiarities in terms of the agrarian question is the large regional difference in land ownership, legal regulation, and natural conditions (van Meurs 1999). The relevance of these differences holds for the reform of feudal relations in the eighteenth and nineteenth centuries as well as for the post-communist restitution policies in the 1990s, as I will show later in the dissertation. The most striking differences are between Transylvania and the rest of the provinces (Moldova, Muntenia, Basarabia, and Bucovina).

Historically, the main cause for these differences can be ascribed to the Ottoman occupation of Moldova and Muntenia until 1878, and the inclusion of Transylvania in the Austrian-Hungarian Empire. As a result, Transylvania benefited from the modernization process that took place in the Austro-

⁵⁰ Patrascanu (1978 p. 30) documents that in 1905 landholdings larger than 500 hectares were paying 26.16 lei in taxes, farms between 100-500 hectares were paying 30.41 lei, and those under 10 hectares were paying 37.35 lei.

Hungarian Empire, while the rest of the Romanian regions remained part of a more traditional economy. Moreover, in Transylvania the system of servitude was abolished in 1948 and land holdings were larger than in other principalities of Romania (75 percent of the agricultural land was occupied by farms of up to 50 hectares) and villagers were provided with commons and woodlands as well (Mitrany 1930 p. 45).⁵¹ In Moldova and Muntenia land remained under the control of native aristocracy who retained their estates and political power, while the peasants were serfs on large haciendas. Absentee landlords had little capital and interest in undertaking large rural modernization programs. However, in Transylvania, under the Austro-Hungarian Empire, the 1848 land reform was implemented more thoroughly, leading to private property titles for the peasants, more equalitarian land distribution, and independence from the rural elites for most of the peasants.⁵² As a result, the economic and social problems encountered in the rest of Romania's provinces were milder in Transylvania. Industrial development, and the transfer of ownership from conservative nobleman to market-oriented owners stimulated the relative modernization of production in the region.

Table 4-2: The structure of agricultural farms in Moldova and Muntenia (Old Romania/Vechiul Regat) in 1918

Farm Size	Farms		Arable Land	
	Nr.	%	Ha	%
Under 3 ha	423,401	44	673,212	8.6
3-5 ha	321,163	33.3	1,342,997	17.3
5-10 ha	176,375	18.1	1,187,900	14.6
10-50 ha	36,318	3.7	695,953	8.2
<i>Total up to 50 ha</i>	<i>957,527</i>	<i>99.1</i>	<i>3,813,598</i>	<i>48.7</i>
50-100 ha	2,405	0.3	166,847	2.2
100-500 ha	3,314	0.4	316,385	10.6
500-1,000 ha	1,112	0.1	302,084	10.4
1,000-3,000 ha	771	0.1	1,236,420	15.8
3,000-5,000 ha	112	0.01	484,367	5.6
Over 5,000 ha	66	0.0	520,095	6.7
<i>Total up to 5,000 ha</i>	<i>7780</i>	<i>0.9</i>	<i>3,977,198</i>	<i>51.3</i>
TOTAL	965,307	100	7,790,796	100

Source: M. Constantinescu - L'evolution de la proprieete rurale et la reforme agraire en Roumanie, Editura Culturala Nationala Bucuresti, 1925, p. 291 in Otiman (2002 p. 43).

Overall, by 1918 the agricultural sector in the main provinces of Romania was suffering as a result of economic decline after the War. The sector was characterized by a bi-modal production system,

⁵¹ From this aspect, a similar situation occurred in Bucovina also, part of the Tsarist Empire at the time (Mitrany 1930).

⁵² As a result of the more even distribution of property rights, leasing practices were more limited in Transylvania: 6.58% as compared to more than 30% in the other provinces (Patrascanu 1978).

based on labor-intensive methods, and dominated by feudal rather than capitalist relations. In Moldova and Muntenia land distribution was very unequal and fragmented. About 99 % of all farms held less than 50% of the arable land, while less than one percent held more than half the land, leaving little room for potentially competitive middle-sized farms (see Table 4-2).

Therefore, the outcomes of this land reform were contradictory. Even if the new law was intended to establish the peasants as free, property-owning individuals, the system of large land estates serviced by peasants through labor contracts, continued.

4.2.2 The 1918 land reform

At the end of the First World War, Romania implemented the most radical land reform in Europe (Sandru 2005). The level of expropriation and land distribution has been unprecedented. But, instead of creating a momentum for growth, agricultural development proceeded very slowly. The institutional structures were not able to respond to these drastic changes fast enough, which led to long delays in finalizing the reform (Evans 1924; Sandru 2005).

Started in 1918 (Law 3681/1918) and being actually implemented in 1921, land reform involved massive transfers of property from large landowners to peasants in all provinces of then, Greater Romania⁵³ (“Romania Mare”).⁵⁴ The primary motive for this land reform was to redefine property relations in the rural areas. Ionescu-Sisesti (1925 p. 22) reveals the emotional character that land property evoked: “by transferring land to the hands that farm it, to those that love it, to those that see land as the meaning of their lives, the reform strengthened the property rights for all, it defined property as an institution.”

Land transfers involved two steps. First the expropriation of large plots of land by the state from the rural elites was done based on criteria and compensation levels specific to each province. Expropriations were more radical in Basarabia, Muntenia and Transylvania (see Table 4-3). In Transylvania land reform took a larger social and nationalistic meaning since, during the Austro-Hungarian Empire, 30% of the agricultural land in the province was owned by more than 60% of the Romanian population living there. Therefore, securing the rights and livelihood of the Romanian population in Transylvania (without discriminating against the German and Hungarian minorities) was the main priority of land reform in this region.

⁵³ Greater Romania generally refers to the territory of Romania in the years between the First and the Second World Wars, the largest geographical extent of Romania up to that time, also including Transylvania, Basarabia and Bucovina.

⁵⁴ Law 3681/1918 expropriates from large landowners the following categories of land properties, with the intent of distributing them to the peasants: a) land owned by the royal domain, institutions/firms (public or private), rural properties belonging to foreigners and absentees; b) two million hectares from private ownership, according to the Constitution; 3) the latifundiar estates that were leased for five consecutive years (Mitrany 1930).

Table 4-3: The level of land expropriation and the number of peasants that benefited from land redistribution in 1938

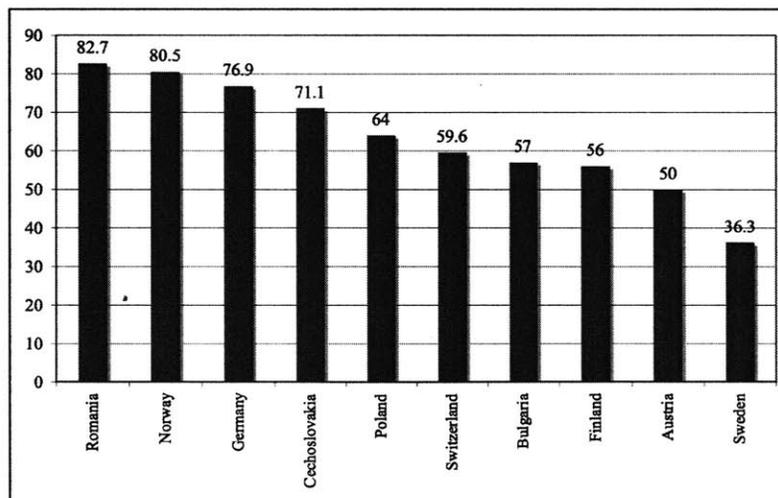
	Expropriated area (ha)	Number of peasants that became landowners
Vechiul Regat (Muntenia)	2,554,658	648,843
Transylvania	1,682,464	319,583
Basarabia	1,489,916	357,016
Bucovina	75,798	76,941
Total	5,811,836	1,393,383

Source: MAD (1938 p. 75).

Second, the state sold back the land to small farmers, landless peasants, war veterans and their heirs. As such, the state acted as an intermediary between the landowners and the peasants, avoiding potential social conflicts between the old and the new landowners. Through reimbursements, the partially expropriated landowners got resources to invest in modernizing the farms, to acquire capital and livestock, and to invest in other sectors as well.

As a result of massive land expropriations, small landownership predominated in Romania much more than in other countries in Europe (see Figure 4-2). More than 80% of the farms were smaller than five hectares.

Figure 4-2: The share of small farms (less than 5 hectares) in total private land ownership (%) in the Inter-War Europe



Source: Ionescu-Sisesti and Cornateanu (1937 p. 37).

Following this land reform, important national, regional, and local institutions were created.⁵⁵

⁵⁵ Some of these new institutions were: The Rural Bank, Agricultural Chambers (offering consultancy, education, and agricultural support for farmers), The Rural House (concerned with property redistribution, the transfer of land

Approximately six million hectares (i.e. one third of the arable land) were transferred to 1.4 million peasants (who had to make payments over 25 years) or were turned into community controlled pastures and forests (van Meurs 1999). After five years the new landowners had the right to sell (or to donate the land). Restrictions for the amount of land to be distributed (or to be sold) existed only in Muntenia and Moldova, but not in Transylvania and Bucovina. Moreover, the law specified that land can not be fragmented (as a result of inheritance transfers) into plots smaller than two hectares in plain areas or one hectares in hilly areas (Patrascanu 1978 p. 68). This provision, along with land expropriation, proved to be the most important economic aspect of the reform, although in the end the overall impact has proved unsatisfactory. In Transylvania, land reform was primarily driven by nationalistic reasons, since large land estates were in the hands of minorities (mainly Hungarians and Germans) and it resulted in a more equitable land distribution as compared to the other provinces.

Motivated by the need to prevent the peasants from joining the communist movement rather than by an urge to achieve socio-economic advancement, land reform became imperative even for the first post-war government. Nevertheless, as the ministry of agriculture Constantin Garoflid mentioned at that time, land reform was determined only by political and social criteria, not by economic rationales (Garoflid 1923 p. 4). Over time, the new small landowners were not able to transform the agriculture from subsistence to a more commercially oriented sector: scattered plots were not sufficiently consolidated, were too small⁵⁶, and investments in machinery and better farming models were never made.

All in all, the economic rationale was lacking. In Transylvania, for example, redistribution of the land was aimed to solve the social problem of a growing land-less rural over-population after the eviction of the Hungarian rural elite and the creation of a larger loyal class of Romanian proprietors. This, however, was merely a temporary and short sighted solution to the peasant question, and did not encompass a strategy for economic modernization.

The struggle for political power in the Greater Romanian region also played a significant role in the strategy of land reform. Under the circumstances of universal suffrage, the younger political leaders of the National Liberal and National Peasant parties needed a class of small landowners as a constituency. At the same time, they had to break the political and economic hegemony of the large landowners united in the Conservative Party. At least in this respect the reform was successful: the Conservative Party of large landowners lost its constituency and its political power. Romanian, Russian (from Basarabia), and Hungarian (from Transylvania) large landowners are known to have protested against the nationalization

plots from the large landowners, to the state, and then to peasants, credit operations, marking for agricultural products and procurement of seeds and fertilizers).

⁵⁶ Studies made by specialists in the field in the inter-war period determined that based on the socio-economic conditions at the time, a rural household needed a minimum of 5 hectares for securing its economic independence (Sandru 2005 p. 46).

of their estates and – even more vehemently – against the redistribution of land to smallholders and the landless rural population.

Without investment in infrastructure and mechanization, and without a class of middle-sized farms, the redistributive land reform failed to address the issue of economic modernization. This was true then, as well as in 1864 (when the first land reform was implemented). Redistribution without facilitating access to the means of production, increased the dependence of small farmers either on landlords, or on the state (Otiman 2002; Sandru 2005). The precarious technical endowment in the agricultural sector, due to low capital accumulation and investment, resulted in the stagnation of the average production per hectare during the next 20 years at about 900-1000 kg of grains per hectare.

Opinions about the 1920s land reform vary from those that claim that, similarly with the 1864 reform, it failed to achieve its stated goals (Cornateanu 1930), to those that argue that it was actually successful in setting up the economic and institutional framework for a capitalist society (Ionescu-Sisesti 1925).⁵⁷ What is certainly true is that the inter-war period brought to the forefront problems and circumstances that Romania has faced before, which certainly slowed down institutional progress. Nevertheless, significant changes in property relations were achieved, and the legal stipulations for land transfers (land market participation and restrictions on land fragmentation) created the right conditions for the rise of middle-sized farmers. These institutional changes also promoted salaried work in agriculture and the use of agricultural technologies, as first steps towards a capitalist farming system (Georgescu 1943 p. 342-346).

In addition, other institutional developments were implemented, from lending agencies for farmers to investments in agricultural scientific research and in education. Moreover, agricultural transformations affected the other economic sectors as well, as “farmers became the best clients for industry and commerce” (Ionescu-Sisesti 1925 p. 36). It is true, however, that even if economic improvements in the sector were slow, the whole economy was undergoing profound changes, requiring more time for real growth to become transparent. Overall, the agricultural sector was lacking a legislative and financial policy promoted by the state, similar with the one pursued in the industrial sector at the time.

But, despite these favorable conditions, demographic and economic conditions contributed to the fragmentation process, which also constituted one of the most severe problems during the post-communist land reform. The rural population rose due to a high natural increase, and a lack of other employment options forced smallholders to continue farming. Under these conditions, the inheritance law (based on equal distribution between heirs) became a veritable “land ownership chopper” (Dumitru 2002). As a

⁵⁷ Ionescu-Sisesti (1925) also suggested that the decline in production was rather due to the economic crisis as a result of the war.

result small plots of land were further divided between family members, until a single peasant ended up farming a dozen of tiny plots, often widely spread. In addition, even at that time, regional differences in agricultural performance and institutional arrangements for farming were apparent. Transylvania was more developed and its rural economy resembled more the capitalist farming system with more secure private property rights and more economic farm sizes. On the other hand, in the rest of Romania, traditional farming practices prevailed, and small farmers were in general tenants on the estates of large landowners.

The significance of this land reform goes beyond the social and political significance and the economic outcomes at that historical point in time. The institutional structure that prevailed after the land reform between 1918-1921, which lasted until the 1940s, was the framework based on which the post-socialist land reform from 1991 was implemented.

4.3 The communist era: agriculture between 1945-1989

4.3.1 Collectivization between 1945-1962

Similarly with most countries in the region under the Soviet influence after the war⁵⁸, between 1940-1962 Romania implemented the process of collectivization and mechanization of the agricultural sector, known as the “socialist agricultural transformation.” As Iancu and Tarau (2000) claim, the effects of collectivization were extremely complex. Some of them were predictable, other were unforeseeable, but they all left deep scars in the Romanian society as a whole. However, the process of collectivization has been only tangentially covered by historians and social scientists, limited mainly to the central themes related to the post-communist land reform (Dobrincu and Iordachi 2005a).

Soviet collectivization aimed to organize the peasantry into groups convenient for the extraction of resources from agriculture (through the price mechanism for grains procurement and collectivization) to finance industrialization (see Kochin (1996) for more references). Forced collectivization was not favored in the early stages of socialist land reform (early 1920s). However, since in Russia the decline in state procurement prices for grains plummeted the grain reserves, the enforcement of collectivization begun in 1929 allowing the state to manage agricultural production by “alienating the control of resources from the family unit of farm production” (Kochin 1996). In the book “The harvest of sorrow,” Conquest (1986) describes very vividly the dramatic social and economic consequences of collectivization in the Soviet region.

⁵⁸ These countries are: Romania, Albania, Bulgaria, Hungary, Czechoslovakia, German Democrat Republic, Poland, and partly Yugoslavia.

Collectivization meant not only a reorganization of property relations, but also to a large degree a “social engineering” of the countryside (Scott 1998) and destruction of preexisting economic institutions (Kochin 1996). By 1962 most rural families in the CEE and the Former Soviet Union (FSU) countries had their land removed from direct control, although the timing and speed of this transformation varied across countries, and even within the same country (Hann 1993). As it is widely documented, collectivization was imposed by the socialist aparatkings, far from being embraced by the locals. Collectivization was resented despite the fact that land rights remained nominally in the property of individuals, as was the case in Romania and Hungary. However, this nominal land ownership during collectivization was irrelevant as property rights lost their meaning under the Party’s control. Land was not transferable, and exit from the collective (or state) farms was forbidden.⁵⁹ As a result, landowners experienced degradation in the “quality of their property rights” as a result of collectivization (Hann 1993 p. 304).

The “Soviet experiment” in the CEE region started in the 1920s at a time when in Western Europe private family farms were thriving.⁶⁰ The Soviet model of collectivization was based on two somewhat contradictory tenets of socialist ideology (Swain 1998 p. 6). The first was that large-scale farms were superior to small-scale farming. The second was that co-operative farming, was both inferior to state property and “something to be treated with suspicion.” This meant that collective farms were not directly endowed with machinery or financial resources.⁶¹

Interestingly, since in Romania the “thirst” for private property was always strong, in a meeting between Stalin and Petru Groza (the premier of the coalition government between 1945-1952), the soviet leader suggested that Romania should maintain private family farming, but that it should invest more in mechanization. Stalin argued that Romania should not force collective farming on peasants⁶². Large-scale agriculture, was argued, should be practiced only on state farms. Nevertheless, collectivization of agriculture swept through the Romanian countryside as the primary mechanism for modernizing the rural economy despite opposition from the peasants themselves who favored private property.

In August 1944 the Soviet Union army came to Bucharest, and in March 1945 the new coalition government led by Petru Groza was formed, dominated by the communists. Much aware of the difficulties that large-scale collectivization would entail in such a traditional sector like agriculture, the

⁵⁹ Hann (1993) shows that these terms were more lax in the case of Hungary, where land could be inherited, and in some conditions it could even be alienated.

⁶⁰ In an analysis of farming structures in Europe, Virgil Madgearu notes that in the European agriculture cooperative forms of production are not preferred (or natural) organizational forms (Otiman 2002).

⁶¹ Swain (1998 p.6) offers further details about the Stalinist model: agricultural purchase prices were low; peasants and collectives alike were subjected to oppressive compulsory deliveries; incomes from the collective farms were low, mainly in kind, and based on the labor unit rather than a wage; machinery was held in state-owned machine and tractor stations (MTS); private household plots were barely tolerated; there was minimal diversification out of agriculture.

⁶² Cited in Otiman (2002), from Petru Groza (1946 p. 291), in “Reconstructia Romaniei - Discursuri Politice, Conferinte, Interviuuri 1944-1946”.

communist leaders embarked in a step-by-step procedure (Iancu and Tarau 2000). Initially, the stated goal of the government was to dismantle large landownership and to set up an agricultural sector based on small-scale farming (Sandru 2005). As a result, Law 22/1945 expropriated from large landowners an area of 1.46 million hectares, of which 75% were given to the peasants (OECD 1996). Land fragmentation became again an issue of concern. In 1948 around five million family households were cultivating less than five hectares representing 91% of the total number of farms. The brief period of individualized farming was mainly aimed at gaining political support for legitimizing the communist regime in Romania, while in the medium-term preparing the ground for collectivization as the five hectares were seldom enough to feed the rural households.⁶³ This was the first phase of collectivization in Romania.

In 1949 another phase of land reform was implemented, calling for more drastic expropriations. Properties of more than 50 hectares of land were further expropriated, along with crown properties (151,740 hectares) and church properties (241,151 hectares). In the mid-1948 there were 7,704 farms up to 50 hectares, with a total area of 1,031,461 hectares. From this area, following the application of Law 83/1954, around one million hectares were confiscated (Dumitru 2002). Landowners were evicted and land was given to the state or to the emerging collective sector. Only one-quarter of the expropriated land remained in the hands of the state at that time. In addition, capital assets (such as tractors, harvesting combines, seeders) and animals were transferred into state ownership and machinery and tractors stations (MTSs) were created for renting out services to farmers. Nevertheless, by 1956 only 10% of land was collectivized.

After the second half of 1950s, collectivization was heavily imposed on the Romanian peasants, most of the time through extremely violent measures⁶⁴. The transformation process was characterized by “many false starts, dead ends, and shocking misconceptions” (Verdery 2004a). The main actors involved were the family farmers (households), the party cadres, and the new agricultural experts.

Opposition to collectivization was widespread in Romania. However, in the West, where property rights were more embedded in the social fabric, resistance to collectivization was more fierce and violent. Iancu and Tarau (2000) document the peasant uprisings in Arad and Bihor, two counties in the Western Plain in 1949, rebellion which was violently crushed in August the same year.⁶⁵ These pockets of

⁶³ Elections were carried out in 1946, when the communist regime came to power, especially due to the votes from the newly created landowners.

⁶⁴ In a relatively short period of time, until 1952, already more than 80,000 peasants were sent to jail because they opposed collectivization (Dobrinu and Iordachi 2005a).

⁶⁵ The authors document that three Securitate (the Romanian Secret Service) battalions from Bucharest were deployed and successively attacked the rebellious centers. As a result 16 peasants from Bihor and 12 from Arad were executed in different villages, usually in public areas, after being labeled as “enemies of the regime”. In addition, more villagers were arrested, their properties were confiscated, and they were deported to Dobrogea, in south east of Romania (270 families from Bihor and 160 from Arad) (Iancu and Tarau 2000 p. 165-166).

resistance⁶⁶ shaped to a certain degree the response to de-collectivization 40 years later, as I discuss in Chapter 9. Table 4-4 illustrates the pace of collectivization from 1949 to 1962, when the process was considered completed. By 1971, 77% of the land was in collective farms, 18% was in state agricultural units, and only 5% of the land was in individual farms (Tsantis and Pepper 1979). Nevertheless, towards the end of the communist regime, in 1989, land in private property increased to 10% (Rizov et al. 2001).

Table 4-4: Agricultural collectivization in Romania (1949-1962)

	Collective farms	Families (thou.)	Area			
			Agricultural land		Arable land	
			thou. ha	%	thou. ha	%
1949	56	4.0	14.3	-	10.1	-
1950	1027	67.7	288.9	2.0	262.5	2.6
1955	2152	184.2	605.8	6.2	792.8	7.9
1960	4187	1420.1	4580.2	31.2	4099.6	40.0
1962	5398	3294.8	9084.7	61.8	7677.7	76.8

Source: Otiman (2002 p. 184).

As opposed to other countries in the region, such as Poland and Hungary, the collectivization process in Romania was more profound, resulting in the lowest level of private property in agriculture. Nevertheless, as many ethnographic studies of different villages around the country show, the experience of collectivization was very diverse. Hence, it is difficult to draw a unified conclusion on the speed and strategy of collectivization (Kideckel 1993; Dobrinu and Iordachi 2005b). Collectivization progressed faster in the less developed regions where the peasants were poorer and less able to farm the land themselves (such as the southern and eastern regions), securing initial support (Chelcea 2005). The strategy was to create “cooperative models” mainly in the regions where grains are cultivated extensively (Sandru 2005). In these regions, large investments were made in mechanization, support schemes and market access for the farmers. Moreover, in the West, where many well-off German communities were expropriated, the newly created collective farms had a higher endowment and were better organized as a result (Goina 2005).

Private ownership of land was limited to garden plots, mainly in mountain areas or in other inaccessible regions inappropriate for collective farming. The garden or family plot (250 square meters, which increased later to 1,500 square meters) was a constitutional right, but also a burden because the plots and the livestock had to be thoroughly registered. Nevertheless, while the household plots were insufficiently large to satisfy the needs of the families, without them it was hard to make a living. The dues to the state were set so high that some peasants were forced to buy additional products to fulfill them. Therefore, a wide informal market developed slowly between the private agricultural sector and the

⁶⁶ Cartwright (2000) documents that at the end of the campaign to collectivize in 1962, Gheorghe Gheorghiu Dej admitted that 80,000 peasants had stood trial since 1949 for crimes related to the campaign.

collective farms, especially for procuring raw materials (seeds and fertilizers) and mechanical services based on barter exchanges (Swain 1998).

State farms underwent several organizational changes since their inception in 1920s (OECD 1996). Prior to 1945 land farmed by state farms was the property of local communities while state farms with more than ten hectares were owned by regional agricultural offices.

As a result of 1945 land reforms, expropriated land was added to the state reserves and the total area farmed by these farms increased significantly. In 1948 state farms were reorganized into State Agricultural Holdings. In 1967 they were transformed into Agricultural State Enterprises (IASs). Both collective and state farms were functioning based on annual and five-year plans drafted by the state authorities. Having higher wages and benefits, workers on the state farms were not allowed to use any land for private purposes, contrary to the collective farm workers. Table 4-5 summarizes the outcomes of the collectivization process between 1950 and 1962.

Table 4-5: The evolution of property forms during collectivization 1950-1965 (%)

	1950	1955	1960	1962	1965
Agricultural area					
State farms, from which:	21.6	25.5	29.4	29.2	30.2
- I.A.S.	5.3	6.2	11.8	12.1	14.0
Agricultural cooperatives, from which:	2.0	9.2	52.5	64.8	61.2
- C.A.P.	2.0	6.4	31.5	61.8	60.8
Private individual farms	76.4	65.3	18.1	6.0	8.6
Arable land					
State farms, from which:	9.2	13.7	17.2	17.6	20.0
- I.A.S.	5.9	7.2	13.7	13.9	16.6
Agricultural cooperatives, from which:	2.8	12.2	67.1	78.9	75.4
- C.A.P.	2.8	8.2	41.8	77.4	75.3
Private individual farms	88.0	74.1	15.7	3.5	4.6

Source: National Institute of Statistics, Statistical Annual Report for Romania, 1966

4.3.2 The agricultural sector between 1962-1989

The aim of the socialist agricultural transformation was to enlarge production (by using large-scale production systems), and to improve the technological base (by massive mechanization and use of chemical fertilizers). However, the underlying rationale has been mostly political (promoting the collectivist practice of the socialist ideology) rather than economic efficiency. The almost doctrinaire approach to collectivization, regardless of the productivity of smaller scale farming, and the reliance on the Soviet example (based on the model put forth by Nikita Khrushchev in 1949) of very large farms (kolhozes) required a certain degree of “social-engineering” (Scott 1998) of the rural communities. This process involved not only physical changes in the countryside induced by the consolidation of land in very large plots, and building the necessary infrastructure to support these large farms. Collectivization also

meant changes in the social relations at the village level. Communist Party leaders became prominent figures in the village and professionals (engineers) played an essential role in the economic transformation of the villages. Moreover, through the process of “rural systematization” (“sistemizare rurala”), thousands of villages were transformed into small urban centers, disrupting local culture and living patterns.

The process of collectivization was hastened by the push for mechanization and industrialization of the agricultural sector. The tractor played a key role in shifting from a traditional agriculture based on horse-drawn plows and seeders, to capitalist practices. The Soviet Union was the first to adopt large-scale mechanization projects under the guidance of American specialists (Scott 1998). In the course of ten years the tractor changed from a curiosity to a standard unit of power (in 1924 there were only 1,000 tractors in operation, by 1934 the number increased to over 200,000) (Dalrymple 1964). In Romania, the number of agricultural tractors almost tripled from 1960 to 1976 (16,093 to 31,498 in 1976) (Tsantis and Pepper 1979).

Agricultural mechanization started in late 1940s along with the heavy industrialization policy. The vision of the Communist Party was to achieve self-sufficiency in the production of agricultural machinery. Hence, significant investments and institutional reorganizations were made to sustain this goal. It was argued that collectivization should proceed gradually allowing for mechanical implements to be set up and for specialists to be formed. First, in 1948 all the agronomic universities became part of the Politechnique University and separate departments for agricultural mechanization were created. In 1946 the former IAR Brasov (an airplane manufacturing plant) has been transformed entirely into a tractors factory. By 1960s, the first integral Romanian tractor was produced, along with Fiat engine tractors. At the end of 1948, the Romanian agricultural sector had 10,189 tractors, 8,600 plows for tractors, 560 sawers, 5,100 mechanical seeders, and 6,805 combines for cereals (Iancu 2001 p. 4). By 1962, the year when collectivization was completed, approximately eleven billions lei were invested in the technical endowment of the agricultural sector. As a result, the number of tractors increased to 57,500 (Iancu 2001 p. 4) and by 1989 to 116,653 tractors. Mechanical and Tractor Stations (MTSs) for agricultural equipments were established to serve the collective and state farms. Technical endowment, however, was not done equally across organizational forms – state farms received more of these investments compared to collective farms. Nevertheless, despite heavy investment in the mechanization of agriculture, Romania still remained far behind European countries (see Table 4-6).

Table 4-6: Share of agricultural land per tractor

	ha/tractor		ha/tractor
Germany	8.3	Greece	30.3
Holland	10.9	Ireland	34.5
Begium	12.2	England	35.7
Italy	12.2	Spain	37.0
Luxemburg	12.2	Portugal	58.8
Denmark	16.9	Romania	100.0
France	20.8		

Source: Otiman (2002 p. 201), based on data from the National Institute of Statistics 1990 and La Situation de l'agriculture dans l'Union Européenne 1992.

Fertilizer use increased significantly. In 1970s most fertilizer was supplied by the Romanian chemical industry itself (Cartwright 2001).⁶⁷ All the main inputs needed for effective farming were controlled by the state. The relevant state enterprises (for upstream and downstream distribution channels) were organized to service large-scale operations. They provided fertilizer and herbicides in bulk, agricultural machinery was almost entirely in the hands of the MTSs, and the state purchasing enterprises bought directly from the farms.

Besides capital investments and organizational restructuring, major institutional changes were also pushed forward. Professionalization of the agricultural sector was among the top priorities at the time. The socialist state trained a large class of agrarian engineers and specialists that were considered essential for increasing labor productivity in agriculture. To support this process, large investments were made in improving the material base for high schools with agricultural specializations and for polytechnic universities. Research laboratories, experimentation lots and educational farms were set up for every such institution. Research contests and exhibitions were organized every year for engineering innovations in farming and agro-food industry. The largest agricultural research center, Research Institute for Cereal and Industrial Crops in Fundulea, was founded in 1962 by joining the Research Institute for Maize Crops (founded in 1957) and the Field Crops Department of the Romanian Agricultural Research Institute (founded in 1927).

It follows that the socialist agricultural transformation had tremendous influence on the organization of agricultural production, on shifting away from traditional practices to more scientific methods of production, and also on the social structure in the villages. However, as Oprea (2005) argues, this process has not proceeded smoothly. Collectivization was received with strong resistance (as I described in Section 4.3), and the mechanical implements were not adopted by peasant farmers immediately. Many peasants found it easier to turn back to their animals as agricultural tools, which were

⁶⁷ The total amount of fertilizers used in agricultural production increased from 5,900 tones in 1950 to 1.37 million tones in 1983 (Turnock 1998).

more reliable and much more easily replaced than the early tractors.⁶⁸ Nevertheless, by 1970s collective farms and state farms were highly mechanized and professionalized.

Evidently, mechanization required farms to be very large. Table 4-7 shows that even if there were only a few state farms, they were much larger than the socialist collective farms. This also meant that they were more equipped with mechanical implements and they received more state subsidies and investments from the state.

In addition, regional differences were quite evident in farming organization. The southern region, Muntenia (the older part of Romania comprising the Central Romanian Plains), experienced the most intense collectivization process, having almost twice as many collective farms, and four times more state owned farms. This discrepancy will, as I discuss in Chapter 9, affect not only individual choices in terms of farming arrangements, but also local politics at the time of restitution.

Table 4-7: Average size of collective farms and state farms by region in 1966

	Total number of farms		Average agricultural area (ha)		Average arable area (ha)	
	CFs	SFs	CFs	SFs	CFs	SFs
Muntenia	2,836	459	2,095	3,027	1,794	2,498
Transylvania	1,465	162	1,654	2,372	1,182	1,427
Total	4,301	621	1,924	2,842	1,575	2,230

Source: Verdery (2003 p. 265), with data from Anuarul Statistic al Republicii Socialiste Romania 1967

Note: CFs – collective farms; SFs – state farms.

In addition, as Nelson (1981 p. 87) describes, the state has disproportionately responded with investment to “ecologically based contrasts in agricultural potential” (see Table 4-8). As a general rule, investment was highest in the most fertile plains (where the Central Romanian Plain is located). In those regions extensive grain cultivation lent itself well to mechanization, and irrigation was more feasible. As a result, in areas with low levels of capitalization (due to lower investments), the farms depended on large number of laborers often employed at tasks requiring minimum training.

⁶⁸ Fitzgerald (2003) makes a similar claim about the farmers in the United States at the time of the agricultural industrialization.

Table 4-8: Zonal variation in agricultural investment*

	1951-55	1961-65	1971-75
<i>Lowland Zones</i>			
I. Lower Danube	1.63	6.43	16.83
II. Southern Plains	1.34	3.25	8.43
III. Western Plains	0.49	4.47	5.76
<i>Mid-Altitude Zones</i>			
IV. Eastern Transylvania	0.40	3.38	6.53
V. Western Transylvania	0.12	2.35	4.10
<i>Upland Zones</i>			
VI. Southern Carpathians	0.15	1.61	3.58
VII. Moldavia	0.37	1.91	3.85
VIII. Maramures	0.24	1.73	2.57

Source: Nelson (1981 p. 107)

Notes: Five year investment per rural person, in million of lei. 1951-55 calculated at 1959 prices; 1961-65 and 1971-75 calculated at 1969 prices.

Zone I: consists of Braila, Constanta, Galati, Ialomita, and Tulcea; Zone II: Dolj, Ilfov, Mehedinti, Olt and Teleorman; Zone III: Arad, Bihor, Satu Mare and Timis; Zone IV: Brasov, Covasna, Sibiu and Mures; Zone V: Alba, Cluj, Harghita and Hunedoara; Zone VI: Arges, Buzau, Caras-Severin, Dambovita, Gorj, Prahova, Valcea and Vrancea; Zone VII: Bacau, Botosani, Iasi, Neamt, Suceava and Vaslui; Zone VIII: Bistrita-Nasaud, Maramures and Salaj.

The austerity policy of the 1980s, aimed at paying off the foreign debt, relied heavily on the agricultural sector. Since agricultural products constituted the largest part of the exports to western countries, the priority of industrialization was partly revised and investments in agriculture started to increase. Still, in 1980 Romania ranked 20th (out of 23 European countries) in agricultural production per hectare, despite the objectively good quality of the soil. Maintenance of irrigation projects (which were very energy intensive) and the physical capital endowments became very costly. Therefore, the decline in investments for upgrading the machinery stock resulted in loss of productivity and deterioration of income levels in the rural areas. Agricultural exports as a share in total exports continuously declined during the 1980s, and rural-urban migration increased. Therefore, the post-socialist transformation found the agricultural sector with a low productivity level, a highly depreciated technological base, and an aged rural population.

The literature suggests several reasons for why the communist model for agriculture was considered to be inefficient, some of them being stronger than others. I can group them in two categories - macro and micro level conditions. The macro conditions were set by the command economy itself, which insulated the farms from market signals, imposed central targets as a substitute for consumer preferences, and allowed farms to function indefinitely under soft budget constraints without proper profit accountability. The micro level conditions refer to the exceptionally large firm sizes and collective organization of production (Cartwright 2001). The excessive size was reflected not only in large land endowments, but also in the large number of workers employed (in absolute terms and per hectare of land). In addition, land was locked into fixed collective use patterns, and land transfers among users could

be initiated only by central authorities (Lerman 2000). This type of organization generated high transaction costs, including the cost of monitoring labor and various agency costs associated with hired management.

This, in effect, was the Soviet model of socialist agriculture, which dominated the region since the early 1950s. It is worth mentioning that only Poland, former Yugoslavia⁶⁹, and Hungary partially deviated from this common pattern. In these countries large-scale collective farms never achieved the same prominence as other socialist countries, and their agricultural sector remained largely based on small individual farmers throughout the decades following the Second World War (Swain 1999; Lerman 2000). Swain (1998 p.5) categorizes the experiences of socialist agriculture in CEE between 1948, when collectivization came into the political agenda, and the collapse of socialism, into four groups: “stalinist collectivization”, “collectivization abandoned”, “neo-Stalinist collectivization”, and “Hungarian collectivization”. The Hungarian case was distinct from other countries in the region because here a “substantial symbiotic” relationship between large-scale socialist and small-scale private agriculture was self-consciously and systematically pursued (Swain 1998 p.12).

Nevertheless, “tacit de-collectivization” (Hann 1993), or “neo-Stalinism” (Swain 1999), which was implemented elsewhere had no precedent in Romania (and Albania). These countries stayed faithful to the 1950s Stalinist model of collectivization: “agricultural purchase prices and wages remained low, the traditional Stalinist planning model remained intact, the labor-day method of payment remained in place and household plots were small and discourages from producing for sale” (Swain 1999 p. 120). Therefore, once socialism collapsed, former collective farms members were more than happy to dismantle them, entirely in Albania and to a significant extent in Romania (Swain 1999). On the other hand, countries such as Hungary and Czechoslovakia reformed collective farming rather than dismantled them in the post-socialist period.

As we have seen so far, over the last century the land tenure system in Romania moved between striking extremes: from the domination of large scale private farms until the end of the First World War, to the domination of small scale family farms towards the end of the Second World War when through nationalization and collectivization most of the land was concentrated in large collective and state owned farms. By the end of 1989 70% of arable land was used by large collective farms, 21% was used by state farms, and 9% was in private property mostly as garden plots and land in the mountainous regions where collectivization was too difficult to implement (see Table 4-9).

⁶⁹ The “abandonment of collectivization” in Poland took place in 1956, while in Yugoslavia it was between 1951 and 1953. But, because private farming was not encouraged and market forces were suppressed, what emerged was something different than the western farming model, a dual agricultural system (Swain 1998 p.6).

Table 4-9: Land property structure in 1989 (%)

	Agricultural land (14.8 mill. ha)	Arable land (9.5 mill. ha)	Grassland and hayfields (4.7 mill. ha)	Vineyards (0.28 mill. ha)	Orchard (0.32 mill. ha)
State farms	30	21	42	31	34
Collective farms	55	70	70	55	44
Private property	15	9	9	14	22

Source: Ministry of Agriculture, Food and Forestry, 1997 Annual Report (Dumitru 2002).

4.4 De-collectivization: the 1990s post-socialist land reform

Romania was the last country in Eastern Europe to brake away from its post war era, and to start implementing the transition reform programs in the 1990s. Since then, the structure and institutions that were established by the communist government were gradually dismantled. Inevitably, as in the case of other countries experiencing transition, the process resulted in social and economic hardships (i.e. surge in unemployment and poverty rates, sharp decline in production).

The post-socialist land reform was unprecedented in the degree of institutional restructuring that took place. Private property rights were re-instated to the pre-1940s levels⁷⁰ and were even expanded⁷¹, former collective farms were dismantled or restructured into smaller formal associations, new endogenously formed family associations were created, state farms were slowly privatized, and the former state owned channels for product collection and marketing, as well as the networks for inputs distribution were broken down and in some cases private intermediaries surfaced. All these changes were a tremendous “shock to the system” for farmers and agricultural professionals alike. At least for the first half of the transition years, the outcome was a real “muddling through” in an environment marked by wide uncertainties and complete “grey zones” in a constantly changing legal system.

The starting point for the transition process in Romania was, in many respects, more difficult than in other countries in CEE. Pre-transition policies had an excessive focus on heavy industry and on large infrastructure projects that most of the time were not economically justified. Additionally, during the 1980s, the rapid repayment of the US\$11 billion foreign debt (20 to 30 percent of the Gross Domestic Product - GDP) imposed severe strains on the population, with deep cuts in imports and a widening of the technological gap (World Bank 2001b). Consequently, towards the end of 1980s the Romanian economy was on the verge of collapse.

The Romanian reform process begun after the Parliament issued the Land Law (known as Law 18/1991) in February 1991. Given the difficult communist legacy, and seeking to protect vested interests

⁷⁰ As I mentioned in the previous chapter, land restitution was limited to 50 hectares, and later to 100 hectares in order to prevent wide inequalities among the new landowners.

⁷¹ Workers on the collective farms received half a hectare of land if they were not landowners prior to collectivization, and workers on the state farms received shares in the new commercial companies.

and to minimize the social costs associated with the transformation to a market economy, during the 1990s the Romanian authorities took a gradualist and piecemeal approach to reform. The imposition of hard budget constraints and the privatization of state-owned enterprises were significantly delayed. While social concerns were understandable, this strategy failed to produce sustainable gains in either the economic or the social realm. The lack of political will to reform, and the constrained institutional and governance capacity are at the root of Romania's less-than-satisfactory economic performance and worsened social conditions.

The Land Law was among the first laws to be passed by the newly elected government. As seen from earlier episodes of land reform, issues around land and property proved highly controversial. Romania's set of policies framing the land reform was one of the most complex in the region, comprising of land restitution to pre-collectivization owners, distribution of land to farm workers, and restructuring state owned farms.⁷² This approach to reforming the agricultural sector, coupled with lack of knowledge for setting up an adequate institutional framework for the market economy, as well as the vested interests at different levels in the administration, resulted in a constantly changing and often times confusing legislation. Box 4-1 lists the main legislative acts for the post-socialist land reform. As, Popica, one of the key informant, argued, there were several cases when even the judge in the court was unable to keep track of the constant changing legislative framework.

Box 4-1: The main legislation for the post-socialist land reform in Romania

The Romanian land reform legal framework includes:

- Land Law nr. 18/1991, amended and extended by Law nr. 169/1997
- Law nr. 1/2000 stipulating the land ownership reconstitution for agricultural and forest land, requested according to Land Law no. 18/1991 and Law no. 169/1997, amended and extended by GEO nr. 102/2001
- Land Lease Law no. 16/1994, amended and extended by Law nr. 65/1998
- Land Circulation Law no. 54/1998
- Law nr. 7/1996 on General Cadastre and Real Estate Publicity amended by Emergency Ordinance no 70/2001.
- Law nr. 268/2001 stipulating the privatisation of the commercial companies which administer the private and public state owned agricultural land and setting up the State Domains Agency
- Governmental Decision 626/2001 approving the enforcement regulations for law 268/2001 and setting up the State Domains Agency.
- Governmental Decision 131/1991 approving the regulation for setting up the commission for establishment of property rights amended by GD 180/2000 and replaced by GD 1 172/2001.

Source: Dumitru (2003 p. 6).

⁷² The country with the most similar approach to de-collectivization has been Hungary. However, Hungary has also used voucher privatization as a land reallocation strategy. The other CEE countries (Bulgaria, Czech Republic, Latvia, Lithuania, Poland, and Slovakia) adopted only land restitution to pre-collectivization landowners. Albania was the only country that distributed land based on equal per capita basis (Swinnen et al. 1997).

Land individualization was a political as much as a social issue in the 1990s, as land became a “political symbol” (Verdery 2004b p. 15) in the post-socialist context. The new political players tried to capitalize in different ways on the popular aversion to anything related to the communist regime. As Cartwright (1994) argues, the specific judgments made over the rights and wrongs of the Communist regime during collectivization gave a highly selective account of state action and peasant reaction.

In Romania, the most vocal political groups advocating for breaking down all the institutional structures of the socialist agriculture were the “historical parties” of the inter-war period, the Liberal and the National Peasant parties. Emphasizing the atrocities of the communist regime during collectivization, these parties stirred the public sentiment and called for land restitution. Their rhetoric resonated strongly with the rural population, especially in Transylvania, but not only. As Verdery (1996 p. 137) argues, the anti-communist sentiment was so pervasive that even the former Communists of the governing National Salvation Front were forced into the clamor to restore property to its former owners. The historical parties created a momentum that was irreversible, leaving no options for simple land redistribution.

Nevertheless, the governing party, the Front for National Salvation, made up mostly by members in the former Communist apparatus, exerted significant pressures to reduce the power that historical parties were building up in the rural areas. One such measure was the limit imposed on the amount of land to be restituted (10 hectares initially), with a stated goal to promote equity. The main reason, however, was to preclude the creation of a “viable propertied middle class” (Verdery 1996 p. 137) in agriculture, that could place significant pressures on the state. At the same time the rural population was antagonized against these traditional parties by arguing that their true aim was to re-create the large estates of the gentry while ensuring poverty for the rest.

Hence, the political scene around land reform was quite convoluted. The institutional changes that followed reflected these constant push and pull factors from the political scene. Legislation changed constantly to the point to which, as one key informant mentioned, “not even the judge in the court knew what were the correct stipulations of the law.” In addition, government policy constantly changed in response to both international demands and national discontent. As Verdery (2004 p. 20) also notes “no policy was left in place long enough to assess its effects properly.”

A major outcome of land reform, aside from land individualization, was the downsizing of socialist farm enterprises: collective and state farms. Lerman et al. (2004, p. 127) argue that the excessively large size of the socialized farms made them difficult to manage efficiently and contributed to high transaction costs relative to the levels observed in market economies. Hence, this process, which occurred throughout the CEE and, to a certain extent, the Commonwealth of Independent States (CIS) region, was regarded as a desirable objective. Nevertheless, it was the countries that experienced the Soviet model of

collectivization, mainly Albania and Romania, who engaged into a large-scale process of breaking down the old institutions.⁷³

Given the overview of the collectivization process across CEE countries, these outcomes were to be foreseen. In Romania, however, many of the collective farms were reorganized into associations (farming societies) and informal family associations were created endogenously. By the end of 1995 formal associations farmed 15.2% of non-state agricultural land, informal associations farmed 14.1%, and the remaining 70.8% was farmed by over 3.5 million individual households, on plots of an average 2.24 hectares (Swain 1998, p. 14). Hence, alternative farming arrangements, such as different forms of associations were soon institutionalized in the Romanian context.⁷⁴ Although the farmed area declined from the beginning of the 1990s (1.9 million hectares), these institutional forms still represent an important share in the Romanian economy.

Chapters 7 to 9 discuss in more detail their role and reasons for persisting in the rural economy and the agricultural sector. Here, it suffices to mention that alternative farming arrangements should become even more important following EU enlargement and the disbursement of direct payment to farmers. Given that the eligibility criteria for receiving the payments are very tight (an area larger than 1 hectare and parcels larger than 0.3 hectares) for the small Romanian farmers, 10% of the area will not be eligible for EU financial support (Giurca et al. 2006 p. 32). As a result, these farmers will face much harsher market conditions and will most probably be pushed to seek alternative institutional arrangements such as associations or land market transactions.

Table 4-10 shows that while collective farms declined following land reform, there was less restructuring of the state farms over the same period in Romania. Nevertheless, notable progress was recorded after 2000, when most of the state corporate farms were privatized.

⁷³ The most extreme process of de-collectivization was documented in Albania: “when the regime finally came to an end in 1991, there followed an extraordinary orgy of destruction and vandalism. As if the world came to an end and there were no future needs, vineyards and orchards were destroyed, co-operative buildings razed to the ground, school windows, furniture and books demolished; machinery broken, and the entire rural telephone system ripped off” (de Wall 1991 p.173).

⁷⁴ Formal associations were set up following Law 36/1991 and currently farm 975,545 hectares (7%) of the utilized agricultural area at the national level (Giurca et al. 2006 p. 34).

Table 4-10: Downsizing of corporate farms in CEE (average size in hectares)

	Cooperatives			State farms		
	Pre-1990	1997-1998	% of 1990 level	Pre-1990	1997-1998	% of 1990 level
Bulgaria	4,000	637	16%	1,615	735	46%
Czech Republic	2,578	1,447	56%	9,443	521	6%
Slovakia	2,667	1,509	57%	5,186	3,056	59%
Hungary	4,176	833	20%	7,138	7,779	110%
Poland	335	222	66%	3,140	620	20%
Romania	2,374	451	19%	5,001	3,657	73%

Source: Lerman et al. (2004, p. 128), based on data from the European Commission, Directorate-General for Agriculture (DG VI), "Agricultural Situation and Prospects in the Central and Eastern European Countries: Summary Report", Working Document, Brussels, June 1998.

As discussed in the previous section, agricultural mechanization services were provided until 1989 by agricultural mechanization stations, administered by the state. In 1990, following Law 15/1990, these entities were turned into commercial companies (e.g. Agromec). The 573 agricultural mechanization stations were transformed into more than 1,626 companies providing mechanization services (Alexandri et al. 2005). However, at present, those units that did not face bankruptcy changed their object of activity by leasing in land and starting farming business. As a result of land individualization, there was less demand for their services (Alexandri et al. 2005).

The process of land reform in Romania was recently documented more extensively, focusing primarily on the resulting institutional changes and the social implications of reform (Swain 1999; Dumitru 2002; Aligica and Dabu 2003; Verdery 2003). Therefore, in the following sections, my overview will address mainly aspects related to land reallocation as a result of de-collectivization, and the challenges for land consolidation and agricultural growth.

4.4.1 The restitution of property rights

Land restitution proceeded at a very fast pace resulting in unprecedented levels of private property and dramatic changes in the socio-economic structure in the rural society. While the most radical change in private property was seen in Albania⁷⁵ one can argue that land distribution is much less politically charged and institutionally cumbersome than restitution. In Romania, restitution was made based on the 1940s land records, generating not only personal conflicts over the historical boundaries, but also economic setback by superimposing two institutional structures that were based on different economic, political, and social conditions. As discussed in the earlier sections, prior to collectivization, Romania was mainly an agricultural economy, with the majority of the population living in the rural

⁷⁵ In Albania, by 1995 94.2% of the agricultural land was in private hands (Cungu and Swinnen 1999).

areas, and with limited commercial activity. The massive industrialization policies implemented during the socialist regime, and the subsequent pressures for economic integration into the EU economic and institutional structures during the post-socialist transition, created an entirely different social fabric, urban-rural labor reallocation, and economic environment. Therefore, when discussing land reform, and hence land reallocation, it is critical to keep in the background this unique reform setting.

Land restitution was the key component in the agrarian reform in Romania, and the socialist collective farms were the ones to provide the required land assets for this process. Ultimately, by restituting land to former landowners, the reform strategists intended to reconcile the wrongdoings inflicted on the population by the communist expropriations. While formally land remained in individual property during the communist regime, in practice private property rights were not enforced at all, being essentially “confiscated” by state. Therefore, land restitution resonated deeply with feelings of social justice, creating at the same time an unprecedented momentum that served well the different political groups that struggled to secure control in the emerging and very unstable and fragile democratic society.

The economic implications of land restitution were not placed high on the reform agenda. This outcome was evidenced by: (a) the lack of policies to address land consolidation; (b) delayed reforming of the upstream and downstream distribution channels; (c) lack of financing schemes for the newly created small individual farmers; and (d) limited provisions for safeguarding the small producers from the adverse effects of “price-scissors” as a result of industrial restructuring, inflation, and low prices for agricultural products. As Dumitru (2002) argues, the Romanian land reform was pushed more by the society and the international institutions rather than by visionary political leadership. Within this context, it becomes critical to examine closely the principles based on which land was redistributed, which will later help us understand the choices individual households made in reallocating their land assets between different institutional arrangements.

As mentioned earlier, in Romania land reform addressed both land restitution and land privatization. Law 18/1991 stipulated that those individuals who contributed land to collective farms could reclaim their land based on historical boundaries.⁷⁶ The restitution process typically involved several stages (Dumitru 2002): 1) claim of the right; 2) checking and validation of the claims; 3) establishment of land balance for each village; 4) identification of parcels, completion of surveys and handing over of land; 5) issuance and delivery of property titles. Full property right would be granted only after all these stages were completed.

⁷⁶ The main requirement was for individuals to submit claims supported by evidence of previous ownership in a period of 40 days after the law was published in *Monitorul Oficial*. If claimants’ entitlement was determined and approved by the special commission appointed for each cooperative, they received “adeverinte de punere in posesie” (temporary ownership certificates), stipulating the acreage and quality of land which they are entitled to receive. After the necessary measurements of land have been made and all possible points of dispute have been solved, eligible persons could receive the final ownership titles, registered as legal documents (Gavrilescu et al. 1999).

There were, however, limitations on how much land one individual could reclaim. Initially the law set a minimum of 0.5 hectares of arable land for each entitled person and a maximum of 10 hectares per family (in addition to at most one hectare of forested land per family), upper limit which was later increased to 50 hectares according to Law 1/2000.⁷⁷ In addition, article 46 from Law 18/1991 established that the maximum amount of land that a family could own was 100 hectares (including donations, inheritance, purchases or exchanges of land). Throughout de-collectivization 10.6 million hectares were returned to 4,177,898 private owners, of which 3,251,472 received a definitive property title (Dumitru 2002). The actual process of issuing property titles evolved relatively fast, with 70% of the land deeds being assigned to the new owners (see Table 4-11).

Table 4-11: Land property titles issued between 1991 and 1999

	Annual number of property titles issued	Share of the total number of property titles issued yearly	Cumulative % of property titles issued yearly
1991	25,963	0.60	0.60
1992	81,780	1.88	2.48
1993	592,564	13.68	16.16
1994	857,551	19.80	35.96
1995	843,085	19.46	55.42
1996	439,992	10.16	65.58
1997	188,174	4.34	69.92
1998	188,245	4.35	74.27
1999	125,934	2.90	77.17
Total	3,343,288	77.19	-

Source: Ministry of Agriculture and Food, National Program for Agriculture and Development (1999): 13. Aligica and Dabu (2003).

Despite having obtained land titles, according to the Land Law the new owners were not permitted to sell the land for a period of ten years. Nevertheless, anecdotal evidence suggests that land sales (and exchanges) were conducted fairly often based on informal contractual arrangements, mainly between family members and neighbors. The restriction on land transactions, which will be discussed in detail in Chapter 7, was intended to prevent land concentration early in the transition and to secure a stable source of income and livelihood for the rural population when inflation created a large dent in real incomes and industrial restructuring increased unemployment to record levels. The limit on the amount of land in ownership and the ban on land sales aimed to ensure that land remains relatively equally distributed.

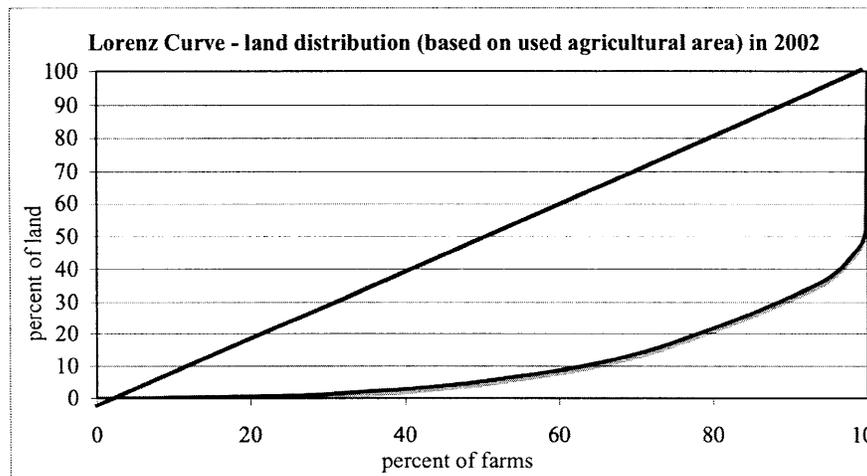
The restriction on land transactions was removed in 1998 by Law 54/1998, regulation which also increased the upper limit of land that one family could own, from 100 to 200 hectares. Nevertheless,

⁷⁷ The collective and state owned pastures and hayfields were transferred to commune property.

participation in land markets remained limited, for economic and social reasons that will be discussed in later chapters. Most land transactions were recoded in the West, following large foreign direct investments and rapid economic development. Land rentals were more frequent, similarly with other countries in the CEE (Vranken and Swinnen 2006). The legal framework for leasing transactions was implemented only in 1994, and due to several restrictions and rigidities, it was only after 1998 that leasing became a real alternative for individual farmers. Slowly, the deterioration in the macroeconomic conditions for private household farming led to the emergence of very large tenants (“super-tenants”, to borrow the term from Verdery (2003)) that were working extensive areas of land, over 1,000 hectares. These very large private agricultural entrepreneurs emerged mostly in the South, scattered in the eastern parts of Moldova, and in the West in the Banat region.

Following an example from Lerman et al. (2004 p. 131) I calculated the “Lorenz inequality curve” for land distribution between different farm sizes, where the vertical axis gives the cumulative percentage of land across farms and the horizontal axis gives the cumulative percentage of farms of all types, ranked by size (see Figure 4-3).⁷⁸

Figure 4-3: Lorenz curve for land distribution in 2002



Source: Calculations based on Agricultural Census, 2002.

The straight diagonal line represents “ideal equality”, when land is uniformly distributed over all farms so that 50% of farms account for 50% of land. The chart shows that in 2002 90% of the farms were working 30% of the agricultural land, while 10% were working the remaining of 70% of agricultural land, which denotes a quite large disparity in landholding size. Nevertheless, Lerman et al.(2004) show that in

⁷⁸ The distribution curves include household plots, semi-commercial and commercial family farms, and larger corporate farms. Also, the data refer to actual land use, and does not necessarily reflect ownership patterns.

1997 the concentration of land in Romania (along with Estonia) had a “normal” land concentration curve, close to the market pattern of land concentration (50% of farmland was concentrated in the top 10% of farms). The increase in land concentration in the subsequent years suggests that Romania is moving towards a “sharply dual” system of land concentration. In addition, the fact that 90% of farmers work only 30% of the land point to the extremely small and fragmented landownership, which was the direct result of the reform strategies, and of the delayed and inconsistent legislative frameworks.

As a result of land restitution, most collective farms were dissolved and the land returned to former owners and their heirs. In addition, part of the land was distributed to workers in the collective farms that were not landowners at the time of collectivization. Nevertheless, the restitution process was full of twists and turns because, aside from land, the Land Law also required the restitution of physical assets. Verdery (2003) documents in quite a lot of details the intricacies of asset distribution, the state auctioning process, and the haphazard procedures and outcomes of this process. Regional differences in the speed of land redistribution and farming arrangements became soon evident. One reason for these disparities relates to the institutional legacies for land registration. Transylvania had, from the time of the Austro-Hungarian Empire, a well documented cadastral and registration land system, while in the rest of Romania cadastral maps were lacking, slowing down the restitution and titling process.

The land in state farms was managed quite differently in the aftermath of land reform. According to Land Law, those individuals that had land within the boundaries of state farms received shares in the new semi-privatized farms, equivalent to the land confiscated by the communist regime. Because state owned farms were the cornerstone of the Romanian agriculture, physical restitution of land was not possible initially. The newly established shareholders were very limited in their property rights since the possibility to trade the shares did not exist and the voting power within the shareholder assembly was insignificant (Dumitru 2002). As Dumitru further claims, later on these limitations became less binding. With the adoption of leasing legislation, the shareholders had two options: to remain shareholders or to lease out the land by signing a five year lease with the agricultural company using the land, period after which the landowner would be entitled to get back the land.

4.4.2 Challenges for land consolidation and improved performance

Following land restitution, the most challenging task for policy makers was to tackle the problem of land fragmentation, by finding socially and economically viable solutions to achieve land consolidation. While little was achieved in integrating the newly reorganized agricultural sector into the wider economic structure, farmers sought to enhance their returns by reallocating their land assets into different farming arrangements (Chapters 7 to 9 discuss these outcomes in more details).

While land restitution was very effective, proceeding at a fast pace⁷⁹ (see Table 4-11), little progress was made in terms of institutional reforms accompanying land policies (e.g. marketing, credit access) and in integrating land reform in the overall rural development policy planning. In many ways land reform was seen by policy-makers as a task for compensating individuals for the historical injustices that were committed by forced collectivization between 1949-1962 (Cartwright 1994; Swain 1999), which then detracted efforts from embedding land policies in the larger economic development planning. Other countries viewed the restitution process in a different light. In Hungary for example, a country that constantly adjusted the socialist model in order to improve it, reformers were more concerned with improving the viability of farm structures than with compensating past injustices (Swain 1999).

Land reform dramatically changed the agricultural landscape in Romania. Private property became predominant to the detriment of public property. Therefore, the former arrangements for input procurements, output marketing and credit mechanisms became unsuitable for a numerous and dispersed clientele (Chirca and Tesliuc 1999). At the outset of transition⁸⁰, 411 state farms and 6,000 producer cooperatives exploited almost all of the country's arable land resources.

Private individual farms occupy 55.4% of the agricultural utilized area and have an average size of 1.73 hectares (Giurca et al. 2006 p. 32). Aside from their very small size, the choice of land restitution based on the 1940s land records, resulted in a very high degree of land fragmentation. Table 4-12 shows that in 1998 the level of land fragmentation was more severe than in 1948. In the beginning of the 2000s the average number of parcels per owner was around four to five, with parcels averaging 3,000 square meters (FAO 2002).

Table 4-12: Land fragmentation in Romania: 1998 and 1948 compared (%)

	1948	1998
Under 1 hectare	36	45
1 – 2 hectare	27	24
Over 2 hectare	37	31
Total	100	100

Source: Chirca and Tesliuc (1999 p. 38)

Soon after Land Law was adopted, a survey implemented by the Academy of Agricultural and Forestry Science (ASAS) in 1992 showed that 86% of the farms were smaller than five hectares, and the average farm size was 2.5 hectares of agricultural land, dramatically smaller and fragmented than two years earlier (see Table 4-13). The issue of land fragmentation is central to the analysis of landowners'

⁷⁹ According to the Ministry of Agriculture, in December 1989, 9% of total arable land was in the private sector (mainly individual garden plots), 70% was in collective farms, and 21% was in state farms (Dumitru 2002 p. 8). Currently, more than 95% of the land is in private ownership.

⁸⁰ In 1989 the figures are from the Statistical Yearbook 1990, published by the National Commission of Statistics, Romania.

choices of institutional arrangements for farming during transition, analyzed at length mainly in Chapter 8. The term land fragmentation refers to multiple dimensions of the physical characteristics regarding a specific land plot, such as size and location. As Sabates-Wheeler (2005 p. 1007) discusses, fragmentation may imply any one or a combination of the following: a) non-contiguous parcels that are owned and tilled as a single enterprise; b) parcels that are distant from owner's homes or from each other; c) ownership of very small parcels.

Table 4-13: Farm structure in 1992

	Number of households		On average per household			
			Hectares (ha)		Number of plots	
	Number	%	Agricultural	Arable	Agricultural	Arable
Landless households	671	2.5	0.0	0.0	0.0	0.0
< 0.5 ha	2,431	11.9	0.2	0.1	1.3	1.0
0.5 – 1 ha	3,022	14.0	0.7	0.5	2.3	1.7
1 – 2 ha	4,551	20.9	1.4	1.1	3.5	2.5
2 – 3 ha	3,640	16.8	2.4	1.9	4.5	3.3
3 – 4 ha	2,481	11.5	3.4	2.7	5.1	3.8
4 – 5 ha	1,619	7.7	4.4	3.5	5.4	4.2
5 – 10 ha	2,710	13.0	6.6	5.3	6.4	4.8
> 10 ha	263	1.5	10.5	7.5	6.6	4.6
Total	21,388	100.0	2.5	2.0	3.9	2.9

Source: "Ancheta sociologica complexa", conducted in 1992 by ASAS and published in "Economistul" nr. 267, 12 December 1993.

Nevertheless, land fragmentation characterized the post-socialist agrarian structure throughout most of Eastern Europe, and was widely understood as the main constraint to agricultural performance (Sabates-Wheeler 2005). Table 4-14 provides some evidence on the extent of fragmentation in three Balkan countries. We observe that even if farm size is relatively larger in Romania, fragmentation is more severe.

Table 4-14: Land fragmentation for selected Balkan countries

Fragmentation indicators	Unit	Romania (2000)	Albania (2001)	Bulgaria (1998)
Average farm size	Ha	2.3	1.25	2
Average plot size	Ha	0.43	0.25	0.5
Average number of parcels	No.	4-5	3-4	3-7
Private farms with <1 hectare	%	40	42	86
Total number of farms	Million	4.7	0.48	2.6
Total number of parcels	Million	40	1.8	12

Source: Sabates-Wheeler (2005 p. 1007).

Even if land fragmentation is a common phenomenon across the CEE region, the extreme crumbling of agricultural land poses problems for a clear and accurate delimitation of plots for the disbursement of funds from the EU's CAP budget. More recently, satellite imaging is being used to map ownership boundaries in the regions that are lacking cadastral maps, and to bring up to date the older maps that existed mainly in Transylvania. This process, however, is very time consuming and controversial since a lot of inconsistencies are being identified, as mentioned earlier. Second, land fragmentation poses significant challenges for land consolidation increasing the transaction costs for land registration and land market transactions.

For comparative purposes, Table 4-15 illustrates the average size of all farms as well as the share of small and large farms in total land cultivated by the EU-CEE countries in year 2002. It can be noticed that significant differences exist between them, with small farms predominating in Romania.

Table 4-15: Average size of all farms as well as share of small and large farms in total land cultivated by country

Country	Average farm size (ha)	Share of cultivated land below 5 ha	Share of cultivated land above 50 ha
Czech Republic	100	1%	93%
Slovakia	31	2%	96%
Estonia	12	9%	56%
Latvia	12	9%	31%
Lithuania	4	31%	11%
Poland	8	16%	25%
Slovenia	6	46%	8%
Bulgaria	4	19%	75%
Hungary	4	18%	58%
Romania	2	58%	19%
Total	5	27%	38%

Source: IAMO (2004 p. 13)

Although initially conceived as a complete set of laws and regulations to secure land ownership and tenure, the legal and institutional setup was rather devious with big gaps of three, four and even more years between different laws. The Land Law 18/1991 has been amended and extended in 1997, 1999, and again in 2001. The legislation on land leasing was approved four years later, in 1994, and amended in 1998. The law on cadastre and land registration was issued six years later, in 1997 and amended in 2001. Moreover, the land market was formalized eight years after the start of land reform, in 1998.

Another drawback that resulted from the specific institutional design of land policy was that land reform created more absentee landowners than any other reform in Romania's history. According to the Ministry of Agriculture by 1992, 43% of those who benefited from restitution were living in the urban areas, 39% were living in the rural areas but were working in nearby towns, leaving only 18% of the new

owners living in the rural areas and having agriculture as the main occupation.⁸¹ In addition, choosing to reconstitute land based on the 1940s records meant that many of the former landowners had died, moved, or emigrated. The question of how their heirs were to divide the restitution claims among themselves was not regulated, generating conflicts among family members. According to OECD (1996), disputes related to the implementation of Law 18 generated about one million court cases.

Aside from difficulties created by the natural changes in population, the so-called process of “shrinking the land” (Cartwright 2000 p.171) created even more contestations during de-collectivization. Cartwright recounts that in order to reduce the burden of quotas imposed during collectivization, villagers used different methods of miss-reporting the size of their agricultural land. For example households divided their land between all the sons and daughters, or families ‘sold’ land to a neighbor on the understanding that the agreement was only temporary and that when circumstances were different the land would be returned. Most of these agreements (generally on oral terms) resulted in under-reporting their land when the Agricultural Register was compiled, further complicating the restitution process in early 1991. A similar, but reverse process is being documented now, after joining the EU institutional structure, on the eve of receiving the direct payment from the Common Agricultural Policy (CAP) budget. Due to a faulty system of monitoring and lack of clear and unified cadastral system (through geo-mapping), many small farmers are miss-declaring the area in ownership, which could result in a loss of 100 million Euro from the CAP budget for Romania (Morovan 2007).

The literature abounds with evidence about the ideological character of land reform. The post-socialist land reform in Romania was no exception. On the one hand, individuals saw in land reform (mainly restitution and de-collectivization) an opportunity for correcting the wrong-doings of the communists, who forcefully alienated them from their properties, by using the state mechanisms. Politicians, on the other hand, used the land policies for consolidating their position in the still embryonic government by securing the votes from more than half of the population that was living in the rural areas. Nevertheless, even if the end goal was the same for all the political parties (gaining political power), there were differences in the underlying rationales among political actors.

The reform process was characterized by pull-and-push factors to de-collectivization, as political factions differed in their support for fully transferring assets from the state to private use. It was not until 1997 that reform efforts started to concentrate on privatizing state farms (Tesliuc 2000), process which was further delayed till 2001. As Tesliuc (2000 p.2) argues, “the conflict between reformists and nostalgics often led to intermediary solutions, where one step for reform is taken simultaneously with its antipode.”

In addition, the post-socialist outcomes have been determined by the importance of social capital of professional expertise and more importantly, the political capital and personal contacts enjoyed by

⁸¹ Information from the newspaper “Adevarul”, 23 April 1993.

managers of cooperative farms, which ensured access to machinery, services, and markets (Verdery 1997; Swain 1998; Swain 1999). The extensive literature on de-collectivization, and the field research that I conducted in the Western Plain and Central Romanian Plain, suggest that land reform was far from a conflict-free process. Collective farm managers were obviously trying to prevent the dissolution of large-scale farming. Their success in convincing farmers to keep their land in cooperatives under their leadership depended both on their earlier prestige and effective leadership of the collective farm, and on the history of collectivization in the region. As Swain (1990 p.1208) also points out for the Hungarian case, managers of successful farms, “had the authority and prestige” to persuade members to accept their proposals. I had similar findings in the West, where in the context in which most collective farms were dissolved, Combinatul Agro-Industrial in Curtici, Arad County, has survived and developed considerably after land reform. The majority of the farmers in the nearby villages continued to be members in the new private restructured collective farm, based on individual rental contracts. The prestige of the farm during the communist regime and its strong leadership made it almost effortless for the manager to maintain its power. Similar cases, which will be discussed in more details in Chapter 9, were observed in the southern plains, although there the overall push for de-collectivization was weaker and conflicts over land were less political.

4.5 Chapter summary

The chronology of land reform in Romania showed how the land question represented a constant struggle for the rural population. Despite different historical and political contexts, it is inevitable to miss that each reform of the agricultural sector seemed to have generated the similar outcomes, facing similar constraints to achieving agricultural growth and rural development. Land fragmentation, low degree of mechanization, and in general a stronger emphasis on ideological factors rather than economic development, are some of the main outcomes, which are part of the “never ending story of land reform” in Romania. Therefore, I argue that land reform in the post-socialist period should be viewed through the prism of historical legacies and circumstances from earlier experiences. Moreover, regional differences can partially be explained by historical patterns of property rights in Romania. Hence, I will take these issues further to discuss the persistence of farming associations during transition through qualitative findings in Chapter 9.

Chapter 5 : Taking stock of the main land reform outcomes in Romania

In the previous chapter I discussed the importance of placing the post-socialist agrarian land reform in a broader historical and economic context. More recently a large body of literature suggests that initial conditions in reforming countries matter, and that to a certain extent they do influence policy outcomes. This is not to say that I adopt a “glacial” view of institutions, but that historical patterns of property rights, production relations, and social processes tend to reproduce themselves and result in regional differences (within or between countries) in reform outcomes. Along the same lines Smyth (1998) argues that the speed at which markets develop is likely to depend on the extent to which countries and regions have a history of market culture prior to socialism.

Having reviewed the institutional progression of land reform since the beginning of the 19th century, this chapter discusses contemporary outcomes of land reform in Romania. I start by pointing to the initial expectations created by the adherence to the Neoliberal model of transition, and then I show that outcomes have deviated significantly from what the architects of post-socialist reform envisaged. Section 5.2 and 5.3 examines in more detail the role that Romania’s agricultural sector plays in the larger economy (in the European Union and the national economy), as well as the economic and social outcomes of reform in terms of poverty and rural-urban migration.

5.1 The Neoliberal myth and the Romanian transition

The fall of the communist regime marked the beginning of the most comprehensive land reform after collectivization in the CEE countries. Nevertheless, under the umbrella of the Neoliberal ideology, the principles of land reform were reformulated. A faithful adherence to the Neoliberal agenda implied that the role of the state would be limited to undoing the process of collectivization by reallocating property rights in land and assets. The economic theories of neoliberalism (shock-therapy policies) were supposed to eclipse the old order and set in motion an irreversible expansion of the market economy (Burawoy 1999). The market, through its self-regulating capacity, would ensure that resources get allocated in the most efficient way resulting into a readjustment of the backward and forward linkages for a capitalist production system.

Expectations were high that once property rights were distributed to individuals (away from the state), a new class of small family farms, operating on capitalist practices, would instantaneously emerge. Privatization of land and assets, formerly in state ownership, would thus be the panacea for agricultural

development, and generally for economic growth in the former socialist countries. As Amsden (1993) pointed, diehard free market economists in Eastern Europe and their Western consultants argued that if any form of state planning is introduced, Communism is likely to return through the back door. Moreover, in this frenzy of “fundamentalist capitalism” (free market, free trade, privatization), the fate of small enterprises, like farms, was never an issue (Cohen and Schwartz 1993).

As Roland (2000 p. xviii) argues, the results of policy advice given to transition countries was particularly humbling for the Neoliberal economists, to say the least, and remain a subject of controversy. After more than a decade of transition it became evident that the actual strategies for reform in CEE countries (as well as in Asia) have, to a certain degree, diverted from the standard mainstream prescriptions, as the “shortages of goods gave way to a shortage of purchasing power” (Amsden 1993 p.1). The expectations of reform policy makers were unmet both in terms of time and outcomes. For example, Kornai (1990 p. 103), in an earlier statement, suggested that the reforms could and should be put in place within a year (cited in Smyth 1998), which proved to be an unrealistic prospect. The difficulties confronting the reforms were generally greater than the architects envisaged, despite the awareness that systemic change involved unknown variables (Smyth 1998; Kozul-Wright and Rayment 1997).⁸²

At the same time, the overwhelmingly positive outcomes from land restitution were very slow to emerge. The expectations of transition, such as an increase in productivity levels and a decline in rural poor, were not met (Deninger 2003, 2005). In fact, production declined, rural poverty increased, and public services in the rural areas were severely curtailed as a result of de-collectivization and the privatization of state farms (World Bank 2007). As Creed (1999) mentioned, the pain of transition became a major problem not simply because it was a painful, but because as transition proceeded, it moved from being a temporary inconvenience on the road to capitalism to a seemingly permanent discomfort.

Given the superiority of private property embedded in the tenets of market economy, the Neoliberal architects of the post-socialist reforms assumed that the transition costs would be lower for private owners than for state and collective farms (Zbierski-Salameh 1999). The reasons for such expectations resided in the static belief that once property rights are individualized, entrepreneurial forces would be magically unleashed and a market economy would be well underway. However, the reality has showed that peasants have in fact faced the highest costs of transition.

The post-socialist policies of liberalization and stabilization implemented all across the CEE countries weakened the purchasing power of the population (of those living in the rural areas in

⁸² For example, Kozul-Wright and Rayment (1997), citing evidence from ECE (1992; 1995) show that the Polish Government expected GDP to fall by 3% in 1990 and to rise by 3.5% in 1991; in fact, it fell by 12 and 7% respectively. In Hungary, the government forecast output growth of 2-3% a year for 1991-1993, but instead it fell each year and in 1993 GDP was 20% below its level in 1989. In the Czech Republic, the government anticipated a drop of 5-10% in GDP in 1991 – it actually fell by 15%, and by another 6% in 1992.

particular), constraining their access to productive resources, and therefore limiting their capacity to exercise the newly acquired private property rights. Price liberalization fundamentally reshaped agricultural prices, affecting the profitability of agricultural production. The prices of agricultural inputs skyrocketed, while retail prices increased only marginally.

Because of unstable economic conditions as a result of stabilization policies, credit preferences were shifted, and small private farmers were certainly not on the list for credit access. Peasants were expected to generate their own financial resources through increased productivity, as in the case of Polish farmers (Zbierski-Salameh 1999 p.196). Aside from imperfect access to financial resources small farmers also had difficulties in accessing agricultural machineries. Moreover, the sale of agricultural products was constrained by the plummeting of the consumers' purchasing power, the shift in consumer preferences towards foreign products (following trade liberalization), as well as by the dismantling of state collection networks and the restructuring of the food processing industry. This last aspect was extremely problematic for small family farms because the remaining distribution channels from the socialist agriculture organization were suited only for large-scale farms, while no new institutions were set-up for facilitating the marketing of products for small landowners. As a result, instead of actively participating in the market economy, the immediate and long lasting effect from reform policies has been the retreat of small private farmers from markets.

At the institutional level, a strategy of "sub-rosa resistance" (Allina-Pisano 2004a) from the state cadres, coupled with a more complex valuation of land and farming by the rural population (Verdery 2003), in the actual reality of building markets "on the ruins of socialism" (Stark and Bruszt 1998) contributed to changing the course of transition away from the teleological prescriptions of Neoliberal reform experts, and reaching unexpected outcomes.

The rise in rural poverty and the decline in agricultural production called researchers to question the complex interconnection between private property rights and economic development during the post-socialist transformation (Allina-Pisano 2007). The Neoliberal approach led to an over-emphasis of the swift removal of state intervention and the belief that such path would unleash economic initiatives among private property owners. Nevertheless, the reality was that the "invisible hand" of the market prevented many private landowners to enter the market, and left the state with "inadequate institutional and technical capacity" to guide the post-socialist transformation.

Taking stock of all these factors allows us to better understand the pattern of farming arrangements in the post-socialist agricultural sector in Romania and in the very recent environment of post-accession to the EU economic and institutional framework. I hypothesize that the economic and social conditions during transition contribute to partially explain the persistence of farming associations and the slow emergence of land market transactions.

Post-socialist transformation is unquestionably a process marked by wide economic and political instabilities. In this environment, policy makers are exposed to entirely new economic principles based on a different ideology, and hence requiring an altered and innovative approach to policy-making. Nevertheless, due to uncertainties characteristic of transition, and internal political fights for power, a short-term rather than long-term vision prevailed in reforming the economy, with serious implications for socio-economic development.

Banerjee (1999 p. 18) claims that “few historical phenomena share the remarkable uniformity found in the history of agrarian relation.” Indeed, as we saw in the previous chapter, there is a pattern of agriculture receiving a last minute quick solution, any change being geared to the main stakeholders (i.e. large landowners). According to Binswanger et al. (1995) this outcome is hardly surprising. The authors argue that the state has “always and everywhere” intervened in the market for inputs and outputs in order to favor large landowners.⁸³

Soon after reforms were implemented, it became obvious that in the attempt to correct the wrongdoings of the communist regime through forced collectivization, and to protect the interests of large state and corporate farms, land reform was viewed as a cushion for the economic and social hardships generated by Neoliberal policies that result in mass unemployment, unprecedented inflation, and depreciation of incomes.

In the following sections I briefly discuss the main outcomes of the post-socialist land reform, the opportunities and hindrances to change, as well as the social conditions in which reform was implemented. I divide the chapter into economic, social, and institutional outcomes of land reform. When necessary, I compare and contrast the reform outcomes in Romania with other countries in the CEE region and in the EU in general.

5.2 The economic outcomes of land reform

A discussion of the land reform outcomes should inevitably start with a brief overview of the role of the agricultural sector in the Romanian economy and the importance of the sector in the broader EU region. As I showed in the previous chapter, agriculture has historically been very important for the Romanian economy. Under the Soviet influence, the massive industrialization undertaking of the socialist regime reduced the reliance on agriculture as a primary source of revenue and employment, but it significantly increased investments in modernization (specifically in mechanization), specialization, and production reorganization. In a similar fashion with the other countries in the region, the institutional

⁸³ The authors argue that the withdrawal of government privileges for large landowners led either to their disintegration into landlord estates or to a shift towards rent seeking and more subtle forms of support for large farms (p. 86).

emphasis was on state, collective farms, and mechanization stations to service these new farming arrangements. Nevertheless, while a wide literature showed that the Soviet model of agriculture proved to be ineffective (Deininger 1993), other authors point to the need for a broader contextual interpretation of these organizations to include the social role they played at the community level, and the symbiosis between the large socialist farms and private farming (on garden plots) (Swain 1985).

Land is one of the main natural resources in Romania. Two thirds of Romania's agricultural area is agricultural land⁸⁴, and more than 80% of the agricultural land is arable, rich in cernoziom, making most of the Romanian landscape suitable for growing cereals and other temperate climate crops. In the plains most land is used to grow maize, wheat, barley, sunflower and sugar beets. In hilly areas, alongside with maize there are orchards and vineyards, and in the river valleys mostly vegetables are grown. The large cereal sector supports a moderate livestock sector specializing in hog, poultry, and cattle breeding.

5.2.1 Romania's agricultural sector in the EU context

Land provides a source of employment for more than a third of the population. This share is even higher if we consider the self-employed informal labor and part-time farmers that are not included in the regular employment or unemployment statistics. As Table 5-1 illustrates, following accession, Romania became the largest agricultural country in the EU in terms of the value added in agriculture as a percentage of GDP (13.4% as compared to 5% average in the ten CEE countries that joined three years earlier), the share of labor force in agriculture, and the percentage of utilized agricultural area from total land (slightly less than Hungary).

⁸⁴ Out of a total area of 23.8 million hectare, Romania's agricultural area is nearly 14.9 million hectare (or 62% of the total).

Table 5-1 Comparative indicators on the agricultural sector in the EU countries

	Value added in agriculture as a % from GDP 2002	Labor force in agriculture as a % from total 2002	Utilized agricultural area as a % from total area 2000	Share of food expenses in family income (%) 2002
<i>EU 15</i>	1.6	4.3	40.6	16.2
<i>CEEC 10</i>	4.6	13.4	54.4	28.3
Estonia	2.9	6.5	22.1	32.7
Hungary	3.1	6.1	62.9	27.7
Letonia	2.9	15.3	38.5	32.9
Lithuania	2.1	18.6	53.4	38.9
Poland	2.5	19.6	58.3	28.0
Slovakia	2.1	6.6	49.8	28.7
Czech Republic	1.2	4.9	54.3	26.4
Slovenia	2.1	9.7	24.2	22.0
Bulgaria	9.7	10.7	50.3	31.8
Romania	13.4	36.5	62.1	39.9

Source: European Commission (Eurostat and the DG for Agriculture), FAO and UNSO (Dumitru 2004).

The share of employed civilian working population is the highest, 33%, almost double than Poland, which has the second highest share. We also see that the share of food expenses in family income in 2002 was the highest in Romania (40%), almost double the average of the other former communist countries in the region. Also food prices increased the most (on average 9.5%) in Romania.

In addition, while Romania has the largest number of agricultural holdings (4,485 thousands), the average holding size is the smallest (3.1 hectare/holding) (see Table 5-2). In the EU15 model of family farms the average farm size is 20 hectares⁸⁵, revealing large differences between farm structures. It is very likely (and expected) that many of the small farms will not be able to withstand competitive pressures from the EU agricultural producers in the years following enlargement (World Bank 2007b). Currently 45.4% of the individual agricultural holdings are in the size category of 0.31-2 hectares, 38% are between 2-5 hectares, only 5% are between 5-10 hectares, and much less, 1%, are larger than 10 hectares (Gavrilescu and Gavrilescu 2007).

⁸⁵ In the United States, a farm operated by full owners has an average of 112 ha, while in Canada it has an average of 164 ha (Lerman et al. 2004 p. 78).

Table 5-2: Farm size in Romania, EU-15 and NMS-10 in 2005

	Physical average size of farms (ha)	Economic average size of farms (ESU)
Romania	3.1	1.1
EU-15	20.2	20.7
NMS-10	8.3	3.5

Source: Rural Development in the European Union. Statistical and Economic Information. Report 2006, EU, cited in Luca (2007). NMS (Non-Member States).

These indicators suggest that the agricultural sector in Romania poses significant challenges for the EU economy as a whole, not only in terms of financial support through direct payments, but also in terms of market sharing, competitiveness, and social development.

The agricultural sector was one of the most difficult chapters to negotiate prior to accession. The main problems were the low competitiveness level relative to the EU countries, significant delays in institutional reform (i.e. cadastral measurements and land registration), and the high degree of land fragmentation. Moreover, the types of support offered to agricultural producers by the Romanian Government (i.e. input subsidies and product price supplements) were inconsistent with the types of support and instruments used within the Common Agricultural Policy (CAP) (i.e. decoupled direct income support complemented by programs effectively targeting the sector's need to increase competitiveness and efficiency) (World Bank 2005). Therefore, the alignment to the EU institutional structures implies a shift to efficiency enhancing measures rather than subsidies and price supports.

As Table 5-3 shows, across all types of crops, the yield levels in Romania were much lower than in the other CEE countries, as well as relative to the EU average. This clearly suggests that the agricultural sector in Romania was not able to catch up with the EU countries prior to integration in 2007, adding significant pressures on national producers to adjust to the new standards of competitiveness. This distinction becomes even more important given that due to already high pressures on the CAP (to reduce subsidies and become less protectionist), Romania will have access to only a small share of the EU market. Quality standards will become more stringent and market niches more narrow, increasing the challenges for domestic producers.

Table 5-3 Comparison of selected commodities yield level relative to Romania (averages for 2000-2003)

	Cereals, 100 kg/ha	Sugar yield, t/ha	Sugar beet, t/ha	Rape seed, 100 kg/ha	Sunflower, 100 kg/ha	Milk, kg/cow	Wine, hl/ha
EU-15	55.0	8.8	n.a.	29.9	16.7	6020	50.9
Romania	16.1	2.0	1.5	12.6	10.6	3025	23.5
Czech Republic	41.9	7.1	40.0	23.2	21.8	5467	26.5
Latvia	22.4	4.4	n.a.	15.6	n.a.	3990	n.a.
Lithuania	27.6	4.5	n.a.	15.7	n.a.	3896	n.a.
Hungary	38.7	6.5	38.0	16.4	18.5	5982	33.8
Poland	29.3	5.4	38.0	21.6	15.4	3945	n.a.
Slovenia	49.3	5.4	n.a.	23.3	11.9	4864	41.5
Slovakia	33.6	4.1	n.a.	17.0	18.4	4835	20.7
Bulgaria	28.9	n.a.	n.a.	11.6	6.0	3580	30.5

Source: World Bank (2005)

Moreover, in 2002 land productivity (gross agricultural output per hectare) was between 500-700 Euro, which is less than 30% of land productivity levels in the EU (2,200 Euro per hectare in 2002). The low land productivity is combined with very low levels of labor productivity, which averaged about 1,600 Euro per worker in 2002, or as little as 7% of EU levels (22,600 Euro per worker in 2002) (World Bank 2005 p. 6).

Important changes are expected for the agricultural sector in Romania following enlargement. The support policies in the CAP, through direct payments to agricultural producers based on the size of landholdings, are aimed at increasing competitiveness. In the first year farmers are entitled to 50 Euro per hectare, amount that will slowly increase to 200 Euro for the same area until 2012.⁸⁶ The eligibility criteria for these funds is to own at least one hectare of land in strips not smaller than 0.3 hectares.

These measures will have tremendous effects on the institutional structure of farming, as well as the capacity of small farmers to survive the new competitive pressures. First, Romanian peasants are “getting lonelier” (Thorpe 2007) and entangled in the web of requirements that have poured over them since January 2007. The small producers have few months until the end of the year to conform their locally produced products to the strict food safety standards of the EU or they face oblivion. What exactly is to be done, who is enforcing it, and so on, is still puzzling for many small farmers. Second, the direct payments from CAP can affect the relation between the small landowners, the tenants and corporate farms who are farming their land. For instance, Latruffe and Davidova (2006) argue that while small

⁸⁶ The financial package negotiated by Romania with the EU for 2007-2009 is for approximately 4 billion Euro: 967 millions for direct payments, 732 millions for market measures, and over 2 billion for rural development.

landowners did not have incentives to withdraw their land from rent contracts before EU enlargement, with the CAP payments they might have higher incentives since they can cash the payments themselves provided that the land is kept in good agricultural and environmental conditions. Hence, the CAP payments may induce more renegotiation of rents, suggesting that a close relationship between the landowners and the manager of the farm matters. I will dwell more on this aspect in Chapter 7, where I discuss the difference between contractual arrangements in associations and in leasing transactions, as a way to understand the persistence of formal associations.

Hence, these policies need to be supplemented with measures for increasing opportunities for off-farming employment, as well as quality standards for the existing producers. But, almost a year after EU enlargement, there are concerns that the current institutional structure is not able to absorb the inflow of funds from CAP. Already, significant delays have been announced in the disbursement of funds due to additional evaluations of the requests submitted by the agricultural producers and the reform of the agricultural payment system.⁸⁷ These delays have been prompted by the very slow progress in instituting a uniform system of land registration through mapping and cadastral measurements prior to integration in the EU. Inconsistencies between the information from the land titles and the more accurate records from geo-mapping decelerate the process of funds disbursement. Poverty in the rural areas and the low revenues from the sale of agricultural products led some farmers to declare a higher area of land eligible for EU direct payments. This “stretching of land” along its boundaries or “shifting perimeters,” also found by Verdery (1996 p. 141) in the Romanian countryside, is likely to cost Romania loss of credibility from the EU institutions, as well as loss of financial aid. For instance, in Neamt County in the north-east of the country, an excess of 10,000 hectares were found, which means an extra half a million Euro from the EU budget (Covaci 2007). Also in Iasi County, more than half of the requests were made for land left fallow, which is strictly against the EU regulations. The delays in setting up a robust institutional infrastructure for the EU payment led more recently to the possibility of reducing the amount of direct payments to the Romanian farmers by 25 percent (approximately one billion Euro) (Morovan 2007; Tapalaga 2007), with significant repercussions initially for the government (who will have to cover the difference) but then to the consumers on whom the costs will be inevitably passed.⁸⁸

This overview shows how the policies for EU enlargement are intertwined with the level of rural development and the rest of the economy. Dependence on land as the main (and in most cases the only) source of income, prevents wide institutional changes from taking place and postpones broader structural changes in the agricultural sector towards higher efficiency. The main concern is that a fast shift to

⁸⁷ In October, AgriNews (2007) reported that the payment of the 50 Euros per hectare, scheduled for December 2007-June 2008 will be delayed with at least two months.

⁸⁸ According to BBC (2007), before the announcement, in October, an EU official described Romania’s farm payment system as a mess.

meeting EU competitive standards without the provision of alternative sources of income would have devastating effects on a wide share of small farmers.

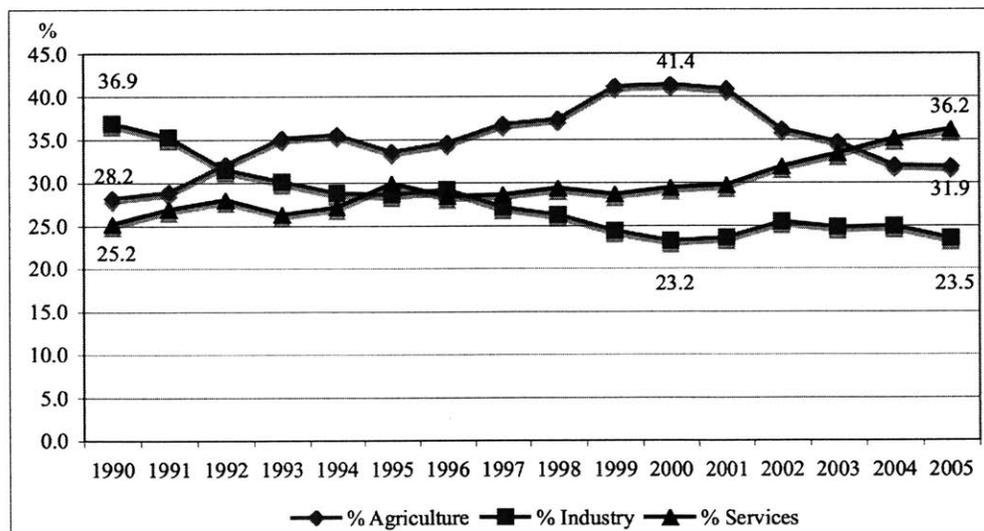
5.2.2 Agriculture in the national economy

Agriculture has always played an important role in the Romanian economy even during the socialist strong push for industrialization. In the 1990s, land reform received the highest priority on the list of reformers, with strong implications at all levels: economic, social, and political. Land reforms (and the continuous tension between large and small landowners) were a constant part of the Romanian history. But, the context created by the post-socialist transformation generated a unique set of circumstances that rendered very unclear long-term outcomes at the time. Therefore, the economic effects of land reform should be understood in this specific framework.

Employment

In general, the importance of a sector in the national economy is reflected in the share of employment and its contribution to national output. Figure 5-1 shows that currently a large share of the labor force, 32%, is employed in agriculture, much higher than in industry (24%), and quite close to the share of employment in services (36%). Interestingly, we also observe a different pattern from the beginning of transition when the share of agriculture relative to industry and services almost reversed.

Figure 5-1 Share of agriculture, industry and services in total employment during the transition period



Source: Statistical Yearbook of Romania (INS 1996, 2005, 2006).

For the most part, this trend in employment across the entire transition period is at odds with the structural change theory for economic development, which assumes that as the economy grows, the share of output and labor force in agriculture decreases, while the share of industry and services increases. In terms of employment, the only period in which we see a clear decline in agricultural share in employment is between 2001 and 2004, leveling off in 2005.⁸⁹ Nevertheless, by 2005 agricultural employment is still higher than what it used to be at the start of transition and before de-collectivization. This is quite interesting since as a result of the breakdown of collective farms and privatization of state farms one would have expected that agricultural employment will decline and there will be an outflow of population from the rural to urban areas. Nevertheless, due to shortage of jobs in the industrial sector following the restructuring programs, land restitution created favorable conditions for workers laid-off from the factories that were closed down, to return to the rural areas and develop small (mostly subsistence) farms.

While agriculture takes an important share of employment at the national level, in the rural areas, agriculture is the main (and sometimes the only) source of income. In mid-2003 agriculture was employing about 69.3% of the active rural population. As Table 5-4 shows, individuals working in agriculture are primarily self-employed and unpaid family workers. The employees (receiving wage payments) account for only 6.1% in agriculture, as compared to 62% in the economy as whole. Hence, as I discuss later, rural incomes derive mainly from in-kind sources of income.

Table 5-4: Agricultural employment by occupational status in 2002

	Number	% from total
Total	3,557,505	100
Employee	215,371	6.1
Employer	3,104	0.1
Self-employed	1,825,209	51.3
Unpaid family worker	1,495,679	42.0
Member of a cooperative	18,142	0.5

Source: "Household Labor Force Survey (AMIGO), Second Quarter 2003, NIS (2003).

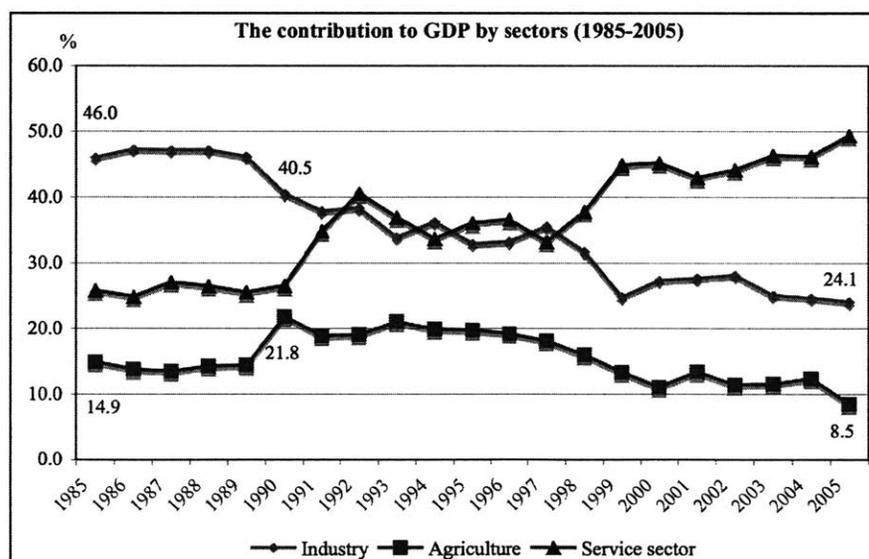
⁸⁹ The statistics for agricultural employment in Romania deserve more detailed explanations. Since 2001, the National Institute for Statistics, in preparation for the Agricultural Census in 2002, has changed the methodology (according to international standards) for recording the individuals working in the sector, which has drastically reduced the statistical share of labor force in agriculture (Lang 2003). Only in one year the share of labor force in agriculture has declined by approximately 5%. One reason why this share has declined is that pensioners that work less than half time in agriculture have not been included in this figure. Nevertheless, in Romania, where most of the rural population depends on agriculture for their livelihood, this new methodology omits a large share of the active farmers.

Contribution to Gross Domestic Product

Figure 5-2 shows that the contribution of the agricultural sector to the Gross Domestic Product (GDP) has declined, especially after 1997. By 2005 agriculture was contributing with 9% to GDP, much closer to the average recorded for middle-income countries. Nevertheless, if we consider that the share of labor force in agriculture is 36%, the contribution to GDP shows wide inefficiencies. Industry, however, has continuously declined, while the share of services in GDP has increased dramatically. Nafziger (2004 p. 99) argues that in high-income countries the rising output and labor force share of services leads to stability (which could be evidenced by the relatively stable shares between 1992-97 for the two sectors in Figure 5-2) and then an eventual decline in the share of industry to growth.

Since in development economics theory a decrease in the share of agriculture to GDP is expected to be accompanied by a decline in the share of agricultural employment, these trends suggest that growth in Romania cannot be fully explained by the structural change argument. One could even argue that the economy is split between a booming service sector driven by the financial and real estate sectors, and a large traditional agricultural economy with low productivity levels. The relatively large share of agricultural employment suggests that the shifts in economic activity from rural to urban areas are not taking place, and that labor absorption into non-agricultural activities is very slow.

Figure 5-2: The contribution to GDP by sectors between 1985-2005



Source: Annual Statistical Reports (BNR 1991), Statistical Yearbooks (INS 1996, 2000, 2005).

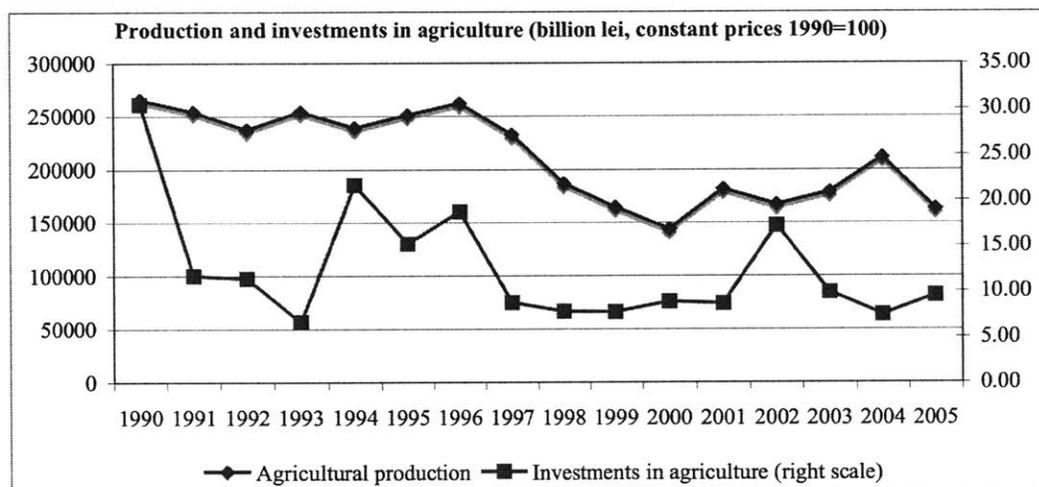
Investment

As Figure 5-3 shows, agricultural investment has drastically declined in real terms since the beginning of the 1990s, by almost 70%. The figure suggests that there is a strong correlation between the

level of production in real terms and agricultural investment.⁹⁰ With a lag of approximately one year, a decrease in investment was accompanied by a decline in agricultural production. The only period when this was not the case (or the time lag was longer), was between 2002-2004, when a major decline in investment was mirrored by an increase in production. Nevertheless, those years were also characterized by favorable weather conditions.

The decline in agricultural investments (i.e. irrigation, research, mechanization) is a reflection of the withering away of the state at all levels as a result of privatization and decentralization, and the inability of the new landowners to take up investments in land improvements and farm modernization. Nevertheless, these investments became even more important recently, following the integration in the EU institutional structures. For instance, in order for farmers to be eligible for direct single farm payments, they are required to maintain and conserve their land and comply with animal and food safety requirements. But, due to lack of financial resources, a large share of small farmers will not be entitled for CAP support.⁹¹

Figure 5-3: Agricultural production (goods and services) and agricultural investments during transition (billion lei in constant prices)



Source: INS (1996, 2005, 2006).

⁹⁰ The correlation coefficient has a value of 0.48, and is statistically significant at 95% confidence level.

⁹¹ Because of these difficulties, recent evidence shows that in order to take advantage of the direct payments, small farmers resort to different unruly options. For example, in Iasi County, more than 40% of the areas for which direct payments were requested, have been left fallow for years, and due to lack of investment, were actually not eligible for CAP support (Busuioc 2007).

Irrigations

Irrigation, one of the largest investments in agriculture, was a priority during the large-scale agriculture in the communist regime. By the end of 1989, irrigation and drainage facilities covered about 3 million hectares (Alexandri et al. 2005). Nevertheless, following land restitution, the breakdown of collective farms, and the privatization of state farms, most of the facilities developed in the 1960s and the 1970s are continuously deteriorating and decreasing their operational efficiency. Aggregate statistics show that currently less than 300,000 hectares of land are actually irrigated (see Table 5-5). Because the irrigation infrastructure was built for large-scale farming, it needs significant investments in adjusting it for small and medium scale farming. Nevertheless, with a new pattern of much warmer weather in Romania (and in general in Eastern Europe), the need for irrigation in agriculture becomes even more stringent.

Table 5-5: The extent of irrigation in agriculture

	1990	1995	1996	1997	1998	2000	2002
Areas equipped with irrigation facilities (thou. ha)	3109	3110	3184	3089	3007	3007	1511
-of which: effectively irrigated (%)	62.5	13.6	23.2	22.0	8.3	14.0	16.6

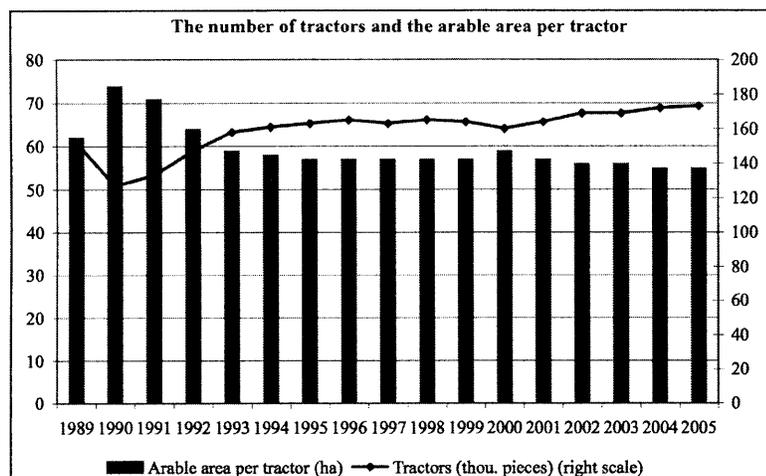
Source: Romanian Statistical Yearbook, National Institute for Statistics 1990-2000. Data for 2002 is from the agricultural census.

Physical capital

The reform of the agricultural sector did not stipulate a transfer of machineries from the former communist entities to the new landowners, along with land restitution. Rather, these equipments remained in the ownership of specialized units, to which farmers had access in exchange of payments in kind or in cash. Despite the fact that the number of tractors increased since the 1990s (due to subsidies provided by the state that Ministry of Agriculture that covered part of the equipment price, since 2001⁹²) (see Figure 5-4), the share of arable land for one tractor is still quite large (i.e. 55 hectares) compared to the EU average of 20 hectares per tractor.

⁹² As a result, in 2001, 94 million Euro worth of equipment was bought, out of which 5,306 tractors and 183 cereal combines, mainly from the domestic tractor supplier “Tractorul” Brasov (Alexandri et al. 2005). As a result, one can claim that this policy aimed to salvage this plant that went through several failed privatization efforts.

Figure 5-4: The number of tractors and the arable area per tractor since 1989



Source: National Institute of Statistics 1993, 2000, 2006

Prices

The phenomenon of “price scissors” has also afflicted the performance of the agricultural sector in general, and in particular the small producers who were not able to generate sufficient revenues from selling their crops. Moreover, in addition to the overall inflationary pressures, the widening price scissors acted as brakes on rural accumulation. Table 5-6 shows the scale of increase in prices for inputs and agricultural services in Transylvania between 1994-2000 and the increase in incomes and sales prices for agricultural produce and land.

Table 5-6: Approximate increases in some agricultural costs and incomes, South-Central Transylvania, 1994-2000

Service/Good	Increase (in lei)	Increment
<i>Costs</i>		
Gasoline	300-400 to 12,000 per liter	30 to 40 – fold
Plowing services	25,000 to 500,000 per ha	20 – fold
Fertilizer	1,000 to 20,000 per kg	20 – fold
Tractors	9.5 million to 150 million	16 – fold
<i>Incomes</i>		
Top pension	130,000 to 2.3 million per month	18 – fold
Wheat sale price	200 to 3,500 per kg	16 – fold
Pig sale price	1,200 to 18,000 per kg	15 – fold
Sale price of land	1.5-2 million to 7-10 million	3 to 5 – fold

Source: Verdery (2004 p. 208).

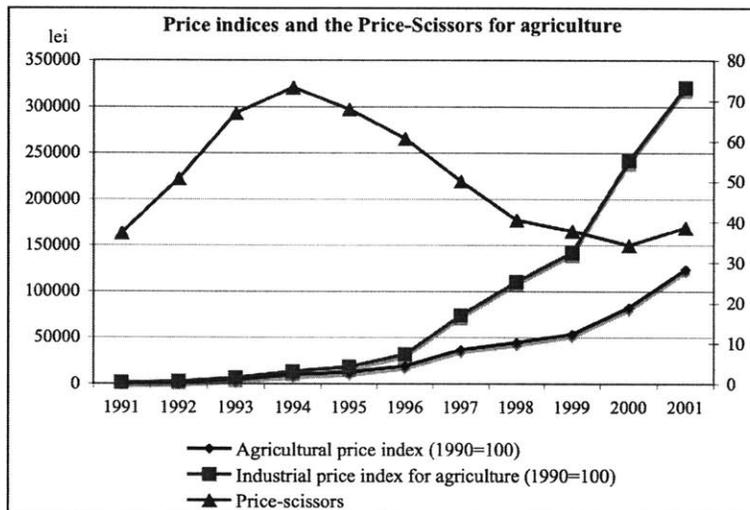
These rough estimates clearly show that in balancing costs and revenues, small farmers were clearly at a loss and over-exploiting themselves if they did not want to leave the land uncultivated. As

Verdery (2004 p. 209) finds, by 1999-2000 some farmers were borrowing money from various sources simply to pay for plowing.

In the literature on international development this phenomenon of small farmers being swept out of the market as a result of increase in costs is not a rare occurrence. Long-term structural transformation in capitalized economies, resulting in a stronger emphasis on industry and services, placed less and less emphasis on more traditional sectors, rendering them less efficient.

The “price scissors” refers to the ratio between the prices for agricultural products relative to input prices. A decline in the price scissors reflects a worsening of the economic conditions for farmers as the prices for inputs increase much more than the price for agricultural products. Starting with 1997 the prices of agricultural products and inputs were completely liberalized. Nevertheless, the prices for agricultural products decreased much more than those for inputs, leading to the worsening of the terms of trade between agriculture and industry (see Figure 5-5). Some of the problems that exacerbated these outcomes were the lack of marketing channels for agricultural products and input supply, the absence of financing options for small producers, and the extreme land fragmentation.

Figure 5-5: Agricultural price index, the industrial price index for inputs necessary in agriculture, and the Price Scissors between 1991-2001



Source: Lazar (2002) in Alexandri et al. (2005).

Productivity

Improvements in productivity, either through increased efficiency or technological change, is a key source for sustained increases in agricultural production during the development process, allowing countries to produce more food at lower costs, to improve nutrition and welfare, and to release resources to other sectors (Trueblood and Coggins 2003; Lerman et al. 2004).

In Arthur Lewis' tradition (1963) economic development theory postulates that technology driven increases in productivity lead to rise in savings and investments shifting excess labor out of agriculture into other sectors of the economy. Lewis argued that any withdrawal of labor from agriculture (attracted by higher wages in the non-agricultural sector) is likely to be accompanied by a reorganization of production by those who are left behind (i.e. technology change) (Ranis 2004). Nevertheless, this trend has not been observed in the Romanian context for three main reasons: (1) the non-agricultural sector did not create job opportunities to attract agricultural labor; (2) a process of reverse migration took place, from the urban to the rural areas, as a result of the combined outcome of industrial unemployment and land restitution; (3) as I discuss below, agricultural productivity did not increase during transition, with the exception of the past couple of years.

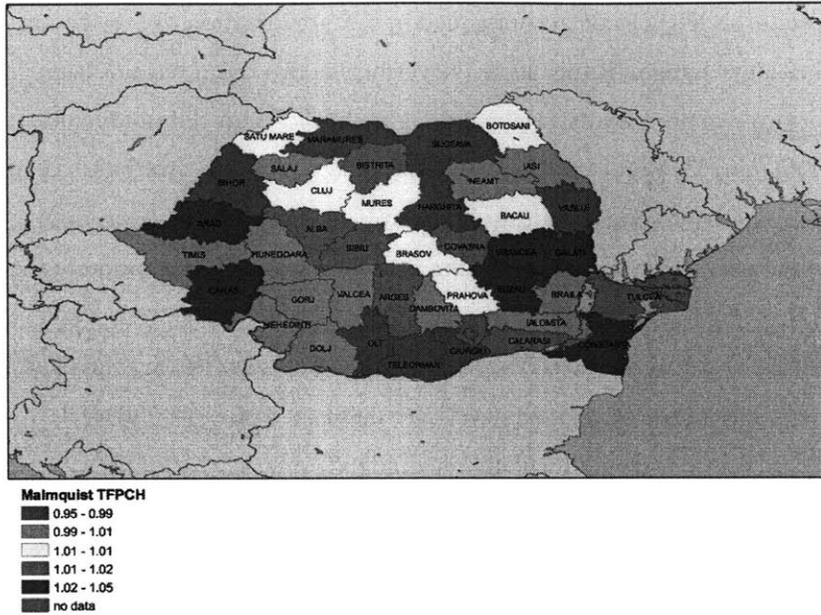
The research conducted by Aldea and Vidican (2007) is the first study that looks at the total factor productivity (TFP) change in Romania's agriculture at regional level over the period of 1992-2004⁹³. While productivity has fluctuated over this period, we find striking regional differences, which pose significant challenges in terms of policy-making (see Figure 5-6). We observe that the south-west and the north-east regions registered a lowest TFP values during the transition. This finding is quite surprising especially for the Southern regions that have the largest agricultural area, the best quality land, and longest tradition in agriculture. The persistence of very large agricultural farms, the slow restructuring of former collective and state farms, and the lower level of economic development might have contributed to its relative stagnation. This region is obviously performing under its potential and significant policy implications could be derived from an in-depth analysis of its economic and social conditions.

Our analysis also points to additional findings, such as that the majority of the counties could increase efficiency by at least 20% with the available resources. While some counties exhibit increasing returns to scale, a few others (located mostly in the South) are characterized by decreasing returns to scale. Since this region is the largest producer of grains, a potential diversification of production into other crops might be appropriate depending on specific regional conditions. Such analysis allows policy-makers to gauge the performance of the agricultural sector during transition, and to design better targeted measures for increasing the competitiveness in the sector.

Figure 5-7 shows that TFP has fluctuated over the transition period, but that since 2001 growth was relatively stable. This trend is a reflection of both exogenous factors such as the vagaries of weather, but also endogenous factors such as macroeconomic conditions and institutional changes.

⁹³ We use Data Envelopment Analysis to calculate the Malmquist Index for the change in total factor productivity, and Bootstrap the results in order to account for more accurate estimation of the index.

Figure 5-6: The Malmquist Index for the change in Total Factor Productivity between 1992-2004⁹⁴

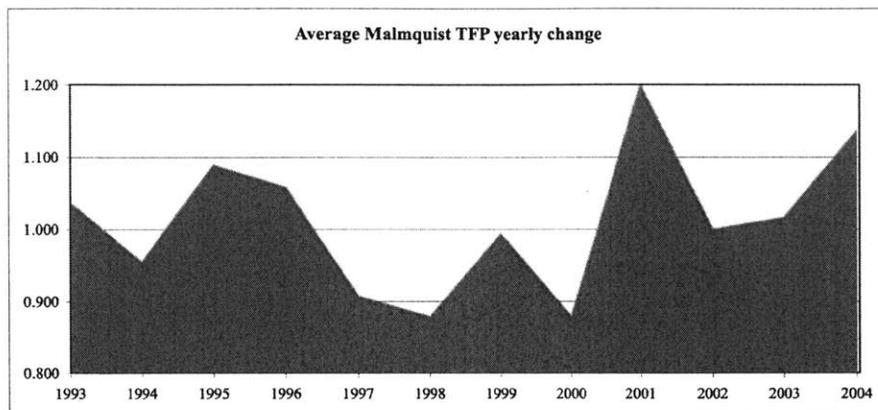


Source: Aldea and Vidican (2007).

We observe that starting with 1995 until 2000 TFP was continuously declining, which is associated with the overall deterioration of the macroeconomic condition as discussed earlier, the steady decline of agricultural subsidies in the first half of the 1990s until complete elimination in 1997, a decline in agricultural procurement prices and doubling of agricultural imports by 2000, and poor weather conditions in 1996 and 2000.

⁹⁴ A value higher than “1” means that productivity has increased over this period, which a value lower than “1” shows that productivity levels declined.

Figure 5-7: Average Malmquist TFP yearly change



Source: Aldea and Vidican (2007).

The low values and the decline in agricultural productivity throughout the transition period partially reflect the withdrawal of a large share of small landowners from the markets. As a result of very high costs for inputs and mechanical services, landowners resorted to what we could call “closed-cycle” production system. Instead of purchasing seeds and fertilizer, the majority of small private individual farmers used mostly “in-house grown” seeds and manure, and they produced crops that were needed for their own consumption and those necessary for their livestock. As a result of these shifts in demand for agricultural inputs, the ripple effects in the rest of the economy were soon noticeable as several of the specialized enterprises closed down.

The structure of agricultural holdings

Land reform resulted in an unprecedented change in the organization of agricultural production. Collective farms were dismantled and in some cases were replaced by farming associations, state farms were privatized into commercial companies, and a multitude of small and fragmented farms were created following restitution based on the pre-communist land records. Table 5-7 shows the different types of farming arrangements in 2005. We observe that farming associations, state farms, and commercial companies maintained large-scale operation.

Table 5-7: The structure of agricultural holdings in 2005

	Number of farms					Agricultural area in use (ha)	Average area in use per farm (ha)
	Total	Farms using the agricultural area					
		Total	Size classes				
			< 5 ha	5 – 50 ha	> 50 ha		
Individual private farms	4,237,889	4,103,404	3,730,501	366,769	6,134	9,102,018	2.15
Farms with legal status, from which:	18,263	17,843	5,317	4,830	7,696	4,804,683	263.1
Farming associations	1,630	1,614	66	207	1,341	742,065	455.3
Commercial comp. with mostly private capital	4,574	4,325	617	685	3,023	1,720,792	376.2
Commercial comp. with mostly state capital	250	238	88	48	102	59,996	240.0
Units of public administration	4,818	4,750	1,389	530	2,831	2,124,737	441.0
Cooperative units	108	89	46	29	14	3246	30.1
Other types	6,883	6,827	3,111	3,331	385	153847	22.4
Total	4,256,152	4,121,247	3,735,818	371,599	138	13,906,701	3.3

Source: MADR (2007).

Moreover, the table illustrates that even now the size of individual private farms is very small (an average of 2.61 hectares per farm), with only very few individual farms (0.02 percentage from total individual farms) being larger than 50 hectares. Nevertheless, small private individual farms use 66% of the agricultural land, pointing to the large share of subsistence farming and the strong dependence on land as a source of income. Therefore, agricultural policy should have a strong social component as well in order to achieve desired growth and long-term sustainability outcomes.

5.3 Social outcomes of land reform

The outcomes of land reform should be understood in a broader context than by simply evaluating growth and productivity, to include the social dimension. We saw earlier that almost half of the labor force is employed in agriculture, and that the rural economy is not diversified. This suggests that for most of the population, land provides the main source of income. Nevertheless, given that access to markets especially for small farmers is very limited, and that non-farming income sources are not enough to cover basic needs, farming takes the form of subsistence agriculture.

The restructuring of the industrial sector resulted in a large number of middle-aged workers being displaced (or forced into retirement) after years of labor in the state owned factories. At the same time, unprecedented inflationary pressures from liberalization policies eroded the incomes to values that were

much lower in real terms than prior to 1990. As a result, higher poverty became a new reality across the country. Nevertheless, in the rural areas, poverty has been more acute as most of the former workers on the collective and state farms became pensioners, and job opportunities in the urban areas were lacking entirely.

Agricultural transformation, with its component of land restitution can be understood as a “social cushion” against the deterioration in living conditions early in transition. The fact that everyone who owned land prior to collectivization received a small plot of land (even if they were currently living in the urban areas), provided a social safety-net against the uncertainties of transition.

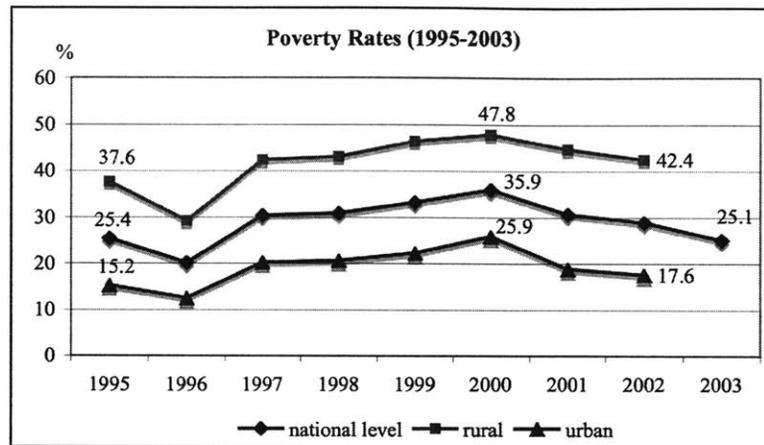
In the next sections I discuss the issue of poverty and migration with the focus on the rural areas, in order to unearth the link between the land reform and the social conditions during transition.

5.3.1 Poverty and rural development

The transformation of a former centrally planned economy to a market economy had, as evidence showed, generated significant social and economic shocks. The severity of these shocks depends on the speed of reform and the economic and institutional particularities of the country. In Romania, the downturn has been significantly harsher than in other countries of similar size and economic composition, mainly due to the extreme economic isolation and strict national centralized planning in every aspect of social and economic life. In addition, the past ten years of communist rule were the most difficult for Romania in comparison to other countries in the region due to the extremely tight squeezing of the population for Ceausescu’s ambition of repaying the entire external debt of the country by the end of the 1980s.

Early in the transition industrial restructuring, trade, and price liberalization, resulted in a sudden surge in unemployment and an immediate and continuous decline in real incomes. After ten years of reform, average monthly real incomes were down to 59% of the 1989 level, and by 2005 they had still not recovered the pre-reform level (90% of the pre-reform real income level). Over the same period of time, due to a constellation of factors, poverty rates surged, affecting mainly the rural population, but also the middle and low social groups in the urban areas (see Figure 5-8). By year 2000 an estimate of 36% of the population was living in poverty.

Figure 5-8: Poverty rates between 1995-2003



Source: CASPIS (2002) and World Bank (2005).

Poverty in the rural areas

While poverty rates started to decline after 2000, in the rural areas this process was only marginal. By 2002 the gap between the rural and urban areas widened more than in the previous years. In rural areas the poverty rate reached 42%, more than double the rate for the urban areas, as the agricultural sector became a form of “poverty trap” and “occupational buffer” (CARE 2004). The level of poverty in the rural areas is probably even more severe if we take into account the severe deterioration of the social (and other public) services.

Inflation, which was not felt by villagers in the past forty years, has continuously emptied the value of peasants’ incomes, who were unfamiliar with the new strategies of storing money in foreign currencies. For many the periodic increments in prices were not just bewildering, but terrifying. As one farmer explained, “what you could buy today you could not buy tomorrow.” In her interviews with farmers in Hunedoara County, Verdery (2004 p. 207) finds that devaluation affected Transylvanians more than farmers in the South because the relatively less fertile soil in Transylvania required more fertilizer and additional plowings to produce good yields, increasing the costs for these farmers.

Land reform, with its component of land restitution, formed a new class of owners of small and fragmented farms, which despite their low productivity level, secured consumption and income for more than half of Romania’s population. Therefore, while the rural sector did not join in the positive benefits from growth, it was, to a certain extent, insulated from the perverse effects of recession. Hence, it is important to juxtapose the agrarian transformation to the strategies used by the population in coping with higher levels of poverty and the extreme erosion in purchasing power. In this context, policies addressing the rural economy should address measures for increasing agricultural productivity as well as rural

development programs that would include not only infrastructure systems but also social programs and non-farming employment opportunities.

Poverty is not a new phenomenon in Romania, but it has become more visible in the post 1990s period. The socialist development plans, with their emphasis on equality and ambitious industrialization, resulted in artificially reducing regional disparities by developing industries in regions with limited natural resources or industrial potential. Nevertheless, even then, the rural areas were significantly lacking behind the urban areas mainly in terms of physical infrastructure.

With the dissolution of the centrally planned economic system and the quick restructuring of the industrial sector based on efficiency standards (industrial shrinkage), most of the rural communities relied increasingly on agriculture as the main source of livelihood. But, the slow emergence of markets for products, the mismatch between the newly created organizational forms (i.e. small family farms) and policy recommendations, and low competitiveness of food products, created ripen conditions for the increase in poverty. Earlier studies suggest that the low skilled workforce in rural areas, where non-agricultural job opportunities do not exist, “constitute the key, and the stagnant poor of poverty in Romania” (CASE 2004). Further, the report finds that poverty incidence is concentrated in three categories of households: those headed by pensioners, self-employed in agriculture, and the unemployed. In 2002 these households accounted for 75% of all the poor (and 80% of those living in extreme poverty) (CASE 2004 p. 25).

Another important aspect relative to poverty in the rural areas and land reform outcomes is the age structure of the rural population. The forced industrialization policies during the communist regime resulted in a fast depopulation of the rural areas, with only the middle-aged and elderly remaining the villages. Moreover, the prospect of low incomes from agriculture has discouraged younger individuals from moving the rural areas and investing in farming.

As Table 5-8 shows, the share of elderly in the rural areas increased since 1977, to 24% of the total population. At the same time, birth rates declined reducing the share of young individuals, from 27% in 1977 to 18% in 2005. Nevertheless, while the dependency ratio⁹⁵ decreased only slightly over this period of time, the trends in population growth suggest that demographic dependency will increase in the next decades. Therefore, with respect to farming, this trend reflects that farming will increasingly remain on the shoulders of older households unless farming associations and land market transactions become the predominant farming arrangements. The aging of the rural population also poses threats to sustainable

⁹⁵ Dependency ratio is calculated as the ratio between the dependents (population younger than 15 years old and older than 60 years) and the working age individuals (between 15-59 years old), multiplied by 100. A dependency ratio of 71% means that there are 100 workers in the labor pool over every 71 individuals under 15 and over 60 years old.

farming practices, as soil degradation increases due to more land being left fallow and inconsistencies in crop rotation practices and fertilization.

Table 5-8: Demographic dependency ratio in the rural areas

	1977	1997	2005
Under 15 years (% from total)	27.1	19.6	17.8
Between 15-59 years (% from total)	56.2	56.4	58.3
Over 60 years (% from total)	16.7	24.0	23.8
Demographic dependency ratio (%)	77.9	77.3	71.4

Source: For 1977 and 1997, Chirca and Tesliuc (1999); For 2005, INS (2006).

Dumitru et al. (2004) claim that in order to get to the average EU level of agricultural employment, Romania needs to “remove about 2 million people” away from agricultural employment. The authors recommend that the government should define a policy based on welfare programs and increase in farmers’ pension, rather than continue the support programs for small farms, which result in the maintenance of current fragmented farm structures. Nevertheless, I argue that while these measures are very pragmatic, evidence from the field suggests that the role of land in the rural communities goes beyond the economic benefit that landowners derive (for more details see Chapter 9). This reality is also reflected by the limited engagement of small landowners in land market transactions or in the new program adopted by the Ministry of Agriculture for encouraging retirement, i.e. “renta viagera”.⁹⁶

Hence, reducing support for small farms, which has been the “unspoken” agricultural policy all throughout the transition period, will fail to address the core social and economic issue in the rural areas, and it can reinforce the trend of assisting large corporate farms.

Farm income levels in Romania are so low that a prevalence of subsistence strategy and chronic poverty exists. Table 5-9 shows that almost 45% of the total incomes are non-monetary in nature. The main source of income for farmers was the sales of agricultural products or service provision, a share of 25% of total monetary incomes, higher than in 2004, but much lower than in 1998 (41% according to FAO (2002 p. 32)), while the average for all households is 4%.

⁹⁶ The government is encouraging (rather pushing) farm consolidation by offering 100 Euro per year per hectare for those that sell land and 50 Euro for those that lease it out. However, by 2007 only 23,000 households have been benefiting from this program, transferring property rights on 135,000 hectares, suggesting that this program does not offer sufficient incentives for the small farmers (Daniciu 2007).

Table 5-9: Household revenues for employees, peasants, and pensioners

	Households		Employees		Farmers		Unemployed		Pensioners	
	1998	2005	1998	2005	1998	2005	1998	2005	1998	2005
Total nominal incomes	100	100	100	100	100	100	100	100	100	100
Cash incomes	68.7	79.6	79.9	87.4	41.4	56.4	64.1	77	58.6	73.5
Incomes in kind	31.3	20.4	20.1	12.6	58.6	43.6	35.9	23	41.4	26.5

Source: For 1998 from "Aspecte privind calitatea vietii populatiei in perioada iulie 1997-iunie 1998";
For 2005 from INS (2006)

As Table 5-10 illustrates, the rural economy is mostly subsistence based, where almost half of the consumption in 2005 was from own resources, five times more than for employees.

Table 5-10: Household expenditures for employees and farmers by categories (% from total)

	Employees				Farmers				Pensioners			
	1996	1997	2004	2005	1996	1997	2004	2005	1996	1997	2004	2005
Purchasing food and beverages	25,2	26,2	22.6	22.6	12,1	12,0	15.7	17.9	21,7	22,7	23.2	23.9
Purchasing non-food goods	20,7	19,0	20.9	22.1	18,1	16,0	14.7	17.7	17,9	16,3	19	21.3
Payment of services	8,9	9,9	18.2	19.9	5,5	6,3	6.8	8.4	9,0	10,1	15.4	17.2
Purchasing inputs for production and investment	1,2	1,5	1	1.3	1,8	2,2	1.7	1.6	1,7	1,8	1	1.1
Taxes and fees	18,3	17,7	21.6	20.7	2,3	1,5	2	1.8	3,9	3,3	4.9	5.2
Equivalent value of consumption from own resources	20,2	20,7	11.9	9.6	57,0	58,7	52.2	45.3	39,9	40,3	29.7	24.5

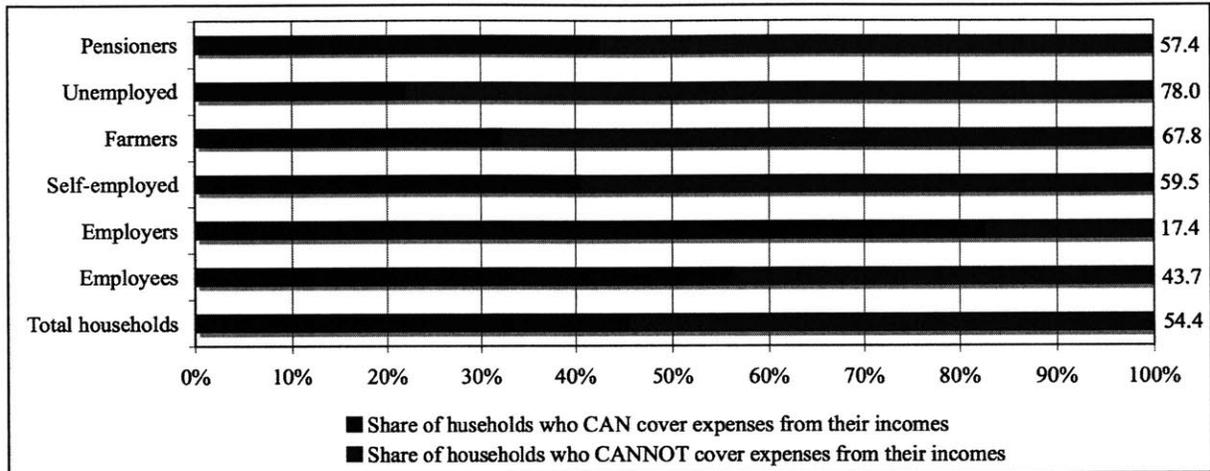
Source: National Institute of Statistics 1998, 2006.

Only less than 20 percent is being spent on the purchase of food and non-food goods. We can also notice that the rural economy is not based on services. Moreover, since most work is based on informal or self-employed status, the expenditures on taxes and fees are only 10% from the level spent by employees. Also, the rural economy is only partly based on cash transactions, so expenditures on insurance and other financial services are almost non-existent.⁹⁷

In general, as Figure 5-9 illustrates, for the majority of households, the level of incomes at their disposal after paying for production, taxes and other fees, is very low relative to the expenditures they need to incur for securing a decent standard of living. Based on households' evaluations, in 2005 68% of the farmers claimed that they cannot cover all the expenses from their incomes.

⁹⁷ Only a small share of the population in the rural areas has bank accounts. The reason for this lack of involvement with financial institutions streams from the limited financial resources at the disposal of rural population, the fact that the services provided by the financial sector are not at all targeted at small farmers (i.e. high fees, poor loan conditions), the difficulty of commuting to the city regularly to access the accounts, and certainly one of the most important reason is the complete unfamiliarity with these new services. Nevertheless, the agency responsible for disbursing the direct payments from the EU to the farmers has required opening bank accounts at certain banks. Nevertheless, as the newspaper Gandul (2007) reports, this new regulation creates more inconveniences and travel expenses for the small farmers.

Figure 5-9: The distribution of households based on their capacity of covering expenses in 2005, by occupational status



Source: "Coordinate ale nivelului de trai in Romania", INS (2006).

Accounting for loss in purchasing power

To better understand the severity of income erosion, conventional microeconomic tools allow us to estimate these changes in the standard of living, emphasizing the subsistence role played by the farming sector in the rural economy. The Slutsky income compensation concept and the Lasoyres price index approximation are used to create an indicator for price fluctuations and their impact on earnings.

To do this, we use a real example. Two variables, basic diet and income, are considered to estimate the change in population food consumption patters and inflation. The major components of the Romanian diet, namely bread and potatoes, are selected as proxies. Since wage is the main source of income and wage earners are the dominant category within the Romanian labor force (particularly in the urban areas), the average nominal wage is selected as the budget constraint for consumption.⁹⁸ In 1989, prior to the post-socialist transformation, the average net monthly income was, according to official statistics, 3,063 lei. The average price of potatoes in 1989 was about 1.5 lei per kilogram and the average price of a loaf of bread was close to 3 lei. For a rough estimation, lets assume that a typical Romanian household consumes 5 kilograms of potatoes and 14 loafs of bread per month.⁹⁹

Using this consumption basket, in 1989 an average household needed 49.50 lei per week ($[1.5 \text{ lei} * 5 \text{ kg}] + [3 \text{ lei} * 14 \text{ loafs}] = 49.50 \text{ lei}$). Sixteen years later, using the same calculation, a household needs

⁹⁸ However, it is important to note that the impact of inflation on incomes will be underestimated for the rural population since income levels are much smaller.

⁹⁹ The quantities are really not relevant in this exercise. What matters is the differences between the purchasing power at two points in time.

260,000 lei to consume the same quantities of potatoes and bread.¹⁰⁰ By using the Laspeyres price index ($L_i = \sum P_{i1} * Q_{i0} / \sum P_{i0} * Q_{i0}$)¹⁰¹ we compare the average salary earning in 1989 relative to 2005. We find that the average income should have increased by 5,253 times (260,000 lei divided by 49.5 lei) to make the individual able to consume the same quantity of goods in year 2005. However, in reality, the average salary earning has increased by only 2,436 times (the average monthly salary earning in 2005 of 7,460,000 lei divided by the average monthly salary earning in 1989 of 3,063 lei).

The numbers reveal that if an individual wage earner in Romania wants to consume the same, not more, quantity of goods (potatoes and bread) ten years after transition, considering the increase in inflation over this time frame, the average wage should be 16,089,939 lei instead of 7,460,000 lei per month (an increase of 116 percentages).¹⁰² This simple calculation suggests that the average wage earners have a monthly deficit equal to 8,629,939 lei, more than their current monthly salary. Said differently, sixteen years into transition, the average income earners in Romanian can consume only 37% of potatoes and 73% of bread they used to consume.¹⁰³

The plummeting in the purchasing power was even more dramatic for the population in the rural areas earning far less than the national average income level. At a time when product markets have become very thin due to closing down food processing industries and unmatched competition from more developed and subsidized outside markets, the subsistence character of Romania's farming sector expanded. At the same time, as mentioned earlier, urban out-migration intensified, exploring this short-term, last-resort "opportunity".

¹⁰⁰ In 2005 the average price of potatoes was 10,000 lei per kilogram and a loaf of bread was equal to 15,000 lei, $([10,000 \text{ lei} * 5 \text{ kg}] + [15,000 \text{ lei} * 14 \text{ loafs}] = 260,000 \text{ lei})$.

¹⁰¹ Where L_i is the "Laspeyres Index", P^j_t is the price in 2005 for the two food products, Q^i_0 is the quantity consumed, and P^i_0 is the price in 1989 for the same basket of goods.

¹⁰² This calculation is also known as the "Slutsky equivalent variation" (maintaining the same consumption pattern), which is determined as: $I_t = L_i * I_0$ or $I_t = 5,253 * 3,063 \text{ lei} = 16,089,939 \text{ lei}$, where I_t is the income to be earned in time t (2005), and I_0 is the monthly income that was earned in time 0 (1989). The core of the Slutsky equivalent variation (or decomposition method) is isolating the change in demand due to the change in relative prices by asking "What is the change in demand when the consumer's income is adjusted so that, at the new prices, he/she can afford to buy the original bundle?" To do this, we hold the purchasing power constant.

¹⁰³ These numbers are based on the following calculation. We can calculate the relative expenditure for a particular bundle of goods. For instance we can illustrate that the expenditure to consume good x at time t ($Ex_t = Px_t * Q_{x_t}$) can be estimated by Ex_t / Wt , where Wt is wage at time t . Accordingly, the equality of $Ex_t / Wt = Ex_{t+1} / W_{t+1}$ can illustrate the proportion of change in quantity of good x at time $t+1$ relative to time t . If we denote the time $t = 1989$ and good $x = 5$ kilograms of potatoes consumed in 1989 at the income level 3063 lei, then our equality is: $1.5 \text{ lei} * 5 \text{ kg} / 3063 \text{ lei} = 10,000 \text{ lei} * x_{t+1} / 7,460,000 \text{ lei}$. Then $x = 1.83$, which means that at the time $t+1$ (the year 2005) an individual wage earner is only consuming 1.83 kilograms of potatoes relative to 5 kilograms of potatoes (the normal diet), or 37% ($1.83/5$). A similar calculation for bread expenditures renders a reduction in consumption to 73% of the 1989 level (10.2 loafs of bread in 2005 as compared to 14 loafs).

This simple exercise also points to an increase in the informal sector. Johnson et al. (1997) and Lacko (2000) estimate that the share of the informal economy¹⁰⁴ in GDP was in the range between 10 and 65 percent in the transition countries from 1990 to 1995. The informal sector is particularly large in the rural areas, where the share of seasonal and disguised unemployment is the highest.¹⁰⁵ Self-employment in agriculture, without a work contract is the predominant occupational status for the working age population in the rural areas, as Table 5-4 illustrated. There is also an unaccounted-for share of the population living in the countryside, which dropped-out of the unemployment statistics (after a period of 9? months of unemployment status), or those that never searched for a paid job but are still engaged in income generating activities. The loss of purchasing power (as we showed in the previous section) and the loss of jobs during transition, were major push factors for the return to land and the rise of informal economy in the rural areas. Aside from agriculture, none of the services provided by skilled individuals (e.g. mechanics, roofers, interior painters) are registered because of unbearably high taxes.

The importance of the informal sector is highest for the purpose of social policy. If the majority of the households rely on informal activities to cope with substantial decreases in real incomes, the informal economy enhances welfare at least in the short run (Kim 2005). Therefore, eliminating the informal sector might not be desirable by social and economic policy.

While it is difficult to determine what the cause of informality is, the reverse migration (which will be discussed in the next section), and the high incidence of subsistence farming in Romania, suggests that the gap between the desired income and the actual level of income contribute to a large degree to informality. Research on the informal sector in Romania is very scarce, but in a recent study Kim (2005) finds, somewhat intuitively, that poverty has a strong effect on informality, advocating that participation in the informal sector is used a survival strategy by the poor in order to cushion negative income shocks during transition.

The way agricultural policy and rural development were approached from this point of view, took an overt position to support this informal economy, as a way of supplementing the state welfare system. Due to inflationary pressures, the state was unable to afford higher pensions. Nevertheless, the cost for the population was long-term overexploitation for the elderly and for the younger self-employed farmers who, in the years to come, will lack as well pensions that are high enough to cover a decent standard of living.

¹⁰⁴ The definition for the informal sector, as used by the International Labor Organization, states that households' informal activities are those that generate income but fail to be registered by the relevant authorities and thus avoid taxes, referring mostly to the unregistered self-employed households or individuals (Bangasser 2000).

¹⁰⁵ Seasonal unemployment is likely to exist in activities that can be undertaken only during specific seasons of the year. For instance, traditional agrarian economies provide work to agricultural labor mainly during the harvest season. Disguised unemployment is a situation under which productivity of labor is very low. This is because an excessive number of workers are employed than what is optimally desirable.

The lack of land taxation¹⁰⁶ is one such indirect welfare policy for small farmers. Nevertheless, like any such indirect measures, it has sizable negative outcomes such as land degradation for strips of land that are not properly cared for. At the same time, however, withdrawing such benefits, without providing alternative sources of income leads to even worse social outcomes in the short-run. In the media there is discussion that the small agricultural producers will disappear due to high level on taxes on land and on the sale of agricultural products (Daniciun 2007).

Therefore, from this point of view land reform can be viewed as a key component of the social policy during transition. The persistence of small and fragmented farms is a reflection of these outcomes, and any attempt to replace these policies would be met with resistance if reasonable alternatives are not provided.

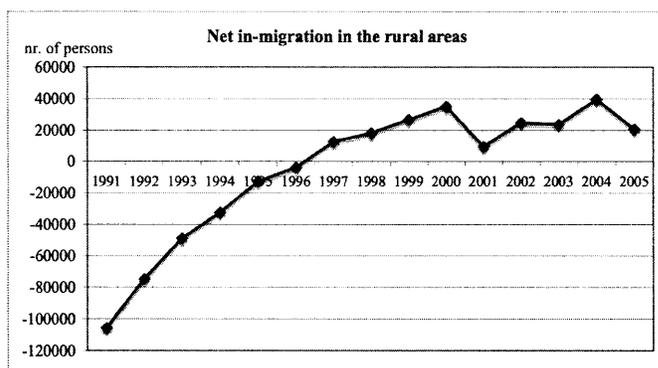
5.3.2 Migration

The issue of migration was brought back in the focus of policy analysts during transition and land reform. As we mentioned earlier, in the context of industrial downsizing, land restitution created a social cushion and job buffer for a large share of the population. As a result, instead of seeing a shift in the population from the rural areas cities, what we actually noticed was a reverse migration from the urban areas to the villages.

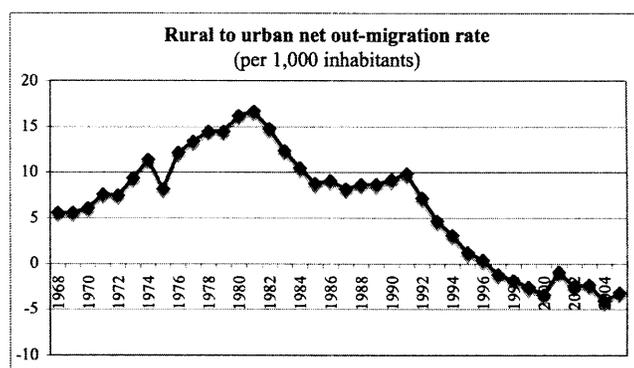
As Figure 5-10 shows, starting with 1996 the net in-migration in the rural areas became positive (more people were moving in as compared to those leaving the villages), contrary to what development economics theory predicts in terms of labor migration during economic restructuring.¹⁰⁷ After year 2000 this trend became less pronounced, and while in 2004 the net in-migration in the rural areas declined, it is unclear whether we will see a much higher increase in urban in-migration rates.

¹⁰⁶ Land taxes, at symbolic values, were adopted in the early 1990s but were never enforced. In late 2000, the law was revisited in the wake of EU enlargement, but even to date its enforcement for the small farmers is not taking place.

¹⁰⁷ A similar phenomenon is also documented by Douglass (2001) for the Asian crisis in mid 1990s and in the UNDP (2000) report. A more detailed analysis of migration patterns in the post-socialist Romania can be found in Dana Diminescu's articles (Diminescu 1996), and in Sandu et al. (2004).

Figure 5-10: Net in-migration in the rural areas

Source: National Institute of Statistics (NIS) 1995-2006.

Figure 5-11: Rural to urban net out-migration

Source: Sandu et al. (2004) and NIS (2006).

Similarly, we see that in Figure 5-11, rural to urban net out-migration rate has been constantly decreasing since the 1980s, but the trend has clearly intensified since the 1990s. The specific policy choices for land reform led to the emergence of a new class of farmers with no prior agricultural experience, how whom land offered a secure source of subsistence. Aside from the population established in the rural areas and the new post-reform migrants, land restitution was a social buffer also for a large urban population employed in other industrial but who became part-time farmers (in the weekends) in order to supplement their incomes. A similar trend as the one we see in Romania, was described in Ukraine as well, where the rural life became more insulated from the “vagaries of political and economic change” (Allina-Pisano 2007). Unfortunately, official statistics (and rural surveys) were not able to capture this important population group. Nevertheless, these trends in urban to rural migration show how rural areas are often called upon to buffer the impacts of urban economic downturns and to play a role in national economic resilience (UNDP 2000 p. 9).

These outcomes also point to the interrelationship between the urban and rural sectors. More recent reflections on development policy and planning have rightfully emphasized the need to consider the socio-economic linkages between urban and rural sectors of economic life. Hence, incorporating this conceptual approach in policy-making results not only in balanced national development outcomes, but also more solid poverty alleviations and higher economic opportunities, and environmental sustainability. I find the issue of rural-urban synergies, especially as it relates to poverty alleviation, highly relevant for the Romanian case. Historically, the development of cities has “intimately depended on the vitality of agriculture and the regional conditions needed to support it” (UNDP 2000 p. 3).

Aside from urban to rural migration, especially after 2002 (when the visa requirement for traveling to the Western Europe was eliminated), temporary work migration (“circulatory migration”) to

Western Europe became a sudden reality for Romania. From field surveys it appears that 80% of this migrant population is from the rural areas (Dumitru et al. 2004 p. 54).

Most migration, as Table 5-11 shows, is concentrated on the border areas. Those who migrate are the young and middle-aged population, emptying the villages of labor force necessary for farming. This, in turn, places additional pressures on the existing rural population, given that (as I found from the 2006 survey) migrants do not lease-out the land but rather send back remittances to the family in the village to cover the costs of farming the land individually or in associations.

Table 5-11: Migration rate from rural areas abroad by historical regions in 2002

	Migration rate
Banat	145.5
Transylvania	66.3
Moldova	37.2
Crisana Maramures	35.3
Dobrogea	22.2
Oltenia	15.5
Muntenia	11.4

Source: Diminescu and Lazaroiu (2002), in Dumitru (2002).

5.4 Chapter summary

This chapter covered the main outcomes of transition and land reform. I discussed the role of agricultural sector in the larger EU context as well as in the national economy. In Section 5.2 I showed that following EU enlargement in January 2007 Romania became the country with the largest share of employment, the most the number of small and fragmented farms, but productivity is lagging behind considerably. Hence, important challenges lie ahead for the Romanian farmers who will have to adjust to new competitive pressures and entirely new market rules and regulations. Already, during the transition farmers faced extremely harsh conditions as a result trade and price liberalization, decline in investments, elimination of subsidies and the breakdown of distribution networks. In addition, the widening of the price-scissors “devaluated” agricultural production (by increasing input prices and decreasing the retail price for crops) to the point to which farming became a risky undertaking, suppressing any entrepreneurial undertaking.

In Section 5.3 I examined the social outcomes of reform in terms earnings, changing distribution of spending, and the dramatic effects of inflation on households’ income. I showed that during the transition period earned incomes became insufficient to cover basic needs. Hence, as a result of land restitution, when most individuals came to own a small plot of land, farming was seen as an opportunity for supplementing consumption needs. Urban-rural migration accelerated, at odds with economic development theory’s prediction.

All these factors form the overall environment in which landowners operate and make decisions with respect to the most critical asset they own, land. Therefore, the choice of alternative farming arrangements, the persistence of farming associations and the limited engagement in land markets can be partially explained by the hardships imposed by transition.

Chapter 6 : Evaluating regional differences: small farming in the Western Plain and the Central Romanian Plain

6.1 Introduction

In the previous chapter I highlighted the main outcomes of land reform on the agricultural sector and the rural economy, taking stock of the social and institutional changes during transition, as well as describing the overall economic environment. I emphasized that the Neoliberal model of transition created expectations that were not met, calling for a broader interpretation of the transformation process. In addition, I placed the Romanian agriculture in a larger context, contrasting it with other EU countries along different aspects related to the agricultural sector (i.e. farm size, employment, productivity). Lastly, I overviewed the social outcomes of land reform, in terms of poverty and migration, in interconnection with the broader macroeconomic environment during transition.

While an overall evaluation of reform outcomes is very valuable, in-depth, micro level evidence can unearth more subtle nuances in the consequences of post-socialist transformation on small farmers. Hence, this chapter disaggregates the analysis to regional and household level. I show the diversity of land reform outcomes that transpires when we hone in to the receiving end of transition policies. From a normative perspective, this description points to the fallacy of mainstream institutional literature that views the process of change as static and homogenous. In addition, a closer familiarization with the regions and the types of small farmers existing in Romania, allows me to generate research hypotheses to be tested in Chapter 8 and 9.

In general the Western Plain is more economically developed, has a higher capital endowment, and a more diversified local economy. Investment is also higher suggesting an economic environment more favorable to entrepreneurial initiatives. Central Romanian Plain, on the other hand, confronts with higher poverty levels, lower capital endowment, and a higher dependence on land as the only source of employment and income.

In spite of these differences, there is hardly any research that examines in greater detail the dimensions and scale of regional differences. Hence, this chapter, more descriptive in nature, examines land reform outcomes from a regional perspective at the household level, shedding light on the distributional effects of land reform. Previous regional accounts of land reform were made at the level of administrative regions (MADR 2007), rather than looking at the agro-regions.¹⁰⁸

¹⁰⁸ The advantages of using the agro-regions as units of analysis have been explained in the Introduction chapter.

To examine regional differences I use survey data collected by the Government of Romania, the World Bank, and the EU in 1996, and the survey conducted for this dissertation by myself in 2006. The surveys are described in greater detail in Chapter 3. In addition, I supplement these data with secondary statistics published by the National Institute of Statistics (NIS).

To explain differences in land reform outcomes between the two regions, this chapter focuses mainly on the human and economic development disparities. Later chapters (Chapter 8 and 9) examine how household characteristics, resource endowments, historical legacies and social capital (and norms) played out differently in shaping the pattern of land reallocation into different farming arrangements. Section 6.2 provides a brief description of the two agro-regions, the Western Plain and Central Romanian Plain in terms of economic structure, agricultural production, human capital, and incomes at county level. Section 6.3 evaluates regional disparities by looking at household level differences across the two regions over time.

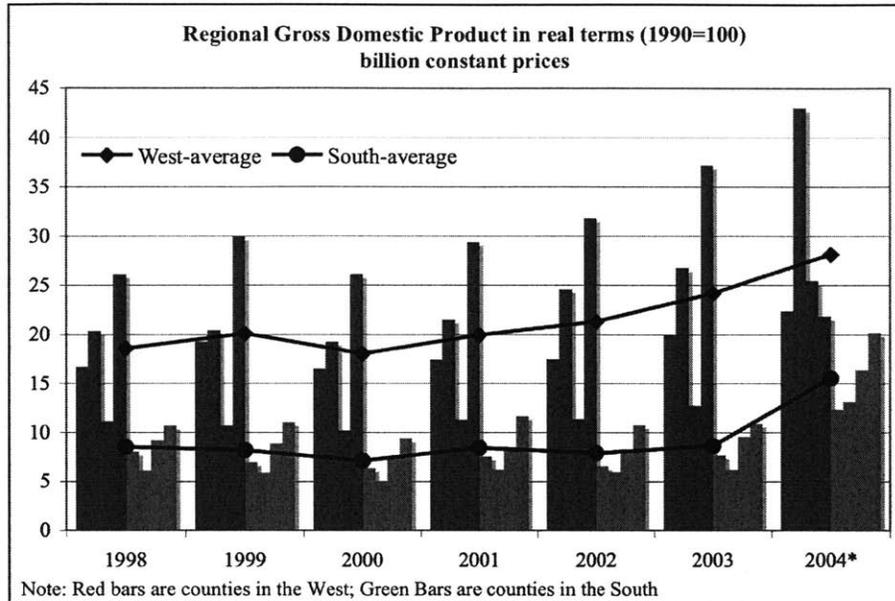
6.2 Two regions in transition

This section discusses the main differences between the two agro-regions in terms of the economic structure and urbanization levels, as well as the overall performance of the agricultural sector, farming organization, and participation in land markets.

Economic structure and urbanization

Western Plain and Central Romanian Plain are quite different in terms of economic development levels, as Figure 6-1 shows. Over the years, the West has been consistently more developed than the South, but since 2003, real GDP shows an upward trend in the Central Romania Plain. The graph also illustrates that there are significant intra-regional disparities, especially in the West, with some counties growing much faster than others. Such diverse growth patterns, between and within regions, provide a first insight into the regional distribution of transition outcomes. We observe that some counties have benefited disproportionately from the reform policies, despite the same policies being implemented across the country. Therefore, a first assumption is that initial conditions, the economic, historical and political structure, catalyze different outcomes given the emphasis of the reform policy, as has been discussed by earlier studies (De Melo 1997). While in Chapter 4 I discussed historical differences between the two regions in terms of institutional structures around land and property, this section focuses on the economic factors that differentiate the West from the South.

Figure 6-1: Regional Gross Domestic Product in real terms, billion constant prices (1990=100)



Source: National Institute of Statistics 2002-2006.

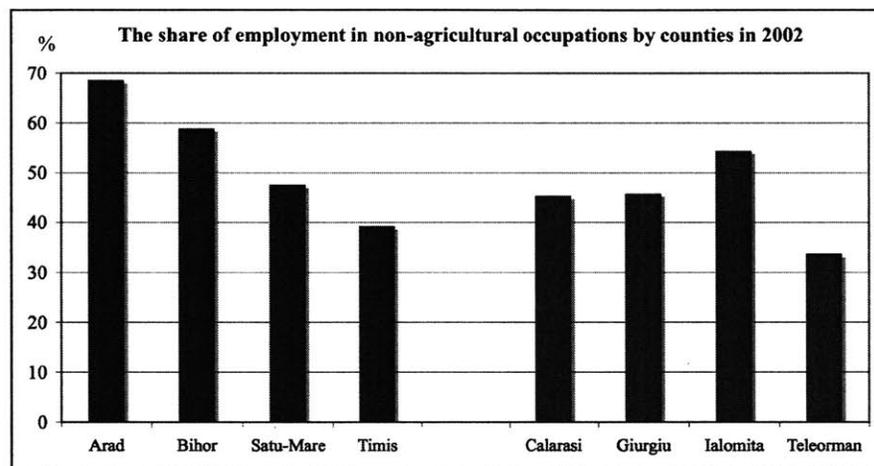
Figure 6-2 shows that the economy in the West is more diversified than in the South, with a larger share of the population being employed in non-agricultural occupations (industry and services). The Western Plain was traditionally an industrial center since the 19th century. The economy was further developed during the communist times, when, in the interest of rapid industrialization and efficient use of investment funds, industrialization was pushed in areas which already had an industrial base rather than in more rural areas (such as the South) (Nelson 1981 p. 87). The types of industries that predominate in this region are manufacturing, construction, software and information technology, food processing, and chemical industry. This industrial base was supported by a long tradition of higher education in the region that attracted (and retained) highly educated professions in different fields. During the transition to a market economy, the economic and skill-based structure of the region, and its strategic location on the border with Western Europe, attracted foreign investors that were pushed East by the pressures of globalization and the search for low-cost highly skilled labor.¹⁰⁹ A report from Price Waterhouse Coopers on regional development, shows that the West has the second highest level of urbanization (after Bucharest), low unemployment, large foreign investment, and developed private sector (PWC 2002).

The Central Romanian Plain was historically agricultural, with a less diversified economy, even if the region extends around the capital city, Bucharest. During the socialist period, as described in Chapter

¹⁰⁹ In a study of globalization patterns in manufacturing, based on fieldwork in Timis County, Berger (2005) discusses the rise in foreign investment through outsourcing and delocalization from Western and Central Europe to this region of Romania.

4, large investments were made in the agricultural sector in this region due to its fertile lands. This economic structure, where agriculture represents the main source of jobs, is also reflected in a low urbanization rate. In 2005 only 37% of the population in the agro-region was living in cities, while in the Western Plain the urbanization rate was 55% (INS 2006). Unemployment rate has also been consistently higher in this region, forcing a large share of the population to move back to the rural areas following land restitution.

Figure 6-2: The share of employment in non-agricultural occupations by counties in 2002



Source: Sandu (2003), Romania Rurala Azi.

The level of urbanization and the rural-urban linkages¹¹⁰ were widely emphasized in the literature as critical for achieving “harmonious” development and for stimulating rural development (UNDP 2000). The spatial flows between urban and rural sectors include backward and forward linkages between agriculture, manufacturing and services, such as production inputs and the processing of agricultural raw materials. Tacoli (2003) argues that the synergy between agricultural production and urban-based enterprises is often key to the development of more vibrant local economies and, on a wider level, to less unequal and more “pro-poor” regional economic growth. Therefore, the fact that the Western Plain is embedded into a more diverse manufacturing economy increases the availability of non-farming occupational opportunities.

A review of the main reasons behind the growth of rural non-farm employment in different nations and regions suggests that diversification is a response to a variety of factors that can be broadly divided into constraints and opportunities (Tacoli 2004 p. 6). For example, in China and Vietnam, one

¹¹⁰ “Rural-urban linkages include flows of agricultural and other commodities from rural-based producers to urban markets, both for local consumers and for forwarding to regional, national and international markets; and, in the opposite direction, flows of manufactured and imported goods from urban centers to rural settlements” (Tacoli 2004).

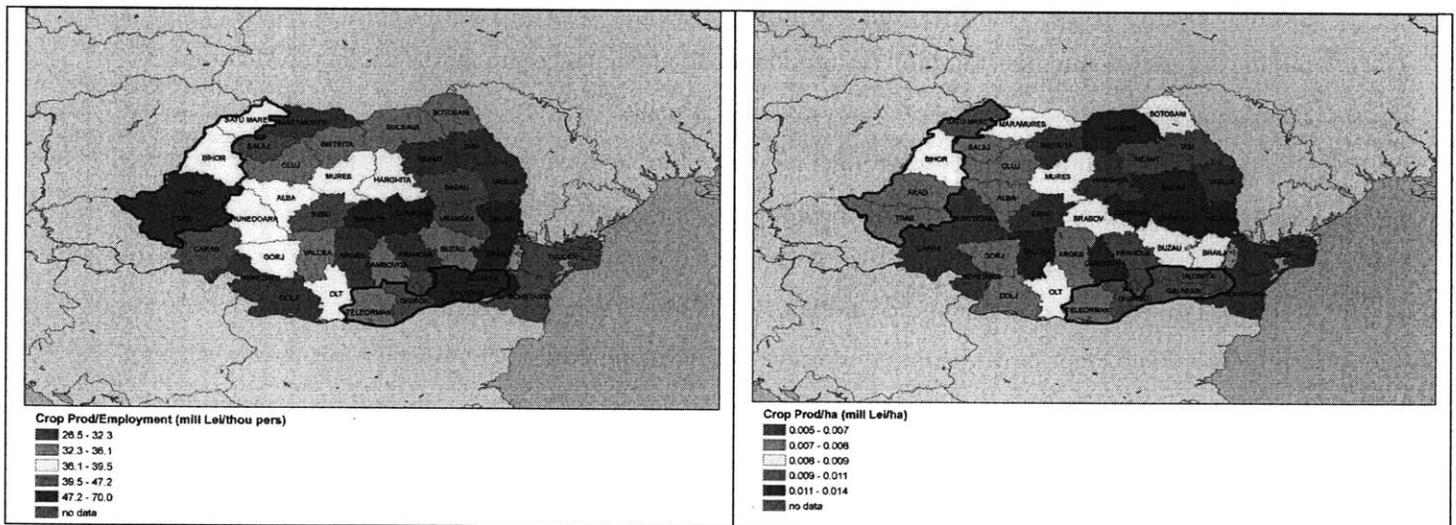
major reason for the increase in rural non-farm activities was the large surplus of agricultural labor that emerged after de-collectivization (Anh et al. 2004). Nevertheless, in the Romanian case a large surplus of agricultural labor is unlikely to occur because average age in the rural areas is relatively high, reducing the opportunities for jobs outside the agricultural sector.

The agricultural sector

As far as agricultural production, Figure 6-3 shows that the ratio of crop production (measured in million lei) per employee (measured as thousand persons) has been, on average, higher in the Western Plain as compared to the Central Romanian Plain, meaning higher labor productivity levels over the period of transition (1992-2005). However, Figure 6-4 shows that land productivity (measured as crop production per hectares) has been slightly higher in the Central Romanian Plains over the same period of time. Nevertheless, given that agricultural land in the South is of higher quality than in the West and that agricultural investment was disproportionately higher during the communist regime (see Table 4-9 in Chapter 4), one would expect to see larger differences in productivity. Productivity differences at regional level were examined by Aldea and Vidican (2007), but further research is needed to isolate the main economic and social factors that make some regions more productive than others.

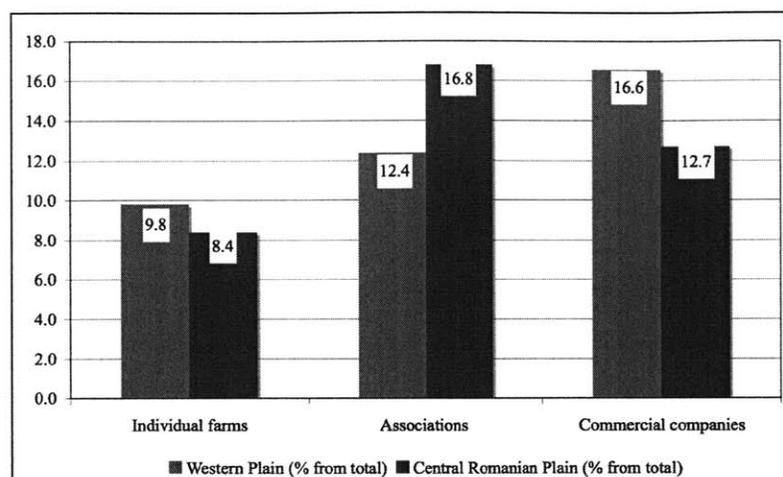
Figure 6-3: Crop production per employment

Figure 6-4: Crop production per hectare



The regions show differences in terms of farming institutions as well. Based on Agricultural Census data, Figure 6-5 shows that the Western Plain has a higher share of private individual farms and commercial companies as compared to the Central Romanian Plain, while the reverse is true in the case of farming associations. Of the total number of formal associations (2,255 in year 2002), 17% (379 entities) are located in the South, while only 12% are active in the West (279 entities).

Figure 6-5: Farming structure by regions in 2002



Source: NIS (2002).

The 2006 household survey in the two regions allowed me to also capture a commune level perspective on agricultural resources (labor, land, capital) and land market development. Aggregate statistics at commune level show that due to a lower urbanization in the South¹¹¹, villages in Central Romanian Plain are more isolated than in the West: on average, villages from the Western Plain are located closer to urban centers (17 km) as compared to those in the Central Romanian Plain (19 km). This finding suggests that in general, the Western Plain has a better access to markets than the Central Romanian Plain.¹¹²

The literature on rural development and rural-urban linkages emphasizes the fact that better access to markets can increase farming incomes and encourage shifts to higher value crops or livestock. However, more recently, Tacoli (2004 p. 4) argues that spatial proximity to markets does not necessarily improve farmers' access to the inputs and services required to increase agricultural productivity. Access to land, capital and labor may be more important in determining the extent to which farmers are able to benefit from urban markets. At times, low incomes do not allow investment in cash crops or production intensification to compensate for the lack of land and capital. In addition, patterns of attendance to periodic markets for agricultural products also show that distance is a much less important issue than rural consumers' income and purchasing power in determining the demand for manufacturing goods, inputs and services (Morris 1997). Therefore, despite the fact that distance to markets is higher in the Central Romanian Plain, low incomes, limited access to capital (as I show in Section 6.3), and lack of economic

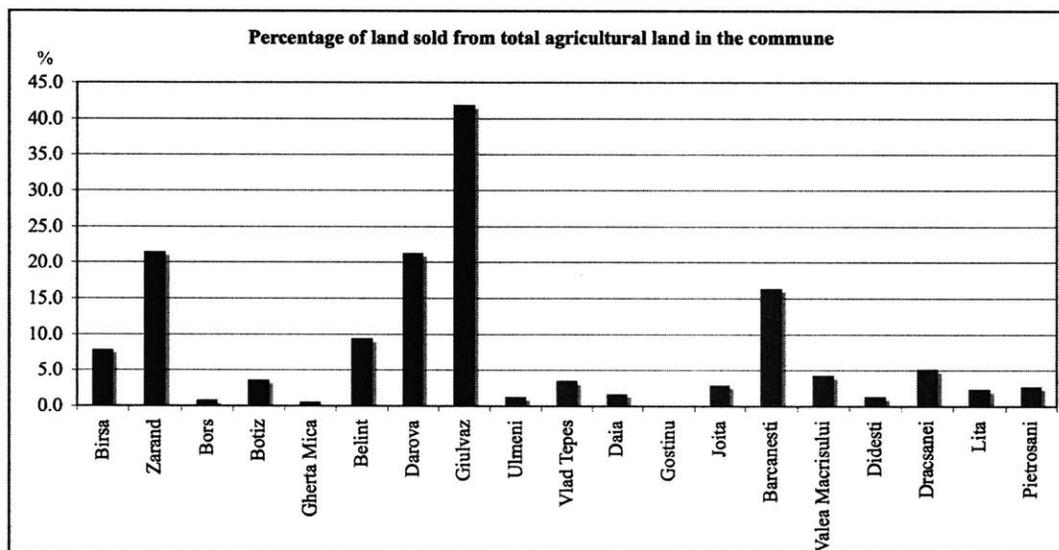
¹¹¹ The rate of urbanization in the Western Plain is higher than in the Central Romanian Plain (55% as opposed to 37% in 2005).

¹¹² Additionally, the access to local traditional markets is not very widespread. Only 25% of the communes in the west have a local market where they can sell agricultural products (crops and animals), and 27% in the south.

diversification (which supports the creation of backward and forward linkages) seem to be weight more for improving rural development in the region.

The commune level data also shows that land markets were much more active in the West than in the South. On average, in the Western Plain 1,100 hectares of agricultural land (on average 13.4% of total agricultural land in the commune) were sold in the commune, at an average price of 2,888 RON per hectare. In the South, less land was sold (an average of 293 hectares, which represents only 4.2% of the commune agricultural land), but at higher prices (on average 2,565 RON per hectare). Nevertheless, there are quite significant intra-regional disparities in terms of the level of land market activity especially in the West, as illustrated by Figure 6-6. One explanation for this heterogeneity is that the communes closer to urban centers experienced more active land markets. In Chapter 7, where I discuss in more depth the development of land markets during transition, I emphasize the fact that due to higher foreign investment, anecdotal evidence shows that in the Western Plain land conversions from agricultural to non-agricultural use were a widespread practice over the past decade, much more than in the Central Romanian Plain.

Figure 6-6: Percentage of land sold from total agricultural land in the commune (red bars are communes in the Western Plain and green bars are communes in Central Romanian Plain)



Source: Household Survey 2006.

Interestingly, however, a higher share of land in the Western Plain remained fallow (25% on average), as compared to only 15% in Central Romanian Plain, despite what appears to be a more vibrant land market. One explanation for this finding is that due to higher diversification of the local economy, more off-farm jobs become available, and landowners shifted to non-agricultural jobs in the urban areas. Nevertheless, land still provides an important safety net and an asset as collateral for loans, in addition to the non-economic value it carries, preventing owners from selling it, despite not having

resources or interest to farm. This pattern has been encouraged by the lack of agricultural land taxation and lack of enforcement on land cultivation.¹¹³

Population is younger in the Western Plain than in the Central Romanian Plain. The largest age group in the western communes is between 45-54 years (63%), while in the South the 55-60 years age group predominates (55%). The level of youth migration is relatively high in both regions (22% in the West and 20% in the South).¹¹⁴ However, there is a high intra-regional variation, with some of the communes having a 0.5% youth migration and some communes with 90% youth migration seeking work opportunities abroad.

Among the most acute problems faced by farmers in these communes, the following issues, identified by the 2006 survey, were consistent across the two regions: marketing channels for agricultural production, lack of mechanical equipments, limited access to financing, lack of knowledge about new farming technologies, and natural disasters.¹¹⁵ Some commune representatives also mentioned old age and lack of irrigation implements as problems for their communes.

6.3 Household level comparison

The two household surveys, conducted in 1996 and 2006 on a representative sample of farmers in the Western Plain and Central Romanian Plain, allow me to hone in on key aspects related to household farms in the two regions. The aspects that I describe in more detail in this section relate to human capital, land ownership, land fragmentation, capital endowment, investment and finance, household income sources, and engagement in commercial activities, giving the reader a better understanding of who are the farmers whose behavior and choices are analyzed in greater detail in Chapter 8 and 9.

¹¹³ In order to reduce the hardships on the rural population, generated by the transition reform process, land taxation was not implemented in Romania until late 2006. While this policy measure diminished the burden on the rural population, it also prevented land consolidation through an indirect pressure for land transfers. From an economic efficiency point of view, land taxation is “a necessary evil,” as portrayed in the media (Serbanescu 2005). Nevertheless, it would be shortsighted to rely only on land taxation to achieve land consolidation (through bankrupting small farms short on liquidities). Incentives to increase farm performance and encourage (rather than force) land consolidation are needed.

¹¹⁴ International work migration, especially from the rural areas, intensified mainly after 2002, when the visa requirement for traveling to the Schenghen space has been lifted (Dumitru et al. 2004 p. 50). As the authors document, Romanian shifted spectacularly from a non-mobility regime to an intense circulatory migration.

¹¹⁵ In the past three years Romania confronted with severe floods in the spring and fall (at critical times in the agricultural cycle) especially in the west, south, and east of the country. The rural areas, having poor infrastructure were severely affected to the point to which entire villages were swept away and thousands of hectares of land inundated. We found cases in our survey in which because of floods, no production was obtained in several households.

6.3.1 Human capital

In 2006 the average household size was 3.1 persons, slightly higher in the Western Plain (3.3 persons) as compared to the Central Romanian Plain (3 persons) (see Table 6-1). A decade ago, in 1996, the average household size was higher. The decline in household size over this decade could be due, first, to a natural dynamic in rural population (lower birth rates than mortality rates) and, second, to increased rural-urban (or international) migration. The average age in Western Plain is lower than in Central Romanian Plain (57 years old respectively 64 years old). Additionally, the educational level of the household head is higher in the Western Plain and a much higher share of landowners have agriculture as a secondary occupation (25% as compared to 6% in the Central Romanian Plain), confirming the more general description in Section 6.2.

Table 6-1: Descriptive statistics for the 1996 and 2006 surveys

	Western Plain		Central Romanian Plain	
	1996	2006	1996	2006
Household size (nr. pers.)	3.9 pers	3.3 pers	3.1 pers	3.0 pers
Age of the household head (yrs)	53 yrs	57 yrs	64 yrs	64 yrs
Gender of the household head (% male)	74.0%	57.0%	74.5%	63.0%
Education of the household head (% gymnasium)	69.5%	63.0%	84.4%	79.0%
Main occupation (% agriculture)	64.8%	52.0%	85.8%	86.0%
Secondary occupation (% agriculture)	24.0%	25.0%	12.7%	6.0%
Occupational status (% pensioners)	54.3%	55.0%	79.3%	69.0%

Source: Household surveys in 1996 and 2006.

6.3.2 Land ownership

By 2006, 90% of the households in the two regions acquired ownership title, 8.2% had a temporary proof of ownership (“adeverinta de punere in posesie”) and 1.8 percent has other legal endorsements. Ten years ago, in 1996, only 47% of the households had ownership titles (more in the Western Plain as compared to the Central Romanian Plain), while 50% had only temporary proof of ownership. Property restitution in the South caught up with the West, so that by 2006, 93.4% of the households in the Central Romanian Plain had ownership titles, as compared to 86.7% in the Western Plain. In Chapter 8 I examine whether this difference plays an important role in the choice of institutional arrangements for farming.

6.3.3 Farm size

The average size of the household farm decreased from 3.80 hectares in 1996, to 3.12 hectares in 2006. This decline in farm size is rather surprising since one would expect that over time family farms will

become larger, especially after 1998 when land market was formally set-up (Law 54/1998). However, it could also suggest that as land markets became more active, and since there were few marketing and financing opportunities for small farmers, households decided to sell part of the land to private entrepreneurs that used the land for non-agricultural purposes.¹¹⁶ Land purchases by small farmers, in order to consolidate their holdings or increase their farm sizes, were very limited, as I show in Chapter 7.

Interestingly, in the Western Plain, the size of the landholding slightly increased since 1996 (from 3.63 hectares to 3.97 hectares in 2006), while in the South it significantly declined (from 3.93 hectares to 2.94 hectares in 2006). Why did the size of landholdings increase in one region while in the other it declined over a decade? Since 1996 land markets became more developed once Law 54/1998 was implemented, leading to a formalization of land transactions (buying and selling of land).¹¹⁷ On the one hand, since the West is economically more developed, land consolidation through the land market was much faster. On the other hand, in the South, since land is the main source of income, further land fragmentation might have occurred through inheritance among household members.

The 2006 survey shows that 81% of the farms were smaller than 5 hectares. On average, landholdings are larger in the Western Plain (3.97 ha) as compared to Central Romanian Plain (2.94 ha). Interestingly, as Table 6-2 illustrates Western Plain has both a higher number of very small farms and a higher number of larger farms (over 5 hectares) as compared to Central Romanian Plain.

Table 6-2: Distribution of farms based on landholding size in 2006 (%)

	Average	Western Plain	Central Romanian Plain
Under 1 ha	12.2	13.3	10.9
1-3 ha	44.9	40.0	50.0
3-5 ha	24.1	22.5	25.8
5-10 ha	15.6	19.4	11.6
10-20 ha	2.3	2.9	1.7
More than 20 ha	1.0	1.9	0.0

Source: Household survey in 2006.

In these two regions, 19% of the farms are over 5 hectares (between 5 and 70 hectares) and out of these, 17% are more than 10 hectares. As Table 6-2 illustrates, Western Plain has more large individual farms than Central Romanian Plain (24% and 13% respectively). These relatively large individual farms

¹¹⁶ This outcome has been observed primarily in the western region, mainly in Timis and Arad county, where large areas of agricultural land were sold to Italian and German investors and who were not required to use the land for agricultural purposes. Speculation, in expectations of higher land prices following EU enlargement, was often the principal reason behind these transactions.

¹¹⁷ Other studies, such as Verdery (2003), suggest that land transactions were made even before Law 54/1998 was adopted, but based on informal contracts and arrangements. After 1998, those earlier transactions were either formalized, or they were nullified.

are likely to be the backbone of Romania's commercial individual farms, closer in size to the EU family farm model, while the segment of less than 5 hectares, is likely to stay semi-subsistence and subsistence, gradually becoming the reserve of land for increasing the size of the commercial individual and joint stock farms, provided that alternative job opportunities (or sources of incomes for pensioners) will be created.

Table 6-3: Distribution of farms based on landholding size in 1996 (%)

	Average	Western Plain	Central Romanian Plain
Under 1 ha	5.7	10.5	2.1
1-3 ha	39.1	43.8	35.5
3-5 ha	26.4	18.1	32.6
5-10 ha	23.2	19.1	26.2
10-20 ha	5.7	8.6	3.6
More than 20 ha	-	-	-

Source: Household survey in 1996.

Table 6-3 illustrates that a decade ago the average farm size was higher in both region, with more mid-level farms. However, the maximum size was 20 hectares, lower than in 2006, suggesting a more normally distributed pattern of land ownership. This pattern of land reallocation in the past decade shows that a class of family farms entrepreneurs has not yet emerged in Romania, and that the unfavorable conditions in terms of access to markets and financial resources may lead to the perpetuation of the subsistence sector.

In addition, especially the more recent land distribution suggests that there might be intraregional differences in terms of land sizes. Table 6-4 illustrates that the two agro-regions are indeed heterogeneous in terms of the size of land ownership (especially the Western Plain). All farms larger than 20 hectares are located in Arad and Timis, as well as 67% of the farms between 10-20 hectares. At the same time, however, 43% of all farms smaller than 1 hectare are in Bihor and Satu-Mare. A similar pattern among the individual household farms can also be observed in the South, although in a smaller degree. Ialomita has a significantly higher share of larger farms, while Giurgiu has the highest share of farms smaller than 1 hectare. These intraregional differences need to be considered in understanding regional disparities in agricultural performance, property rights arrangements, as well as market participation.

Table 6-4: Distribution of farms based on landholding size by counties in 2006 (%)

	Under 1 ha	1-3 ha	3-5 ha	5-10 ha	10-20 ha	More than 20 ha
Western Plain						
Arad	5.3	11.1	9.4	16.7	14.3	33.3
Bihar	21.3	5.7	3.4	4.2	7.1	0.0
Satu-Mare	21.3	13.6	12.8	8.3	0.0	0.0
Timis	8.0	15.1	22.1	34.4	42.9	66.7
Central Romanian Plain						
Calarasi	6.7	9.7	7.4	11.5	0.0	0.0
Giurgiu	22.7	15.8	8.7	8.3	14.3	0.0
Ialomita	6.7	8.6	9.4	10.4	21.4	0.0
Teleorman	8.0	20.4	26.8	6.3	0.0	0.0
Total	100	100	100	100	100	100

Source: Household survey in 2006.

6.3.4 Land fragmentation

After de-collectivization and restitution based on the 1940s land records, land fragmentation became a serious problem for the newly created private farms and, in general, for improving agricultural performance. The level of fragmentation was almost unprecedented in the region. In 2006 almost 62% of the household farms had their land divided in more than 3 plots, which is considered a major obstacle for technological progress in agriculture and for increased productivity levels. This high level of fragmentation is problematic also because due to the Soviet style of high mechanization, the endowment with agricultural equipments is not well suited for a majority of small farms (Tesliuc 2000; Sabates-Wheeler 2005).

Interestingly, however, land fragmentation did not decline significantly in the past ten years, as was expected once private property rights were reinstated and land markets were formalized. In Chapter 8 I empirically test whether land fragmentation affects the choices landowners make in terms of the land reallocation in different farming arrangements. Tables 6-5 and 6-6 illustrate that while land fragmentation declined on average (from 31% of the surveyed households owning 1-2 plots in 1996 to 39% in 2006), in the Western Plain the share of farms with more than seven plots of land increased. This suggests that even if the average farm size is larger in the West, the type of farming arrangements that are operating in this region were not able to fully absorb land fragmentation. Figure 6-11 shows a cadastral map from a village in the Western Plain, illustrating the extent of land fragmentation and the irregularities of plot boundaries, which make mechanization very hard to use.

Table 6-5: Land fragmentation in 2006 (%) Table 6-6: Land fragmentation in 1996 (%)

	Sample	Western Plain	Central Romanian Plain
1-2 plots	38.5	39.9	37.1
3-4 plots	36.7	30.7	43.0
5-7 plots	20.4	21.5	19.2
>7 plots	4.4	7.9	0.7

Source: Household survey in 2006.

	Sample	Western Plain	Central Romanian Plain
1-2 plots	31.1	33.3	29.5
3-4 plots	34.6	36.4	33.3
5-7 plots	27.6	24.2	30.2
>7 plots	6.6	6.1	7.0

Source: Household survey in 1996.

The small size of the household farms, in addition to high land fragmentation, might lead to a perpetuation of subsistence farming even after integration in the EU. As of now, out of more than four million private individual farms, only 1,500,000 farms were determined eligible for the Common Agricultural Policy (CAP) direct payments.¹¹⁸ Nevertheless, cadastral measurements, which are another requirement for EU subsidies in agriculture, exist only for 38% of farms. CAP will provide financial assistance to semi-subsistence farms¹¹⁹ (approximately 15,000 Euro/year), but only for a limited number of years (approximately five). Therefore, reliance only on the CAP payments, without broader social and economic institutional policies for addressing structural change in agriculture (and more broadly, in the rural sector) is likely to have limited outcomes on reducing land fragmentation and increasing farm performance.

6.3.5 Capital endowment

The dismantling of collective farms and the Tractor and Mechanical Stations (MTS) that were serving them, the return to small private farming after land restitution, and a slow privatization of state farms, led to de-capitalization of the agricultural sector. Large irrigation systems became obsolete and land fragmentation made mechanical equipments ineffective on small land plots.

Nevertheless, overall, capital endowment increased since 1996. At regional level, we notice that capital endowment increased only in the Western Plain, specifically the number of households that own a tractor, plow for tractor, and seeder (see Table 6-7 and 6-8). In 2006 41% of the surveyed households in the Western Plain own a tractor and plough for tractor, while only 9% do so in the Central Romanian Plain. Rather, in the South, 39% of the households use horse drawn carriages for transportation and other farming related activities. Moreover, in the South capital endowment declined consistently across different

¹¹⁸ Direct payments will be made on farms that are at least 1 hectare in size, split into parcels of not less than 0.3 hectares.

¹¹⁹ The difference between subsistence and semi-subsistence relates not only to the size of farms (smaller than 3-4 hectares) but also to the share of production being sold on the market. Subsistence farms produce only for consumption, while semi-subsistence farms sell only a very limited share of the production. Data from the 2002 Agricultural Census in Romania, show that 40% of the agricultural area in private individual use is occupied by subsistence farms, and 39% by semi-subsistence farms. Only 7% of the area is used by farms with commercial activity (Giurca et al. 2006).

physical assets. In Chapter 8 I test whether capital availability affects the choices landowners make in terms of land reallocation. I hypothesize that households that own agricultural equipments are more likely to farm the land individually or to join associations if individual farming is not an option for other reasons (i.e. alternative income opportunities, low farming ability).

Table 6-7: Physical assets in 2006

% of households	Western Plain	Central Romanian Plain
Truck	2.8	0.7
Tractor	21.2	4.3
Plow for tractor	19.3	4.6
Combine for grains	2.2	1.3
Carriage	19.3	38.6
Seeder	8.5	2.6
Equipments for irrigation	3.5	0.3
Equipments for processing	1.6	0.0

Source: Household survey in 2006.

Table 6-8: Physical assets in 1996

% of households	Western Plain	Central Romanian Plain
Truck	4.8	1.4
Tractor	9.5	8.5
Plow for tractor	9.5	6.4
Combine for grains	2.9	2.8
Carriage	22.9	43.3
Seeder	7.6	5.7
Equipments for irrigation	6.7	3.5
Equipments for processing	16.2	3.5

Source: Household survey in 1996.

At national level, capital endowment is also low compared to the size of agricultural area, despite continuous increase in the stock of mechanical equipments. Secondary statistics show that Romania has 55.34 hectares of arable land per tractor, while the European average is approximately 12.7 hectares per tractor (AgriNews 2007). In addition, more than 70% of the tractors were in operation for at least eight years, increasing operation costs, and therefore, making mechanical works unprofitable for many small farmers that are confronting with serious liquidity problems.

6.3.6 Commercialization

With a low capital endowment, high land fragmentation, and low prices for agricultural products, small and medium farms in Romania are able to produce just enough for household consumption without having the capacity to market their production. According to the two surveys one decade apart, the ability of the small and medium farms to market their production significantly declined. In 1996 more than 90% of the households claimed to have sold agricultural products, while in 2006 only 33% marketed some of their production. This is a significant decline and further research is needed to explain the drastic worsening of the marketing potential.

Central Romanian Plain experienced the most drastic decline in the share of households able to commercialize part of their production (from 87% in 1996, to only 24% in 2006). In the Western Plain 40% of households sold agricultural products in 2006, as compared to 98% in 1996. This decline in market participation can be attributed to structural changes in the food industry in Romania in preparation for accession to the EU, when in the past years, approximately 80% of the food processing industries were closed due to inability to compete and to establish quality standards. As a result, many of these small producers lost a significant number of their customers. Moreover, decline in agricultural

subsidies, coupled with rise in imports at lower prices from the highly subsidized EU countries, led to decline in the demand for local products.

Regional differences in market access in 2006 were reflected also in higher average incomes from selling agricultural products in the West as compared to the South (4,693 RON¹²⁰ respectively 2,458 RON). Potential reasons for the difference in product commercialization between the two regions derive from accessibility to markets, a more diversified economy, capital endowments, as well as the composition of agricultural production (in the South farmers cultivate mainly grains, while in the West the production is more diversified). Structural factors in terms of farming practices and the degree of farm fragmentation are also critical and affect produce sales through their potential effect on farm performance. For example, since the majority of farmers in the South lease-out part of the land to associations, farmers have a lower ability to sell agricultural products. This suggests that the agricultural products obtained as rent are just enough for domestic consumption.

Table 6-9 illustrates that households that were able to derive income from selling agricultural products had larger landholdings, which is another indication that land consolidation is required for making the transition from subsistence farming to a more commercially oriented production.

Table 6-9: Market participation by landholding size in 2006

	Sold agricultural products:	
	Yes (%)	No (%)
<0.99 ha	5.5	15.3
1-2.99 ha	31.0	51.6
3-4.99 ha	30.0	21.3
>5 ha	33.5	11.8
Total	100	100

Source: Household survey in 2006.

The majority of the farms that marketed part of their crops sold them directly in town or village markets without a pre-approved permit. After accession to the EU structures, this practice will exclude all these small producers from CAP price and market support measures (Dumitru et al. 2004).¹²¹ Therefore, in order to benefit from the CAP direct payments, small commercial farmers need to start immediately to organize in marketing cooperatives or to move from traditional outlets to wholesale markets. This also means that many households will not benefit anymore from this source of income after integration.

¹²⁰ RON is the Romanian currency (Lei Noi) introduced in 2005.

¹²¹ The current CAP system grants support at the wholesale or processing level and not at the farm gate (milk delivery, fruit and vegetables, potatoes starch, sugar, etc.).

6.3.7 Investment and finance

As Table 6-10 illustrates, investment behavior for small household farms has been very limited in both regions. Most households invested in purchasing livestock and very few bought physical assets or agricultural machineries. This outcome is characteristic of subsistence farms, pattern consistent with the results from the 1996 survey.

Table 6-10: Share of households that invested in any of the following categories in 2006 (% of surveyed households that investment in a particular activity)

	Western Plain	Central Romanian Plain
Buy agricultural equipments	1.9	1.0
Plant trees	1.6	2.3
Buy animals	12.3	13.2
Buy land	0.3	1.7
Build house annex	5.7	2.0
Develop a private non-agric. enterprise	0.3	0.3
Develop and food processing enterprise	0.3	0.7
Buy car	0.9	0.3
Children's education	25.0	8.9

Source: Household surveys in 2006.

In the Western Plain most households, 83%, purchased agricultural equipments with savings derived from selling agricultural products, while only 33% in the Central Romanian Plain used this source of income for this purpose.

The credit market is an important contributing factor to investments in land and other assets. Titling programs are critical for increasing the activity of commercial banks in the agricultural sector and giving access to smallholders to financial services by using land and other assets as collateral. Nevertheless, since landholdings are so small, affordable credit options have been very limited.¹²² It is possible that after accession to the EU, banking institutions would show more interest for this segment of the population, since they will get involved in handling the direct payments to farmers.

Nevertheless, only a few households in the household surveys took loans for investment or to supplement their incomes. The majority of these loans, however, were used for other expenses besides agricultural works, mostly for consumption purposes. In the Western Plain 15% of the households took a loan (58% from a bank, 25% from a private individual, and 10% from a relative) in 2006, while in Central Romanian Plain 11% took loans, mostly from banking institutions (81%). Given that the level of economic development (and financial services) is more developed in the West than in the South, the fact

¹²² Another obstacle for farmers to get access to credit has been created by the fact that the majority of these farmers does not have bank accounts and therefore credit records to do exist for them.

that fewer households resort to loans from private individuals and relatives, suggests that social capital in the rural communities might be stronger in the Western Plain than in the Central Romanian Plain.

However, economic instability, an undeveloped financial sector for the small and medium farmers, and lack of information about the financial services in rural areas, led to limited trust in banking institutions. In both regions respondents claimed that if they would need a larger sum of money they would rather borrow from relatives (74% in the West, and 81% in the South). This denotes that social networks are still very strong in the rural areas, overruling market relations, which is characteristic of a more traditional economy.

6.3.8 Household incomes

As for household incomes, Table 6-11 shows that pensions¹²³ represent the largest source of income for farmers. In the Western Plain 68.4% of the surveyed households derive incomes from pensions, while 84% do so in the Central Romanian Plain. As discussed in the Section 6.3.6, only a small share of households derive incomes from selling agricultural products (33%). More farmers in the Western Plain (41%) derive incomes from selling agricultural products, than in the Central Romanian Plain (23%). In addition, 43.4% of the households in the West have non-farming sources of income (wages), while this share is much lower for the households in the South (25.6%).

Table 6-11: Income sources for the households surveyed in 2006

	Average	Western Plain	Central Romanian Plain
Selling agricultural products	32.5	41.1	23.4
Associations	8.9	2.2	15.8
Leasing	8.1	2.2	14.2
Wages	34.7	43.4	25.7
Non-agricultural entrepreneur	1.3	1.3	1.3
Pensions	75.8	68.4	83.5
Other state funds (i.e. scholarships, unemployment compensation)	13.6	12.3	14.9
Relatives	3.7	5.7	1.7
Other sources	8.7	10.4	6.9

Source: Household surveys in 2006.

In terms of income value, on average in the two regions, pensions represent 54% of total household income, wages represent 23%, and revenues from selling agricultural products account on average 10% of total income. Based on the weight of each source of income in total income, the following types of households can be identified: households where pensions represent the main source of income

¹²³ In pensions we included both agricultural pensions and other types of pensions. A high pension level might be due to agricultural pensions, which increased since 1993 (MAA 1997 p. 7-1).

(55%), households where wages are the main source of income (29%), and households where the main source of income is derived from selling agricultural products (7%).

Incomes from salaries and pensions are on average very low. Based on official statistics, in June 2006, 57% of the households from the Western Plain were earning less than 500 RON (US\$180), while in the Central Romanian Plain this share was higher, 72% earning less than US\$100. More importantly, 32% of the households in the West are earning less than the minimum wage (330 RON/month in 2006), while in the South this share is much higher, 51%.

Figure 6-7 and Figure 6-8 illustrate the concentration of incomes towards the lower levels in both regions in 2006. Nevertheless, the West has a more normal distribution for the mid-level incomes.

Figure 6-7: Earned incomes in the 2006 Western Plain

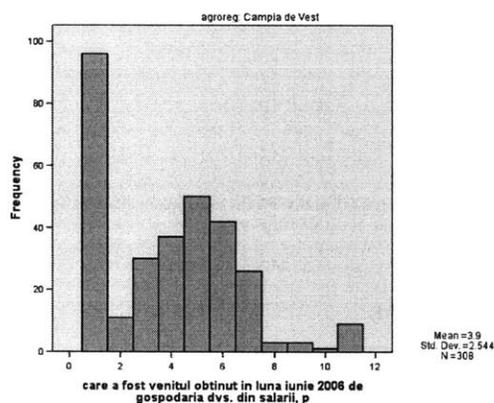
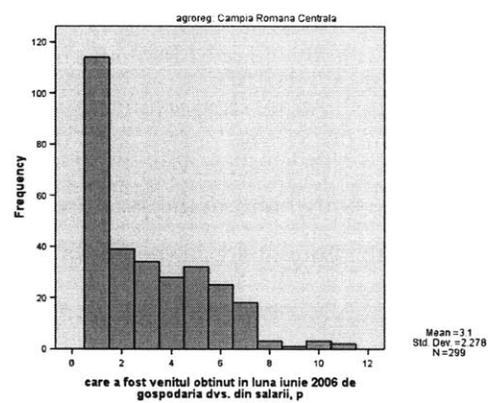
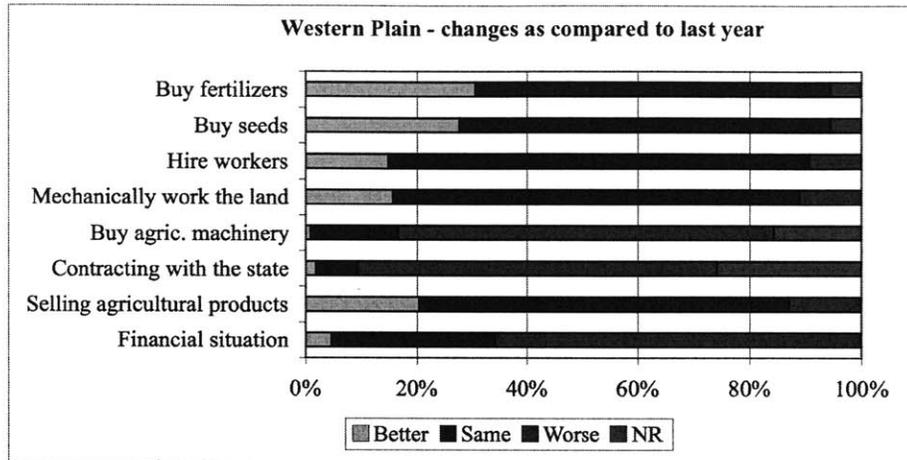


Figure 6-8: Earned incomes in the Central in Romanian Plain in 2006



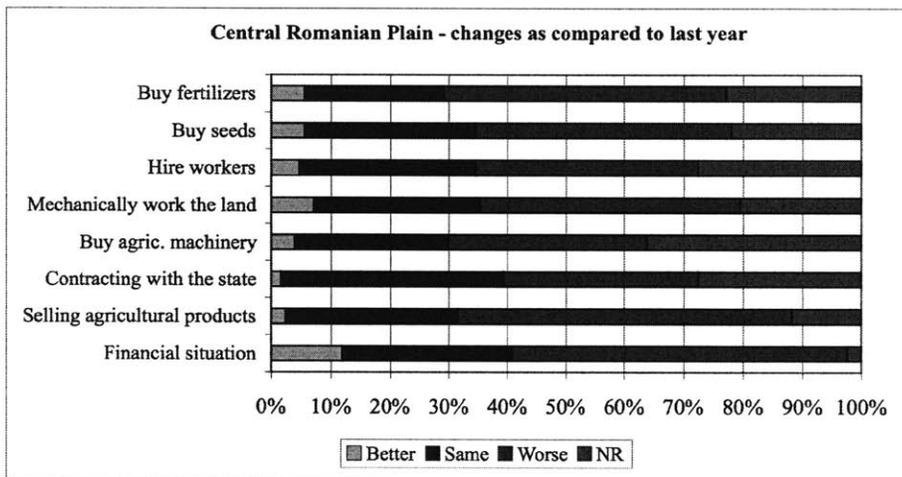
Overall, as we can notice from Figure 6-9 and 6-10 below, the surveyed households perceive that, as compared to a year earlier, the general market conditions for farming have worsened. Even if the degree of non-response is higher in the Central Romanian Plain, most households responded that 2006 was a worse year mainly in terms of the financial situation, purchasing seeds and fertilizers, as well as hiring labor and the possibility of working the land with mechanical implements.

Figure 6-9: Overall perceptions in 2006 regarding specific changes as compared to a year ago in the Western Plain



Source: Household survey, 2006.

Figure 6-10: Overall perceptions in 2006 regarding specific changes as compared to a year ago in the Central Romanian Plain



Source: Household survey, 1996.

In the West, as Figure 6-9 illustrates, most households considered that conditions worsened especially around contracting with the state for selling agricultural products and buying agricultural machineries, as well as the overall financial situation. Market access for seeds, fertilizers, and labor, seems to be better than in the South. As far as labor is concerned, despite higher migration for jobs abroad, a younger rural population in the Western Plain created better conditions for hiring labor as compared to the Central Romanian Plain.

6.4 Chapter summary

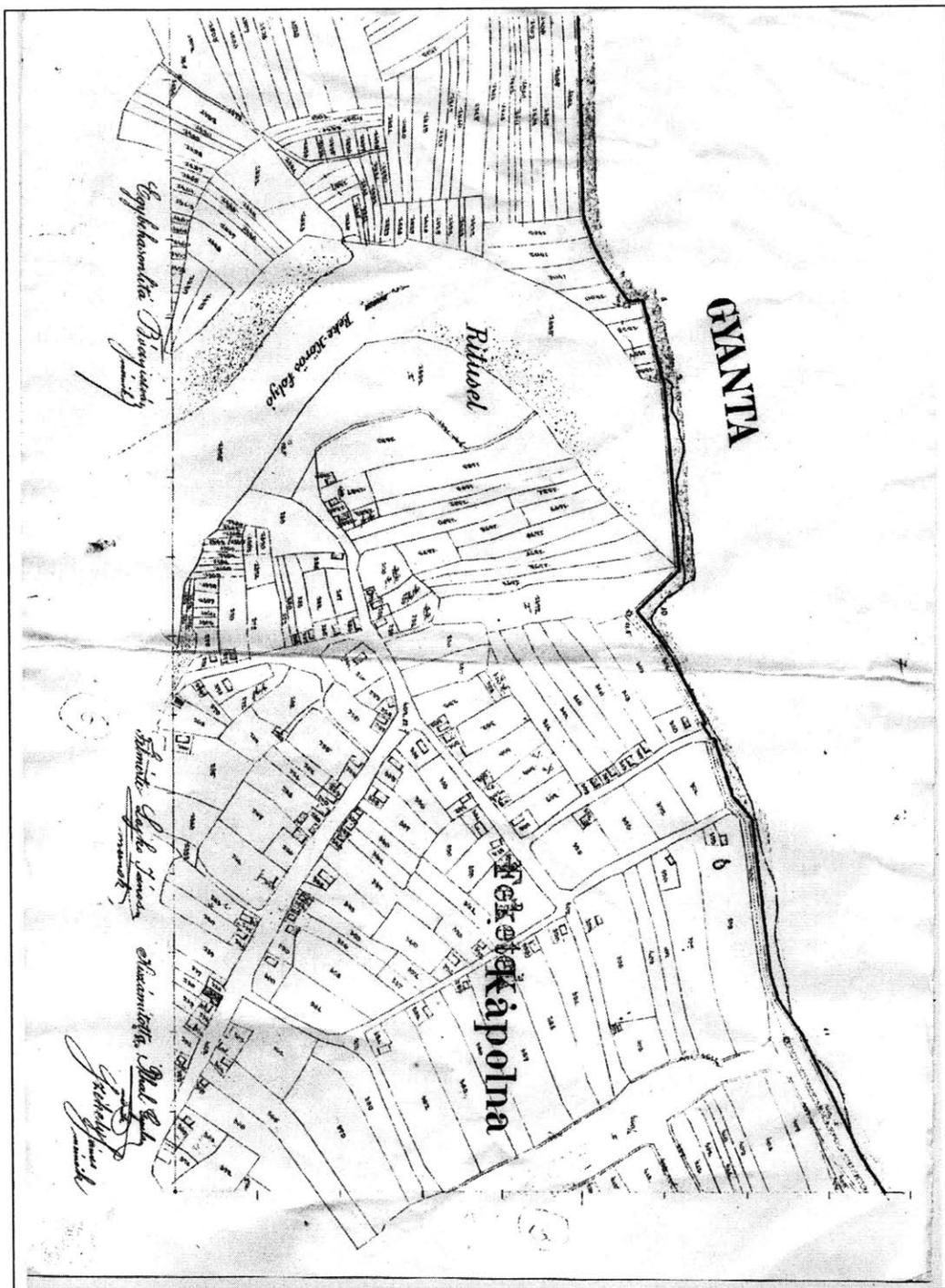
In this chapter I examined the main regional differences between the Western Plain and the Central Romanian Plain in terms of economic development, urbanization level, and agricultural productivity. In addition, using household survey data, I described the type of household farms that are currently operating in these two regions. Along with Chapter 5, this overview provides a better understanding of the overall environment in which small farms operate, and hence, of the different decisions landowners make with respect to land reallocation.

To summarize, I showed that the Western Plain is historically more industrialized than the Central Romanian Plain, it has a more diversified economic structure, a higher level of urbanization, and the income levels are higher. In addition, capital ownership is higher and a larger share of households in the region commercialize part of the agricultural production. Lastly, but very important, I also showed that in the Western Plain private individual farms predominate.

In the South, agriculture is traditionally the main economic sector, providing incomes and jobs for the majority of the population. Therefore, the economy is less diversified (with fewer non-farming opportunities), more rural (despite being located close to the capital city), and income levels are lower. Moreover, just a small fraction of the households marketed part of the harvest. In contrast to the Western Plain, most landowners reallocated part of the land in farming associations.

In the next chapter I describe in more detail the institutional arrangements for land reallocation, discussion which will lead to the more analytical part of the dissertation (Chapter 8 and 9), where I examine, through statistical analysis and qualitative fieldwork, the relationship between different factors (i.e. household characteristics, farm size, land fragmentation, physical characteristics) and the choices landowners make between different institutional arrangements during transition.

Figure 6-11 Cadastral map showing the degree of land fragmentation in a Western Plain village



Chapter 7 : Land reallocation into different institutional arrangements

7.1 Introduction

In the previous chapters I highlighted the main outcomes of land reform on the agricultural sector and the rural economy, taking stock of the social and institutional changes during transition, as well as describing the overall economic environment. I discussed the socio-economic outcomes of land reform at a macro (agricultural sector in the larger economy) and micro level (the impact on small farmers). I also showed that, during transition, landowners resort to different institutional arrangements for farming. In this chapter I take this finding further and I explore in more depth the specific features of the farming arrangements currently available to landowners in Romania. I trace their evolution over time, and I examine them in terms of organizational aspects, contractual arrangements, and household characteristics. This analysis allows me to generate research hypotheses to be tested in Chapter 8 (using statistical analysis) and in Chapter 9 (based on qualitative fieldwork).

Currently, Romanian landowners who wish to farm their land face a range of options. Immediately after land reform, in 1991, farmers could choose to farm the land themselves, or in associations (large formal associations or informal associations). In addition, since 1994 individuals (landowners and private entrepreneurs) could enter various land-renting arrangements. In 1998, landowners were also given the option of selling land to either shift out of agriculture, or to release part of the assets to more productive farmers allowing them to focus their productive energy on smaller land plots. These farming arrangements are not mutually exclusive. At a given point in time, a household can make several choices regarding its land: it can release some land to associations, it can lease-out land to other individuals, and it can retain part of it for self-cultivation. These institutional alternatives can be viewed as a rearrangement of property rights over a spectrum of tenure forms. This outcome is not unique to Romania. Stark (1996), for example, points to similar patterns in Hungary, and Csaki and Kislev (1993) in Moldova. In describing these arrangements Verdery (1999) used the term “fuzzy property rights” to portray the wide variation of property relations, which are blurred and ambiguous in terms of obligations and responsibilities associated with the restituted land.

The mixed land reallocation practices make this study interesting for theoretical as well as policy purposes. The diversity in institutional arrangements challenges orthodox transition theories that emphasize individual farming as the panacea following land restitution. In addition, this pattern of land

reallocation provokes the realm of policy-making for more comprehensive measures, sensitive to contextual and institutional variations.

I start by describing the institutional patterns and the national and regional trends in land reallocation. Then, in Sections 7-3 to 7-5 I examine each arrangement (private individual farming, associations, and leasing) separately, emphasizing mainly organizational aspects and contractual terms for each arrangement. In Section 7-6 I describe the main characteristics of the households engaged in each arrangement (i.e. age, education, main occupation, land and capital endowment, and land fragmentation) and I summarize the main hypotheses generated by this chapter. The analysis brings to light potential motives for landowners' choices of land reallocation during transition, to be examined in greater detail in Chapters 8 and 9.

7.2 Institutional outcomes, national and regional trends in land reallocation

7.2.1 Institutional outcomes from land reallocation

The alternatives for land reallocation varied significantly over the years. Immediately after land reform farmers could choose between farming individually or in different forms of associations, while land markets were formalized only later, after 1994. Following restitution and the transfer of property rights from the state to individuals, an increasing number of landowners decided to farm the land themselves. In this analysis, private individual farms refer to landowners (households) that have a final land title as well as those with a temporary title (“adeverinta de punere in posesie”) who farm the land using household and/or hired labor. This type of farming assumes a complete bundle of rights over the land under cultivation and over the produce derived from the land (with the exception of land that was leased-in under a contractual agreement).¹²⁴

Nevertheless, immediately after restitution and the breakdown of the collective farms, associations emerged as alternatives to farming all the land individually, to the surprise of policy reformers. Associations were of two types: formal associations and informal associations. Formal associations were created directly on the structures of the former collective farms (i.e. same buildings, capital, and oftentimes the same management) but they were significantly smaller in size. Membership in formal associations is easy to obtain and final title is not required for joining. The rent is generally paid as a share of the harvest at the end of the year. A major advantage of formal associations, as opposed to other farming arrangements, is the benefit they derive from the networks of production inherited from the old collective farms.

¹²⁴ The types of property rights that form the bundle for a good are access, withdrawal, management, exit (or exclusion), and alienation (Schlager and Ostrom 1992).

Informal associations were created endogenously by neighbors and relatives in order to consolidate land plots and to draw on common resources (i.e. capital, labor). These farming arrangements do not have legal status, restricting members' access to financial services. Because, as Section 7.2.2 shows, informal associations declined significantly since the beginning of land reform, this study examines mainly formal associations. In Section 7.2.2 and 7.2.3 I compare trends in these forms of association during transition. However, in Appendix 7-1 I examine in greater detail the informal associations emphasizing their evolution over time, the main differences from the formal associations and the household characteristics of the landowners that engage in this arrangement.

Land market transactions (i.e. leasing and sales), as another form of alternative farming arrangements (or tenancy), were formalized only later in the transition process. Leasing became available starting with Law 54/1994 when conditions for lease were more restrictive (i.e. the duration of the lease was enforced to at least five years, and a minimum rent was specified). The rent for the leasing arrangements is generally paid as a fixed share of the yearly harvest. This form of tenancy in Romania is different from the canonical model of sharecropping because the tenants are generally capital rich, having easier access to financial resources.¹²⁵

Land sales were formalized in 1998, but with the exception of the Western Plain, purchases and sales of land were very limited. Therefore my research is centered on leasing arrangements. Nevertheless, Appendix 2 discusses in greater detail the trends in land sales since the beginning of land reform.

In the following sections I present the main national and regional trends in land reallocation based on official statistics and household surveys. Then, in Sections 7-3 through 7-5 I examine in greater detail each of the main farming arrangements (i.e. private individual farming, associations and leasing).

7.2.2 National trends in land reallocation

At the national level, the share of agricultural land farmed by small individual farms has increased by 26% since 1993 (from 3,420 thousand to 4,104 thousand farms), as Table 7-1 shows. Nevertheless, the share of land farmed by private individual farms stayed relatively constant over this period (approximately 66% from total arable land), suggesting a high degree of land fragmentation. The number (and size) of formal associations declined by approximately 16% from 1993 to 1999. Over the same period of time, the number of informal associations¹²⁶ declined by much more, 55%. By 2005 the number of formal associations had been reduced by more than half as compared to 1999. Official statistics show that the

¹²⁵ Sharecropping typically involves a relatively richer owner of the land and a poorer agricultural worker or farmer.

¹²⁶ After 2000, informal associations stopped being recorded by national statistics institutions due to lack of legal status and the subsequent difficulty in assessment. As a result, those households are included in the individual farms category. Nevertheless, as we will see in the later sections, there are important differences between them and private individual farms, which one has to be aware of.

share of arable land farmed in formal associations declined from 17% in 1993 to 5% in 2005. However, survey evidence¹²⁷ shows that a sizable share of households are members in such arrangements, as I will show in the next section.

Official data on leasing arrangements is very limited because, as I discuss later (in Section 7.5), informal leasing arrangements predominated especially early in the reform period. According to the General Agricultural Census in 2002, the share of agricultural land leased out based on contractual arrangements represented 11% of the total agricultural area. From this total, 5.4% (754,580 hectares) were farmed only in leasing contracts, while 7% (982,472 hectares) were farmed in a mixed regime (leasing and individual farming).

Table 7-1: The pattern of land reallocation at the national level between 1993-2005

	1993	1994	1995	1996	1997	1998	1999	2002	2005
Total arable land privately* farmed (thou ha)	11,006	11,212	11,381	11,539	11,612	11,690	11,921	13,931	13,907
<i>Formal associations</i>									
- number	4,266	3,970	3,973	3,759	3,912	3,578	3,573	2,224	1,614
- agricultural land (% from total arable land)	17.4	15.8	15.2	15.2	14.8	13.3	11.9	7.0	5.3
- average size (ha)	448	446	436	466	438	435	396	432	455
<i>Informal associations</i>									
- number	13,772	13,741	15,915	15,107	9,489	7,175	6,264	n.a.	n.a.
- agricultural land (% from total arable land)	16.0	13.7	14.0	12.5	8.6	8.1	7.3	n.a.	n.a.
- average size (ha)	128	112	100	95	105	132	139	n.a.	n.a.
<i>Private individual farms</i>									
- number (thou.)	3,420	3,578	3,597	3,626	3,973	3,946	4,120	4,277	4,103
- agricultural land (% from total arable land)	66.6	70.5	70.7	72.3	76.6	78.5	78.7	55.3	65.4
- average size per farmer (ha)	2.1	2.2	2.4	2.3	2.2	2.3	2.3	1.7	2.2

* Private refers to land that is in private ownership (not in state or cooperative ownership), including land farmed by private individual farms, associations, and tenants (through leasing).

n.a. = data not available from official statistics.

Source: For 1993-1999, National Program for Agriculture and Rural Development 1999, Annex 34, Ministry of Agriculture and Food Newsletter (July 2000); (Aligica and Dabu 2003). For 2002, INS National Agricultural Census 2002. For 2005 MARD (2007).

¹²⁷ There are no national statistics recording the share of households that are members in farming associations over time.

Despite the overwhelming presence of private individual farms, it is difficult to accurately assess the share of households that farm under this arrangement. As Dumitru (2002) claims, estimating the exact number of individual farms is problematic because informal leasing became very common following de-collectivization, part-time (weekend) farmers with jobs outside agriculture are not officially registered as farmers, and the difference between individual farming and informal associations is sometimes hard to make, as I discuss in Appendix 7-1. This is why household surveys are able to capture a more accurate description of the institutional arrangements for small farmers. Nevertheless, even if surveys show an increase in leasing especially after 1998, land markets in Romania are still very thin. For example, in Slovakia and Czech Republic more than 90% of all cultivated land area is leased. In Bulgaria, Hungary, Moldova and Kazakhstan, between 50% and 60% of the cultivated area is leased (Swinnen and Vranken 2007).

7.2.3 Regional trends in land reallocation

My survey data in the two agro-regions in Romania, Western Plain and Central Romanian Plain, shows that private individual farming has increased (from 49% in 1996 to 65% in 2006) (see Table 7-2).¹²⁸ Most of this increase occurred in the Western Plain, while in the Central Romanian Plain the share of households that farmed individually declined by 5%.

Table 7-2: The pattern of land reallocation into different institutional arrangements by year and agro-region (%)

	1996			2006		
	Overall	Western Plain	Central Romanian Plain	Overall	Western Plain	Central Romanian Plain
Private individual farming	48.8	62.5	37.5	64.5	67.4	32.6
Farming associations	41.9	22.3	77.7	16.2	11.0	89.0
<i>from which:</i>						
-Formal associations	67.9	27.1	72.9	84.0	13.1	86.9
-Informal associations	32.1	12.1	87.9	16.0	0.0 ^(a)	100.0
Leasing-out	11.8	34.5	65.5	20.4	28.6	71.4
Land sales ^(b)	n.a	n.a	n.a.	12.9	87.5	12.5

Source: Household surveys in the Western Plain and Central Romanian Plain, 1996 and 2006.

n.a. = not available.

^(a) In 2006 no informal associations were recorded in the sample of households in the Western Plain.

^(b) In 1996 land sales were not formalized. Therefore, the 1996 questionnaire did not ask a question on land sales.

¹²⁸ I run t-tests for the differences of means between the two years along land reallocation choices in the two agro-regions and I found statistically significant differences between the regions.

Regional differences in the development of private individual farming are interesting for theoretical and policy reasons. From a theoretical point of view, this disparity suggests that the reform of property rights creates a different set of incentives for farmers in different regions, conditional on historical legacies, economic opportunities, and the social environment. In Chapter 9 I examine this hypothesis further, based on interviews and participatory observation. The outcome is also important for policy reasons because it highlights that policies need to be flexible enough to allow the emergence of local solutions to land reallocation. In addition, it suggests that different regions may require different policies to make the transition to market based economies.

The share of households that farmed part of the land in associations declined from 42% in 1996 to 16% in 2006. Nevertheless, this reduction can be mostly attributed to a fall in the share of households that joined informal associations (from 32% in 1996 to 16% in 2006). Among the households that joined associations, the share of those that farmed land in formal associations has actually increased (from 68% to 84% in 2006). This trend was influenced by land reallocation in Central Romanian Plain, where the share of households that joined formal associations increased from 73% in 1996 to 87% in 2006. In the West, the prominence of associations (both formal and informal), as alternative institutional arrangements, declined over this decade (from 22% in 1996 to 11% in 2006).

Land markets (leasing, sales, purchases) recorded an upward trend during this period, but at a much slower pace than it was initially expected. Leasing has only slightly increased, while the surge in land sales (since 1998 when the land sales law was implemented) was driven mostly by land transactions in the Western Plain region. Land sales in the West were mainly concentrated in Timis and Arad counties. Despite the fact that there is no published data on land conversions at the national level, anecdotal evidence from local officials suggests that rural-urban conversions of prime agricultural land have been widespread over the past ten years. Because these areas, along the border with Central and Western Europe, are more urban and developed, this process was accelerated in comparison to the South. Such pattern is common and widely documented across the developing world, where the weakening of traditional land-use systems, unscrupulous land title transfers from poorer rural households, and the lack of coherent land use planning at the urban fringe facilitates this process at a faster rate (UNDP 2000). In Romania, as in other South and Eastern European countries, the system of governance related to land conversions for non-agricultural uses (industrial and urban sprawl purposes) is largely dominated by markets, with limited oversight from the state, unlike in the neighboring countries.¹²⁹ Given that in the

¹²⁹ Poland and the Czech Republic have instituted strict regulations on the conversion of agricultural and forestry land to other purposes (Sikor 2002).

West there is a stronger pressure for land conversion and that there are more non-farming opportunities (as discussed in Chapter 6), landowners are more likely to engage in land sales.

In addition, counties in the Western Plain became very attractive to foreign investors due to a higher level of development and diverse economic structure, as discussed in Chapter 6. As a result, in the late 1990s, Italians and Germans entered the market and bought massive amounts of land from local farmers, for prices that were much lower than the EU average, hoping to capitalize on the increase in prices following EU enlargement. Such a surge in land market transactions had no precedent in Romania. In the South, engagement in land markets was much lower. However, anecdotal evidence suggests that a similar pattern is underway in the South since the summer droughts of 2007 (Pitulice and Caloian 2007).

7.3 Private individual farming

The simplest institutional arrangement is the “pure peasant proprietorship” (owner-occupancy farms), or family farms, where the ownership of both land and labor is vested in one group: each peasant household cultivates its own land using its own labor (Currie 1981 p. 32). Hence, individual private farming refers to a household cultivating land (owned and/or leased) and making cultivation decisions independently from other farmers. At different stages in the production process the individual farm can rely on outside resources such as hired labor and machinery services. In my 2006 household survey, I came across farmers that were using mostly household labor, and only occasionally hired labor. Family farms in Romania resemble more Chayanov’s (1966) peasant farmers (from the first quarter of the twentieth century Russia), who were essentially relying on household labor. Other characteristics of owner-occupancy farms are that households produce for self-consumption or for commercialization, and that their actions are directly affected by the nature of markets for productive resources (inputs, capital, finance).

Private individual households in Romania differ significantly from those found in Western Europe and even in CEE (Lerman et al. 2004), as I showed in Chapter 5, Section 5.2.1. In Romania, private individual farms are smaller and more fragmented, only few are commercially oriented, and the level of technology used in production is much lower. The primary role of these farms is to satisfy the level of self-consumption for the family through a diversified range of agricultural products. Therefore, individual farms generate little or no cash from these activities, serving a social and subsistence role for the rural community.

Chayanov’s (1966 p. xviii) characteristics for family farms, are very relevant for the Romanian context. Chayanov argues that “in the conditions where capitalist farms would go bankrupt peasant families could work longer hours, sell at lower prices, obtain no net surplus, and yet manage to carry on with their farming, year after year.” This behavior of “self-exploitation” has most of the time been the

price paid by households who chose to farm the land individually in spite of resource constraints and low farming ability. These nuances are made more evident by qualitative (especially ethnographic) research.

Survey data from 2006 show that while the median size of private individual farms amounts to two hectares, there is quite a lot of variation among farm sizes. At the 5th percentile, farms are small, 0.6 hectares, while at the 95th percentile the average farm size is 9 hectares. Dumitru (2002) claims that in the Romanian context, viable family farms should average at least 5-10 hectares, suggesting that further land consolidation is needed in order to shift from subsistence to more commercially viable farms.

Choices for private individual farmers are constrained by the external environment given the level of market development (e.g. capital, produce, labor markets) and the availability of backward and forward linkages.¹³⁰ Following de-collectivization, the input markets and distribution channels remained geared towards large corporate farms. Moreover, harsher economic conditions and the effect of “price scissors” (discussed in Chapter 5, Section 5.2.2) placed significant pressures on small farmers’ incomes, decreasing the amount of available liquidities. This poses significant problems not only for investment purposes, but also for input payments during the agricultural production cycle, as payments are required to be made immediately following the service (i.e. purchasing seeds, fertilizers, or mechanical services).

7.4 Farming associations

The persistence of farming associations almost all across Eastern Europe following land reform (Lerman et al. 2004) has come as a surprise to most policy makers who expected that private individual farms will take off immediately after land restitution. Resource constraints (especially the absence of affordable credit and machinery) and the slow emergence of rural markets (low prices of agricultural commodities and lack of backward and forward linkages for producers as a result of de-collectivization and privatization of state farms, as discussed in Chapter 5) were some of the main factors examined in the literature to explain the formation of associations. Due to these constraints, associations were viewed as a hedge against risk (Meurs 2001). In addition, from a political economy perspective, associations were considered the result of “sub-rosa resistance” to de-collectivization (Allina-Pisano 2004a) on the part of the new political class who was committed to the idea that large farm size was to be maintained for organizing agricultural production.¹³¹ Nevertheless, a more in-depth analysis of these institutional arrangements,

¹³⁰ By backward linkages I refer to a farmer’s access to outside markets for purchasing direct and indirect inputs for the production process, which by forward linkages I refer to a farmer’s access to distribution channels for agricultural products.

¹³¹ This argument brings to the forefront the debate on how much do these newly created associations resemble the old collective farms and therefore, whether they are able to overcome the systemic problems embedded in those socialist structures. I will discuss this issue in greater depth in Chapter 9.

their evolution and persistence over time, as well as regional differences suggest that the story is more complex.

Following land restitution (Law 18/1991) two types of associational forms surfaced after the breakdown of the socialist collective farms: formal associations (or agricultural societies) and informal associations (or family associations). Both types of associations work the land of the member farmers, but they can also hire labor and lease-in additional land from members or non-members (based on formal or informal agreements).

The 2006 survey shows that the majority of association members (more than 70%) joined associations in the first years of transition (between 1990-1993), and only 20% joined after 1996. Hence, some authors argue that landowners were locked-in the decisions made earlier in the transition (Sabates-Wheeler 2005). However, there is actually variation across villages in terms of the year when landowners joined associations. In addition, given that 20% of the households joined after 1996 (mostly after 2000) suggests that landowners found it beneficial to join associations even later on. Moreover, those who were members in associations longer do not seem to have “abandoned” them once alternative farming arrangements became available.¹³²

Findings from qualitative fieldwork (interviews with farmers and participatory observations) show that among the main reasons landowners choose to join farming associations are:

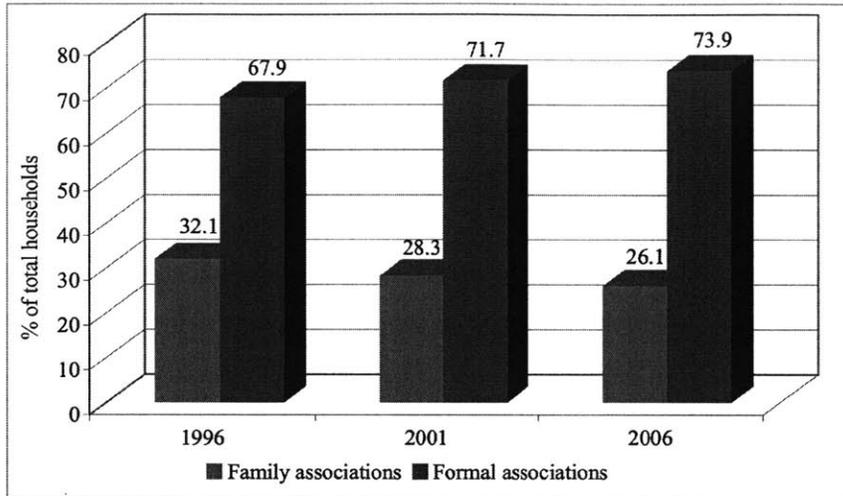
- the ability to retain full ownership title on the land,
- lack of resources for working the land themselves (physical, financial capital and labor),
- a sense of security and flexibility that the association arrangements offer to compensate for market constraints (e.g. in-kind payment for mechanical services), and
- the older age of the rural population.

Nevertheless, it has been widely emphasized in the literature that the effective operation of associations is plagued by collective action problems (in the form of principal agent and free-riding). Therefore, the question of why have associations persisted throughout the transition period is very pertinent and requires careful examination. Chapter 9 delves more into these issues by examining findings from interviews with farmers and professionals, as well as historical facts and earlier research.

Based on household survey data, Figure 7-1 shows that among the association members, over the years, the share of landowners that joined formal associations increased, while the share of landowners in informal associations declined. Prior to 1996 there is no survey data for the rural areas in Romania, and hence we cannot know for sure by how much associations declined in these two agro-regions relative to national trends since the beginning of land reform.

¹³² But due to data limitations, we cannot know what farming arrangements were they pursuing earlier.

Figure 7-1: Farming associations between 1996-2006 in the Western Plain and Central Romanian Plain



Source: Household survey data, 1996, 2001, and 2006.

As Table 7-3 illustrates, the share of land in associations has on average declined in both formal and informal arrangements, from approximately 78% of the owned land in 1996 to 74% in 2006. Given that this share represents less than 4 hectares of total land in ownership, only about one hectare of land remains to be farmed individually. Hence, this table, showing the large fraction of land farmed in associations, points to the salience of these institutional arrangements in households' land reallocation decisions during the post-socialist agricultural transformation.

Table 7-3: Average land and share of land in farming associations

	Formal associations		Informal associations	
	1996	2006	1996	2006
Average land in associations	2.97 ha	2.25 ha	3.53 ha	2.20 ha
Share of land in associations from total land in ownership	78 %	74 %	79 %	74 %

Source: Household surveys in the Western Plain and Central Romanian Plain in 1996 and 2006.

Because informal associations declined significantly throughout the transition period, the rest of the analysis is focused only on formal associations. Previous studies such as Sabates-Wheeler (2005) analyzed in greater depth this farming arrangement, and I discuss it in more detail in Appendix 7-1 for further reference. Hence, in the following subsections I examine organizational aspects, and the rights and responsibilities embedded in formal associations.

7.4.1 Formal associations

Formal associations, also known as agricultural societies, were created following Law 36/1991 (law for agricultural societies and other forms of associations in agriculture), as legal entities that employ both members and non-member workers. For a formal association to be established, a minimum of ten member families is required. The members are farmland owners and they can theoretically withdraw at any time from the association. During the duration of association membership, landowners retain all their rights over the land. However, association members are entitled to only a fraction of the harvest. Contractual arrangements are generally made on informal basis based on share contracts.

Despite problems of collective action highlighted in the literature review chapter (Pollak 1985; Carter 1984), these organizational forms offer important advantages to their members. Because of market imperfections and the insecurities characteristic of transition, earlier research emphasized that associations provide risk-sharing alternatives (through access to capital, solving liquidity and labor shortages, partially shielding from price fluctuations in the market) (Carter 1987; Brooks and Meurs 1994; Rizov et al. 2001; Verdery 2003). Hence, I hypothesize that given the limited non-farming income opportunities, associations provide such benefits for landowners that are interested in staying active farmers during transition.

Below I discuss how formal associations are organized, the type of contractual arrangements, and the duration of association membership. This overview and analysis generates further hypotheses to be tested in the next two chapters on the main differences between associations and leasing as two forms of alternative farming arrangements.

Organizational aspects

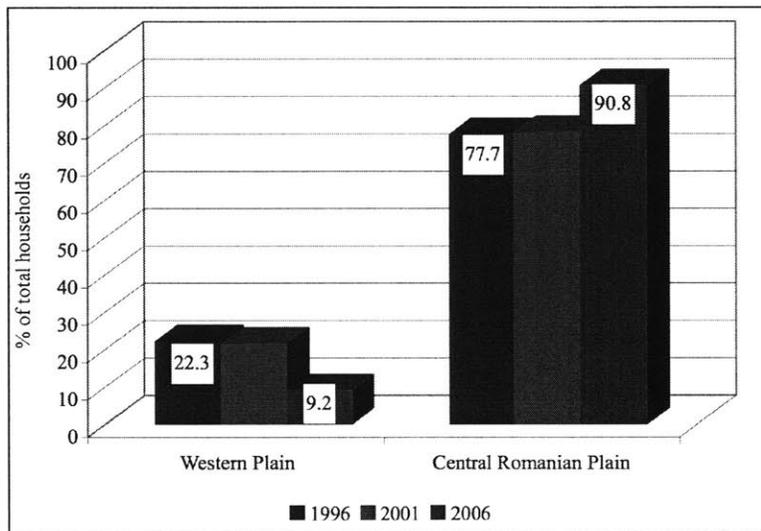
In most cases formal associations were created on the structures of the former socialist collective farms. Leonte and Alexandri (2001) claim that the establishment of the formal associations has been sought due to the following conditions: (1) the high share of elderly population in rural areas; (2) migration of young rural population to urban areas; and (3) a large percentage of the landowners living in urban areas (more than 40%).

Formal associations do not require farmers to have a legal title for the land they are contributing with, as is the case for leasing contracts. Low registration fees early in transition also encouraged the formation of formal associations. The Ministry of Agriculture exempted these newly created institutional arrangements from profit tax for five years. Moreover, early in the transition associations were the only other alternative to working the land individually, since leasing was institutionalized only later, in the second half of the 1990s.

Household survey data shows that in the Central Romanian Plain 88% of the households joined in the first three years of transition, while in the Western Plain 70% did so. Figure 7-2 also shows large regional differences in the distribution of formal associations. In 1996 78% of the associations were located in the Central Romanian Plain, share which increased to 91% by 2006. Examining in greater detail why associations emerged differently in the two regions early in the transition process can enrich our understanding of why this institutional arrangement persisted throughout the transition. A large part of Chapter 9 explains these outcomes, adding to more structural explanations in Chapter 8.

Qualitative fieldwork suggests that joining associations required collective decision making in order to allow the newly formed associations to operate on compact plots of land and to benefit from economies of scale. Hence, I hypothesize that the formation of associations early in the transition process resulted from the constant interaction of different actors (landowners and former leaders of collective farms) having different interests. I test this argument in Chapter 9 where I discuss how this interaction led to different choices for farming arrangements at regional level, bounded by historical and social specificities.

Figure 7-2: The distribution of formal associations by agro-region and years



Source: Household survey data, 1996, 2001, and 2006.

Contractual arrangements

The associations farm the land of their members and they can also lease-in land from other landowners. The contractual terms are most of the time different between association members and other landowners (Amblard and Colin 2005). For association members, generally, no formal contracts are

signed between the association management and the landowners.¹³³ The term of the agreements is perpetual. The rent is paid as a share of the yearly harvest, in kind, proportional to the amount of land in association, and based on the average yield for the entire harvest. This amount can vary from year to year depending on costs and weather.¹³⁴ Such a strategy acts as risk-shielding for the association members against the unpredictable effects of weather¹³⁵ and market conditions (i.e. wide fluctuations in prices and weak distribution channels).

The rental arrangements made with the formal associations resemble the reverse tenancy sharecropping model described by Bellemare and Barrett (2003). The authors argue that property rights insecurity matters in contractual choices. They find that if the landlord were to rent out land on fixed rent contract, he would face an increased risk of losing the claim on land (Bellemare and Barrett 2003 p. 2), and therefore reverse share tenancy reduced the probability that a landowner will lose his claim to the land (Bellemare 2006). This suggests that once landowners obtain secure property rights over land, they would shift out of associations, or they would engage in other forms of tenancy. However, in the two household surveys we have seen that landowners were still joining associations even if they had full title over their land. In addition, Bellemare (2006) claims that landowners lease out on shares to minimize the amount of uncertainty they face over the price of crops. Hence, I argue that in the Romanian case, multiple risks prevail making sharecropping an important explanation for the persistence of farming associations during transition.

In addition, interviews with farmers suggests that there is a system of checks-and-balances, a self-enforcing mechanism, working at the level of the local community, ensuring that the payment received from the association is not below what landowners are willing to accept. I hypothesize that this self-enforced mechanism of monitoring contributes to alleviating collective action problems in associations. I examine this hypothesis in Chapter 9, based on interviews and participatory observation.

In addition, because of high uncertainty during transition, a tighter contractual agreement in terms of duration and the amount of rent, might be less attractive to farmers that joined associations. Verdery (2004 p. 199) documents that the main reason why landowners would join associations is because they receive higher returns than from farming the land themselves. The associations decide the rent based

¹³³ Following a study in Alba County, Amblard and Colin (2005) argue that one reason for this is that associations do not have to attain a given size (larger than 110 ha, as per Emergency Ordinance Nr. 108/2001) in order to be entitled to receive state subsidies, as is the case of commercial farms or other private agricultural entities.

¹³⁴ Amblard and Colin (2005) examine in more details the contractual choices and types available for landowners (mainly in leasing arrangements), and point to the “institutional innovation” of “rent as a range of product per hectare” found in the Romanian setting.

¹³⁵ In the past seven years agricultural production in Romania has suffered tremendously due to floods and droughts. As a result, agricultural producers were hit hard as insurance schemes for the harvest are non-existent. This year, after unprecedented droughts all across the country, the Ministry of Agriculture conditioned the disbursement of direct payments to farmers on farmers insuring their harvest in 2008 (Vaduva 2007).

on the average yield, which is especially advantageous for those with poor-quality land. However, the rent is in general low in comparison to what landowners would need to secure a decent standard of living. But, associations, as commercial entities, are also struggling for survival (Verdery 2004). Therefore, tackling this problem is not so much an issue of power differentials between associations and landowners (Amblard and Colin 2005; Ortiz 1981), but rather a systemic, agricultural policy concern.

Individual farmers are very much constrained by lack of liquidities, while the payment for seeds, fertilizer, or plowing is regularly done “on the spot.” Moreover, the costs for working the land are extremely high, largely due to differences between the cost of inputs and the price of agricultural commodities (price scissors). In addition, inflationary pressures often resulted in losses at the end of harvesting season.¹³⁶Hence, one significant contractual benefit (even if informal in nature) relates to the payment for inputs and for mechanical work during the production cycle. This practice (payments in kind for mechanical services) offers more flexible options for landowners to pay for cultivation expenses (i.e. inputs and mechanical services) due to liquidity shortages. The association eliminates this constraint by retaining (if needed) part of the production as equivalent for these services. Such arrangements were found both in the West and South, mostly informal in nature.

The duration of the association membership

As I discussed earlier, most landowners joined associations earlier in the transition. Therefore, the issue of withdrawal, in case better options became available, is highly relevant. The exit options are part of the rights and responsibilities embedded in the association agreement. According to legal provisions stipulated by Law 36/1991, withdrawing from an association agreement is a decision made by the members, and can be taken at anytime. This gives landowners a significant amount of control. Most research focused so far on the issue of exit from a different perspective, that of the balance of power weighting more on the association leaders because of disproportionate access to capital (Verdery 2003; Kideckel 1998). However, given limited resources available to landowners, I argue that the reason why associations persisted throughout the transition is not because farmers were locked in their earlier decisions, but because they needed the associations. The institutional arrangement provided them with enough flexibility to be engaged in farming at different stages of the production process, and secured

¹³⁶ In order to show that often small producers (and sometimes large tenants also) are faced with losses at the end of the production cycle, Popica, an agronomist and private individual farmer in Capalna, Bihor County, laid out for me all the expenses from land preparation to commercialization. Based on his calculations (and confirmed by other farmers and policy makers) in 2005 a farmer had the following expenses: 1) preparing the land for seeding: plowing 250 RON/ha; turning the land: 250 RON/ha; seeding 160 RON/ha; fertilizer (5 bags) 250 RON/ha; 2) growing the crops: hoeing/weeding 300 RON/ha; or herbicides 300 RON/ha; 3) harvesting: 250 RON/ha; 4) transport 50 RON. As a result, the total cost for working one hectare of land (calculated here for corn) is 1,510 RON. In 2004, 100 kg of corn sold for 20 RON. On one hectare of land, one can harvest on average 5 tons of corn, therefore selling it for 1,000 RON. As a result, the producers were clearly loosing.

necessary inputs (i.e. mainly mechanical services). However, I hypothesize that the choice and persistence of associations also depends on the local specifics of de-collectivization, the local politics at the time when the new associations were formed, and the availability of alternative farming options in the region. I examine this hypothesis in Chapter 9.

The issue of exit from associations can be viewed from two different angles. First, one can view the association in a position of power (or monopoly) over landowners, by making their exit strategy difficult when members' choices for alternative farming strategies are limited. Second, in the West, the practice by which landowners reallocated land assets in associations to satisfy their short term needs (i.e. seasonal labor, capital, and access to distribution channels) suggests that the members had more leverage over the association leaders.

However, based on my own observations in the field, I see the decision to stay or to exit from the association as a constant interaction between association managers and landowners in achieving a series of trade-offs that are mutually beneficial for both parties. Ultimately land is a fixed asset¹³⁷ and one cannot do without the other. The associations need to operate with compact land plots in order to reap economies of scale, and landowners do not have the necessary capital (physical, financial, and sometimes labor) to engage in individual farming. The ultimate outcome is similar to a “muddling-through”¹³⁸ strategy in finding the “optimal” outcome for both the associations and the landowners.

7.5 Land leasing

A formal leasing market begun to operate only several years after the implementation of land reform. This is partly because of the delays in establishing a legal basis for leasing transactions. The first land leasing law was passed in 1994 (Law 16/1994).¹³⁹ The Law addressed the visible lack of viable frameworks for basic economic transactions in agriculture, and was viewed as an alternative for land consolidation in larger farming units (Aligica and Dabu 2003). In addition, the Law sought to find ways to transfer use rights from farmers that could not work all the land in ownership to farmers that had the capacity (labor and capital) to enlarge their farm operations but were unwilling (or unable) to purchase land. In the literature, leasing transactions are also viewed as a stepping stone in the agricultural ladder, through which tenancy becomes a stage in the accumulation of capital and expertise, a link between working as a farm laborer and land titling, and a vehicle for land acquisition and economic mobility (Winters 1978 p. 91).

¹³⁷ In the rural areas the population is relatively immobile. It is difficult for a farm manager to move to a different village or county to establish a farm enterprise if he/she is not satisfied with the local business conditions.

¹³⁸ Term coined by Lindblom (1959) within the context of decision making in public administration.

¹³⁹ Between 1990 and 1994 only 4.4% of the agricultural land was leased-out.

Despite the stated benefits from land rentals, the heavy number of restrictions imposed on the eligibility to lease-in or out, and on the nature of leasing agreements, Law 16/1994 was slow in promoting a fluid leasing market (Dobrescu 1999; Sabates-Wheeler 2005). Law 16 was amended in 1998 by Law 65. The most important change referred to contractual requirements. The five-year minimum lease period established by the previous law became more flexible, and the stipulation of a rental value was abolished (Sabates-Wheeler 2005). Nevertheless, a formal leasing market is still in initial stages of development, most transactions being based on informal agreements (in 1996 56% of the leasing-out transactions were based on informal agreements while in 2006 the share was 42%).¹⁴⁰

Survey data shows that from 1996 to 2006 the share of land leased-out (as a percentage of total land in ownership) has increased from 68% to 73%. Moreover, the average amount of land leased out by one household has gone up by 0.13 hectares. This suggests that leasing transactions are on the rise as the land market consolidates.

Moreover, data from the 2006 survey shows that 17% of the households declared that they leased-out land between 1990 and 1994, 6% between 1995 and 1998, and 77% after 1998. This information by itself tells quite an interesting story. Firstly, leasing transactions were taking place even before Law 16/1994 was adopted.¹⁴¹ Secondly, the data shows that these early transactions were based on some form of contractual arrangements (registered at the mayor office), but they attest to their very informal character, devoid of legal consequences, since the Law was not passed at the time. Therefore, findings on contractual arrangements need to be interpreted with care, especially early in the transition period.

Law 16/1990 did not create sufficient incentives for engaging in transactions for neither of the contractual parts.¹⁴² Nevertheless, after 1998, when the legislation for leasing became more permissive

¹⁴⁰ More recently, in 2005, the government proposed a new policy for encouraging the transfer of land from older farmers to younger ones, with an expected outcome of transferring many of the informal rental agreements from the informal to the formal market. This program is called “renta viagera” and it is based on the payment of 100 Euro/ha if the farmer sells the land, or a perpetual rent of 50 Euro/ha/year if the farmers leases-out the land. The conditions for enrolling in this scheme are the following: the landowner has to be older than 65 years, and the tenant has to have agricultural expertise and commitment for sustainable farming. The success of this measure is, however, not clear yet, since the payment offered by the government is still low, and alternative sources of income for these landowners are very limited. Moreover, as media sources show, “renta viagera” has reached fewer than expected farmers mainly because of the underdeveloped legislation regarding the type of agricultural land that could be rented or sold (Daniciuc 2007). These institutional uncertainties and confusions in legal provisions were a constant reminder of the difficulties of changing institutions during the post-socialist transition.

¹⁴¹ In her ethnographic study on Vlaicu village in Transylvania, Verdery (2003) also argues that such early leasing transactions existed.

¹⁴² Interviews with farmers revealed that those wishing to lease-in land thought that the minimum amount of rent stipulated by the Law was too high, while market conditions did not allow them to gain enough revenues to secure profit. Moreover, since the macroeconomic conditions were very unstable (i.e. high inflation and low prices for agricultural products), they favored a more short-term strategy, as five-year contracts seemed too risky. On the other hand, since the titling process was still in early stages, the landowners did not feel that their property rights were

and flexible, the number of transactions increased significantly: 77% of the households that leased land claimed that they signed leasing contracts between 1998 and 2006. This trend could suggest that institutional innovations in the leasing legislation were successful in stimulating participation in land markets. However, it could also suggest that other changes in the economic and institutional environment contributed to shaping these outcomes. For instance, increased opportunities for non-farming jobs might have pushed landowners out of farming, increasing participation in land markets. In addition, as I discuss in greater detail in Chapter 9, some associations shifted to leasing contracts with their members, which could also explain this increased activity in the land market.

The fundamental difference between the owner-operators and tenant farmers is that rather than enjoying full ownership over land and assets, the tenant farmer has only a right of temporary occupancy in return for which he pays rent to the owner. From this point of view, both farming associations and leasing arrangements are forms of land tenancy. These institutional arrangements are similar in terms of what they seek to achieve (i.e. consolidation and mechanization), but there are significant differences in terms of legal provisions, and the economic and social context in which the transactions occur. Hence, this dissertation seeks answers to the persistence of farming associations while land markets were slow to develop during transition.

In Romania, and generally in the CEE region, the outcomes of land reform deviated from the standard land tenure arrangements. Land restitution in the former communist countries in Europe resulted in a so-called process of “reverse tenancy,” where a poor landowner contracts with a rich and risk-taking tenant, quite different from the canonical model of sharecropping. One of the main assumptions of sharecropping theories is that the landlord has better access to information, markets, and institutions, while the tenant is better able to supervise family labor (a large component of the total labor used on the land) (Singh 1989 p. 48). However, in the post-socialist countries the reverse is true. As mentioned in Chapter 4, the unanimous restitution of private property rights resulted in a large share of absentee and part-time landowners, in a context of dramatically changed market conditions. These social and economic circumstances contributed to increased incentives for reverse tenancy. Not having sufficient capital or labor, landowners seek capital rich tenants to lease part of their land in exchange for rent.

In the following sections I discuss who are the tenants in leasing-out arrangements, how contractual arrangements are made, and how rents are set. Moreover, I describe the profile of those households in the sample that leased-in land during the transition period.

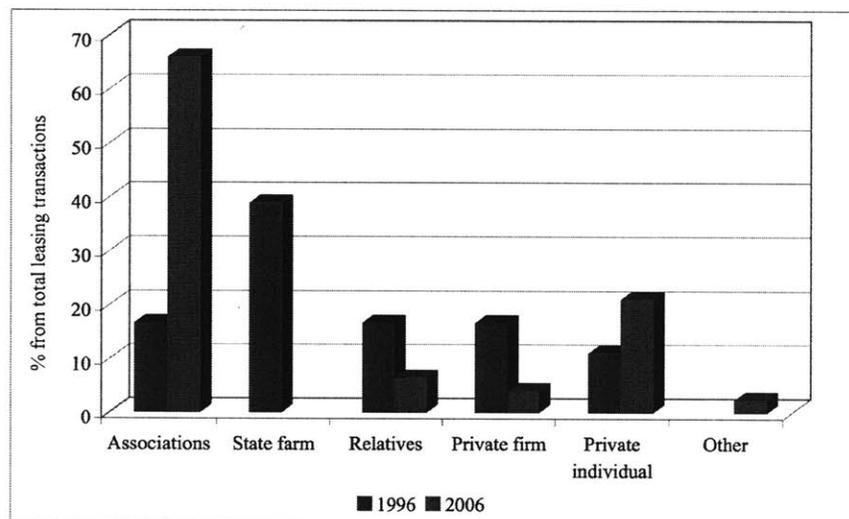
secure enough to permit long-term leasing. The risk of not getting their land back at the end of the lease was too high when alternative sources of income were lacking in the rural areas (and industrial restructuring was still causing widespread unemployment).

Leasing to whom?

Leasing arrangements can be made with other household farmers, with farming associations, or with state farms. Survey evidence shows that in Romania most landowners entered in leasing arrangements with associations (formal or informal) or with other private farmers.

Figure 7-3 shows that there is quite a lot of variation among farmers surveyed in 1996 and 2006 in terms of their contractual partners in leasing arrangements. Leasing agreements with farming associations increased dramatically from 17% in 1996 to 66% in 2006. This trend suggests that farming associations have been the most active players in the land market. I discussed in the previous section that associations gradually shifted to leasing contracts in order to get easier access to investment opportunities, which would partially explain the increased share of leasing transactions with associations since 1996. Private individuals also exhibited an increase in entrepreneurial behavior over this period, as reflected by the higher share of leasing transactions they engaged into.

Figure 7-3: The entities to whom landowners leased out land to in 1996 and 2006



Source: Household surveys in 1996 and 2006.

In general, the tenants purchased or rented machineries from former collective farms or state owned mechanical stations. Several of the tenants I interviewed took loans to purchase tractors at a subsidized price in the mid 1990s. Tenants draw on village labor, mostly landless farmers, during the harvest season. The only permanent employees are the professional staff (mechanical engineers and agronomists) and the managerial staff. Hence, as interviews showed, there is often significant competition for labor between the associations and the other tenants.

Contractual arrangements

As opposed to the association arrangements, while the landowner maintains his property title over land, in leasing contracts he loses two main rights from his “bundle of rights”: *usus* and *fructus*. As a result, the ownership remains but the possession, use, and valorization of the products obtained on the land are transferred to the tenant. In addition, contrary to the association agreements, the farmer cannot break the contract before the term specified in the agreement. Registration fees are also higher especially for farmers that do not have full ownership title. Successive renting of the land by the tenant is not permitted by law, the leasing contract having an *intuiti personae* character.

The rent in leasing contracts is generally fixed, as opposed to the case of associations, where the rent is paid as a share of the harvest. Hence, some landowners were concerned that in good years they were not receiving enough of the harvest as compared to those who were members in associations. Rents can be specified in kind or in cash, but in general they are paid in kind as a fixed share of the crop. There is an abundance of literature on the types of rental contracts in land tenancy and their relation to risk-sharing (Cheung 1968; Newbery and Stiglitz 1979; Singh 1989). The main argument is that while a fixed contract is optimal if the tenant is risk-neutral, it causes a risk-averse tenant to bear all the risk. This suggests that a share contract provides some incentives, while at the same time reducing the tenant’s risk (Singh 1989 p. 44). Similarly, sufficient risk-aversion on the part of the tenant will tilt the scales in favor of a share contract (Newbery and Stiglitz 1979). The idea that share contracts might have risk-sharing advantages over fixed rent and wage contracts was first suggested by Cheung (1968). The argument is interesting for this case because it suggests that landowners are more risk-averse than the tenants that lease-in the land. Hence, share contracts, practiced by associations, provide higher risk-sharing benefits both to the tenant as well as to the landowner.

Even if there are few official statistics on land market transactions, interviews with landowners and tenants reveal that there is a large variety of tenancy arrangements in the Romanian countryside (both formal and informal). The length of the lease can be specified at the time when the tenancy is agreed on, or it can be left at the discretion of the parties, in what Currie (1981) calls “tenancy-at-will.” Examining the length of contracts offers some interesting insight into the way leasing operates at the local level. More importantly, contractual terms are a reflection of the incentives built into different institutional arrangements. Leasing arrangements appear to be made on very short contractual terms, from year to year, or on unspecified periods of time.

On the one hand, this lack of specificity in contracting can be attributed to the unequal balance of power, since usually landowners are older, unfamiliar with the institution of contracting, and the rights and obligations that it entails. As a result, the tenant benefits from a large amount of discretion in decision-making on farming the land. These short-term commitments also provide a unilateral advantage

for the tenant, giving him the flexibility to end the contract at any time, without legal repercussions. Nevertheless, it can also be argued that these contractual arrangements are the direct result of the external economic environment and the market conditions for agricultural products.

On the other hand, landowners face unpredictability in their land reallocation decisions, given the short-term contractual arrangements. Most landowners that rented out land after 1998, when the terms of the lease were not regulated anymore, did so on very short-term contracts (45%), a much higher share as compared to households that claimed to have rented out land before 1998. The landowners I interviewed were concerned that the tenant could break the contract at any time, giving them no alternatives for land reallocation.

A share of 58% of the households that leased land claimed that the length of the agreement varied between 2-18 years. Not surprisingly, most of the lengthier contracts occurred in transactions made before 1998 (73% as compared to 55% made after 1998). However, when the lease term is longer, potential tenants are reluctant to engage in such arrangements because of market unpredictability. Interviews with tenant farmers brought to the surface these concerns. For example, one tenant from Bihor, in the Western Plain, claimed that he was very reluctant to enlarge his farm operation by leasing-in land because five years was a very long period of time to plan for, given the economic conditions in agriculture.

Nevertheless, as I discussed in Chapter 2, earlier literature points to the fact that longer contractual arrangements provide the tenant with strong incentives for investment due to higher security for land and the stream of revenues (Cheung 1969; Allen and Lueck 1993). However, based on interviews and participatory observations, I hypothesize that the opposite is true during transition, when market imperfections prevail. In a volatile environment (where access to financial resources is constrained, and prices for agricultural products are low) tenants benefit more from short rather than long-term contracts. Shorter contracts provide lower risk and a higher leverage in negotiating rents with landowners due to higher economic uncertainties (poor market conditions, lack of capital, and most of the time lower ability to farm the land due to old age).

Another aspect related to leasing transactions is the importance of legal recourse. Currently, legal action against the tenants is very difficult and costly. The costs for starting a legal case are very high for small landowners¹⁴³, the process very tedious and time consuming and the outcome very unpredictable given documented cases of corruption in the system. Therefore, it is unlikely that any breach of the contractual terms by the tenant will be questioned in court by the landowner. This in turn, gives higher balance of power to the tenant, probably more so than in the case of associations.

¹⁴³ Ambland and Colin (2005) estimate an amount of 4-5 million lei (\$140-\$150), much higher than what a pensioner could afford in the rural areas in Romania.

Rental arrangements

In general there are three types of leasing arrangements depending on who pays for the mechanical work and inputs: a) when the landowner pays, more frequent in 1996 reflecting that the land rental market was still developing; b) when the lessee pays the costs (called “*arenda*”), the standard and most common arrangement; and c) when both households cover the costs (arrangement called “*dijma*” mostly found in the South).

Earlier, Law 16/1994 stipulated that the minimum rent for one hectare of land should be at least 600 kg of wheat (calculated as being approximately 30% from the total production).¹⁴⁴ Later, Law 65/1998 eliminated this restriction, and stipulated that the rent should be determined by the two contracting parties, based on reasonable terms and the local rental market. Following the loosening of contractual arrangements, survey data in the Western Plain and Central Romanian Plain shows that in fact, the average rent paid to landowners decreased from 941 kilograms in 1996 to 571 kilograms in 2006.¹⁴⁵

Popescu (2007) argues that if a household receives this amount of rent, revenues are still insufficient for sustaining a decent standard of living.¹⁴⁶ Moreover, Amblard and Colin (2005) show that the tenants determine the rents and there is almost no bargaining between the two parties. Nevertheless, while it is true that the tenant has more bargaining power than the landowner, I found that the bargaining power of the tenant is greater where the landowners have wider choices for alternative income opportunities, as evidenced in my fieldwork in Arad County. I elaborate more on these aspects in Chapter 9 where, based on interviews with landowners and association managers, I examine the role of social institutions in the persistence of farming associations at regional and local level.

Regional differences, already emphasized in Chapter 6, surface in terms of rental values as well. The lowest recorded rent was 100 kg, and the highest was 1,000 kg (or, in terms of share of crop, 10% at the minimum or 66% at the maximum from the total harvest). Central Romanian Plain seems to have higher rents as compared to the Western Plain (on average 592 kg in 2006 as compared to 473 kg in the Western Plain). Nevertheless, it is interesting that while in the West rents have on average increased, in the South they have actually declined. Supply and demand conditions and the timing of the market

¹⁴⁴ As Amblard and Colin (2005) mention, rents are established in kind and the reference product is wheat, regardless of the crop that is being cultivated. An explanation for this standardization is that wheat is a more of a cash crop than corn (the other main crop in Romania), and therefore, its value is more closely determined by market fluctuations.

¹⁴⁵ The current rent amount is confirmed by other studies also (Popescu 2007) which show that the average rent is 600 kilograms, representing one fifth of the average yield per hectare.

¹⁴⁶ The author assumes that a 600 kg of wheat/hectare represents between 1.8-2.4 million lei given that the price of wheat last year was 3,000-4,000 lei/kg. If I consider a household with an average landholding of 2.4 hectares that rents out all its land, the total revenues are approximately 4.3-5.8 million lei (\$172-232), significantly less than what a family could live off.

development in these two regions could offer an explanation for these opposite trends. In 1996, land leasing was at its peak in the South and private entrepreneurs were trying to offer attractive rates in order to differentiate themselves from farming associations while maintaining the minimum rent amount established by law. But, by 2006, when contractual terms were relaxed and pressures for investment intensified (due to concerns for EU competition following enlargement), rents declined significantly. In the West, where the demand for leasing was lower earlier in the transition, rents were low, even less than the stated legal minimum.¹⁴⁷ Nevertheless, once demand for leasing increased, rents increased as well.

Box 7-1: Leasing-in arrangements

The share of households that lease-in land is very small. In 1996, 2% (10 households) of the landowners claimed to have leased-in land in the Central Romanian Plain. By 2006, the share has increased to 3% (42 households), of which 33% were located in the Central Romanian Plain and 67% in the Western Plain. Hence, this research is mostly concerned with leasing-out transactions, unless otherwise specified. Nevertheless, to offer more background below I discuss the profile of landowners that lease-in land in the Western Plain and the Central Romanian Plain.

Currently, leasing-in to expand farm size and to consolidate land plots is mostly done by large farms (i.e. private entrepreneurs, farming associations), which often led to the formation of large hacienda types of farms mostly in the southern and eastern Romania.

In 2006, 14% of the landowners that leased-in land claim to have done so before 1998, 25% between 1998-2003, and the majority of 47% since 2004. This pattern is reflected at regional level as well. Interestingly, most of the leasing contracts are informal, based on verbal agreements (100% in 1996 and 91% in 2006). The length of the agreement was one year in 1996 and between one and four years in 2006.

Households that lease-in land own much less agricultural land (on average 2.9 hectares of land both in 1996 and 2006) than those that farm all land individually or seek alternative farming arrangements (see Table 7-4).

As far the amount of land leased-in, there is quite a lot of variation among households especially in 2006. In 1996, a household leased-in on average 1.8 hectares of land (varying from a minimum of 1 to a maximum of 3 hectares). In 2006 the amount of land leased-in was much higher, 5.4 hectares, but with a much higher variation, from 0.2 hectares to 60 hectares.

For small landowners, the primary purpose of leasing land is to enlarge their farm size given that they do not have enough to ensure food security for their household members. The average household size for landowners that leased-in land in 1996 was 3.6 members, while in 2006 it was 4.6.

In addition, the two household surveys show that those that lease-in are younger (on average 53 years old in 1996, and 50 years old in 2006), and more educated (on average 7.6 years of education in 1996 and 8.6 years of education in 2006). The demographic profile of the landowners that lease-in additional land is confirmed by other studies such as Vranken and Swinnen (2006), showing that better education is correlated with leasing-in land, and older age with leasing-out. This result suggests that these farmers are more entrepreneurial, and have higher abilities and skills for working the land, in addition to the need to supplement incomes for the larger families.

¹⁴⁷ This finding is also confirmed by qualitative interviews I conducted in Bihor County where tenants claimed to have offered 270 kg/ha as rent, which was less than half of the minimum amount stated by law.

Lack of data made it difficult to determine whether the rents from leasing are higher than the rents from farming in associations. However, surveys from 1996 and 2006 show that actually the rents from associations are higher than from leasing-out, but there is quite a lot of variation among households¹⁴⁸.

7.6 Summing up the research hypotheses

This chapter explored in more depth each of the farming arrangements currently available for landowners: private individual farming, associations, and land market transactions. I discussed in detail how these arrangements operate, pointing to the main benefits and drawbacks associated with each choice. Ultimately, this chapter aimed to set the scene for an empirical inquiry into the choices landowners make during transition in terms of institutional arrangements for farming. In particular, the main concern is to explain the persistence of formal associations during the post-socialist transition period. To this end, based on literature and fieldwork, I generate a set of research hypotheses to be examined in the remaining of the dissertation using statistical analysis and qualitative research. Depending on the methods required for different hypotheses, I examine them in Chapter 8 (using statistical analysis) or in Chapter 9 (using findings from qualitative fieldwork). Drawing from the analysis in this chapter I distinguish between two main groups of factors hypothesized to affect the choice of land reallocation alternatives: (i) household characteristics (i.e. human and physical capital); (ii) institutional and socio-economic environment.

7.6.1 Household characteristics

Earlier research showed that households that are younger, more educated, and have a higher endowment with physical capital are more likely to engage in private individual farming (Rizov et al. 2001; Sabates-Wheeler 2005; Mathijs and Swinnen 2001). However, given the slow development of land markets in Eastern Europe, there is limited research, if any, examining the importance of human and physical capital on the choices landowners make between joining associations or leasing, as alternative forms of land reallocation. Vranken and Swinnen (2006) find that for the case of Hungary, older households are more likely to lease out land. Deininger (2003?) also points to a similar conclusion.

Descriptive statistics in Table 7-4 allow me to hone into differences across household characteristics between landowners that chose specific arrangements during the decade under study. Hence, based on earlier literature and summary statistics in Table 7-4, I hypothesize that private

¹⁴⁸ It is quite difficult to determine exactly by how much are the returns in associations higher than in leasing arrangements because not all households reported how much they received from associations at the end of the harvest.

individual farming tends to be practiced by younger households (as defined by the age of the household head), while older households (> 60 years old) are likely to seek alternative arrangements. Moreover, I test whether there is a statistically significant difference between households that lease and those that join associations along age and education characteristics. Physical capital endowment (as measured here by tractor ownership) shows an interesting difference between the two years in the analysis. I hypothesize that households with a higher capital endowment are more likely to farm the land individually, or to join associations if other factors prevent them from farming individually.

As I emphasized several times throughout the dissertation, land fragmentation is a major challenge for the Romanian agricultural sector, as a result of the land restitution choices made earlier in the transition. However, there is hardly any research that takes into account this factor in the decisions landowners make regarding land reallocation. Sabates-Wheeler (2005 p. 108) showed that the higher the distance from home to the land plots, the higher the probability of joining associations rather than farming the land individually. However, there is no study, to my knowledge, that examines how land fragmentation affects the choice between alternative farming arrangements. Given the high transaction costs with registration and notary fees (as discussed in Section 7.5) and the easy entry in associations (as discussed in Section 7.4.1), I hypothesize that households with more fragmented landholdings (a higher number of plots) are more likely to join associations rather than to lease out land. Table 7-4 confirms this pattern, and it will be further examined in Chapter 8.

Table 7-4: Key descriptive statistics by property rights arrangements

	1996			2006		
	PI	FA	LL	PI	FA	LL
Household size (# pers.)	3.9	2.9	2.7	3.4	2.9	2.4
Age of the household head (years)	54	63	67	61	66	65
Education of the household head (years)	7	6	5	8	7	7
Agriculture-main occupation* (%)	76	92	74	65	87	74
Land in ownership (hectares)	3.5	4.1	3.8	3.5	3.1	3.8
Land fragmentation (# of parcels)	3.9	4.2	2.6	3.5	3.7	3.2
Tractor ownership (% of households)	3.3	1.9	4.4	18.8	3.2	1.6

Note: PI – Farming all land in Private Individual Farming; FA – Farming part of the land in associations; LL – Leasing out part of the land; LS – Sold part of the land.

* Percent of households where the household head has agriculture as the main occupation.

Source: Household surveys in the Western Plain and the Central Romanian Plain, 1996 and 2006.

In addition, I hypothesize that the main occupation of the household head matters in the decisions landowners make with respect to land reallocation. Deininger (2003) argues that the availability

of alternative sources of income affects whether a household participates in land market transactions. Table 7-4 also shows that households where the household head has agriculture as the primary occupation tend to join associations.

Lastly, Table 7-4 also shows that households with more land in ownership are more likely to lease out land. The transaction costs associated with leasing out larger and more compact plots are lower. A similar trend can be seen for the decision to join associations as well, but only in 1996.

7.6.2 Institutional and socio-economic environment

The overview of the farming arrangements showed, first, that there are regional differences in the choices landowners make on land reallocation. While private individual farming predominates in the Western Plain, in the South the majority of the households joined associations. Regional disparities can be explained through differences in economic and social factors. I hypothesize that a higher level of economic development in the West created conditions for private individual farms to emerge (through easier access to capital), more so than in the South. Also, due to a higher urbanization level, in the West villages are more clustered and closer to urban areas, reducing the distance between individual plots and improving access to markets. In Chapter 8 I test this hypothesis, controlling for other variables.

Second, the description of the farming arrangements revealed several institutional differences that could explain the persistence of farming associations throughout the transition process. This suggests that structural factors (such as human and physical capital) cannot fully explain the choice of farming the land individually.

One of the main hypotheses to be examined in Chapter 9 is that associations provide a sense of security and flexibility (through in-kind payments for mechanical services and longer contractual terms) to compensate for market constraints (i.e. limited access to credit and distribution channels). The terms of the contractual arrangements (length of tenure and exit strategies) could provide one explanation for the persistence of associations and the limited engagement in leasing transactions. Especially after 1998, when the leasing law was modified (as discussed in Chapter 7), leasing contracts were made on much shorter periods of time, year-by-year, or based on undefined periods of time (i.e. tenancy at will). The association arrangements, however, provide a better strategy for spreading risks because the landowners can decide when to exit the association. Once a landowner becomes an association member, the leadership cannot decide to not farm the land without the accord of the household. An assumption embedded in this hypothesis is that the interests and the time frame for decision-making is different for the tenants as compared to the landowners. The landowners are more risk-averse, seeking longer term contractual arrangements, while the tenants prefer short-term contracts which allows them to respond easier to market uncertainties (i.e. fluctuation in prices, vagaries of weather, market access).

We saw earlier that formal associations were created immediately following de-collectivization. Hence, I hypothesize that the formation of associations early in the transition process resulted from the constant interaction of different actors (landowners and former leaders of collective farms) with different interests in the final outcome. In Chapter 9 I discuss how this interaction led to different choices for farming arrangements at regional level, bounded by historical and social specificities.

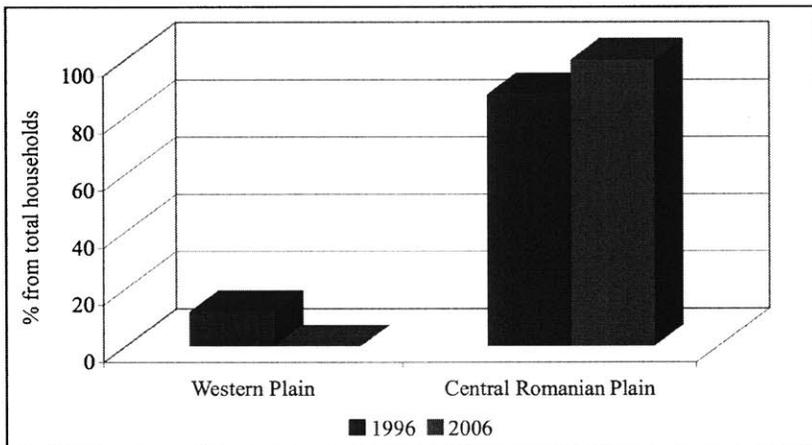
Hence, these institutional and social aspects should be considered complementary to more structural explanations for the choice of institutional arrangements.

Appendix 7-1 : Informal associations during transition

Informal associations were created endogenously and are recognized as an organizational form by Law 36/1991. They are based on informal agreements (verbal or written) between two or several families. Their main goal is to consolidate landholdings in order to benefit from larger-scale mechanization. A survey conducted by Rachel Sabates-Wheeler in 2000 shows that association membership is mainly based on kin and neighborhood relations (52% of the associations had only family members and neighbors and 25% had only family members) (Sabates-Wheeler 2005).

Farming the land is done individually, or in common, and the responsibility for production resides with the landowner. In general, farming inputs such as physical capital and labor, are shared among the members. The management of the farm is normally done by one of its members. One distinction from the formal associations is that at the end of the harvesting season the members have the right to the entire yield produced on their plot after paying for production expenses. Other differences are that informal associations do not generally hire labor (Sarris and Gavrilescu 1997), they rarely take credit and do not own any physical capital in common.¹⁴⁹

Figure 7-4: The distribution of informal associations by agro-regions and years



Source: Household survey data, 1996, 2001, and 2006.

My survey shows that while in 1996 32% of the households in associations were part of informal associations, by 2006 this share declined to 26%. In the West less than one fourth of the associations were

¹⁴⁹ One immediate advantage of informal associations is that they do not have to cover for earlier debts, as was the case of formal associations who inherited part of the debts from the former socialist collective farms (Sabates-Wheeler 2005).

informal in 1996 and by 2006 no household was member of an informal association. In the South the prevalence is much higher relative to the West (see Figure 7-4).

One potential explanation for why informal associations predominated in the South resides in the level of economic development and availability of farming resources. In the South, households that did not join formal associations or did not lease-out were not able to farm the land themselves (as was the case in the Western Plain) due to lack of physical capital. The choice of informal associations, where neighbors or relatives with land strips nearby are sharing capital (and labor) to farm larger plots of land, was certainly a better alternative in the South. A second explanation could be that voluntary collective action is very limited in the Western Plain, perhaps due to cultural reasons as shaped by historical legacies. I expect to find a stronger sense of individualism and private property in the West, as suggested by claims of mistrust, and lack of community cohesion. Chapter 9 examines these factors in detail based on qualitative fieldwork.

By the end of 1992 there were already approximately 11,500 informal associations with 720,000 members, operating around 1.8 million hectares (about 150 hectares per association) (Dumitru 2002). As in the case of formal associations, survey data in 1996 and 2006 shows that most households joined informal associations very early in the transition process. All households in the sample claimed to have joined the associations before 1996, mainly in the first years between 1990 and 1992. In 2006 I find a similar pattern, with 70% having joined the informal associations before 1996.

Even if informal associations played an important role in land reallocation decisions throughout the transition, there were no institutional provisions following Law 36/1991 to facilitate access to physical and financial capital for the farmers that opted for this type of institutional arrangement. That informal associations have no legal status, but are at the same time defined by law is confusing. Kideckel (1995) offers an explanation for this situation. He claims that at the time when Law 36 was passed, the Romanian Government clearly favored formal associations. However, by including informal associations within the Law, the government tried to promote the idea that associative activities, other than formal associations, were encouraged. This appears to be the most logical explanation as to why informal associations were excluded from the realms of law. But, lacking legal status it is difficult to distinguish between informal associations and individual private farming, and more recently national statistics have stopped recording them altogether.

The main reasons invoked by households for joining informal associations are the benefit of jointly using capital and labor, consolidating land plots, and having more control on farm operation and cultivation decisions, as opposed to the formal associations (Sabates-Wheeler 2005). However, because informal associations are so deeply embedded in family and friendship relations, membership tends to be restrictive to the outsiders. Nevertheless, Sabates-Wheeler (2005) points to the flexibility that informal

associations provide for the existing members, who, at any time, can decide to add more land or withdraw land from the association. I found, however, that in certain cases, these close ties between members contribute to freezing alternative options. One farmer in Petid, Bihor county, claimed that she had her land farmed in the association by her relative, and that while she could receive more rent by leasing out the land, exiting the informal association would jeopardize her family relations and position in the local community.

Overall it does seem that informal associations are a good tradeoff between individual farming and formal associations for landowners that intend to keep their ownership rights, to exert more control over the production process, and for those that do not intend (or are not able) to shift out of subsistence by increasing investments and getting better access to markets. Nevertheless, for these farmers, access to farming inputs is highly constrained by lack of liquidities. Also, long-term investment plans are difficult to make when the organizational form is not formally registered and hence not able to offer asset ownership as collateral for loans. Product commercialization also becomes more costly, lacking the networks that formal associations inherited from the old collectives.

Therefore, informal associations appear to be more of a transitional farming arrangement, where landowners adjust their needs of labor and capital to benefit from economies of scale from land consolidation. In addition, informal associations are able to offer alternative institutional arrangements for households that are in the process of obtaining land titles. This can be one explanation for why, in the past decade, informal associations have seen such a drastic decline, period in which significant progress has also been made in land titling.

Appendix 7-2 : Land sales during transition

Participation in land markets (leasing, selling, buying) is emphasized as a channel for adjusting the size of land holdings and allocating resources to the most efficient producers. While restrictions on land transferability create a barrier to the flow of resources from less efficient to more efficient producers, and thus an impediment to agricultural growth, some scholars argue that temporary restrictions on buying and selling (especially in the transition countries) may be necessary for political and social considerations (Banerjee 1999; Lerman et al. 2004). There is concern that land market liberalization leads to re-concentration of land, especially when access to information, capital, and markets are asymmetric (Lerman et al. 2004).

As in other countries in the region, in Romania markets for land sales did not exist prior to the 1990s. While land restitution and privatization begun in 1991, the main legislative act addressing agricultural land sales was Law 54/1998, “Law on the Legal Transfer of Land.” This Law provides that Romanian citizens can acquire and sell agricultural land in conjunction with the norms of Civil Law (Duncan and Prosterman 2000). Two limitations apply. First, there is a restriction on land ownership, which currently stands at 200 hectares of arable land¹⁵⁰, and second, neighbors and co-owners have a pre-emptive right to buy land over a period of 45 days from the time when the offer was publicized.

By making the bundle of rights for landowners complete (adding the right to sell land), it was expected that progress will be made towards consolidated farm plots, and that land resources will flow from less to more efficient farmers, contributing to an increased performance of the agricultural sector. Nevertheless, despite low economic performance in agriculture, and a high degree of land fragmentation, land markets are still very thin in Romania. Swinnen and Vranken (2007) show that in the Czech Republic, Slovakia, and Hungary, land leasing amounts to approximately 66% of the households, while in Romania, Albania, and Azerbaijan, the share is only 10%.

Existing literature and fieldwork document that institutional factors, such as the slow progress of title registration (including cadastral measurements) contributed to delaying land market development. While in some regions, such as the West, cadastral maps were “inherited” from the Austro-Hungarian Empire, in most of Romania the system had to be set up from scratch.¹⁵¹ This inadequacy hampered the smooth evolution of formal land transactions and contributed to higher transaction costs.

¹⁵⁰ On the one hand, since household farms are so small (on average 3.2 hectares) this limit does not hamper the development of land markets in the short run. On the other hand, as Duncan and Prosterman (2000) claim, it prevents the formation of large private holdings (so called *latifundia*).

¹⁵¹ With the support of the World Bank, Romania started in 1998 a \$35 million project to implement a general cadastre and legal registration, much later than in other countries in the region. The main goals of the cadastre are

The emergence of land markets is difficult to document in Romania (but also in other countries in the region) as official statistics are lagging behind denoting not only a slow administrative adjustment to new institutional changes, but also the embryonic stage of land transactions. According to Dumitru et al. (2004 p. 14), during 1999-2004 private landowners sold 355,725 hectares of agricultural land (3.1% of total private agricultural land) and another 25,104 hectares changed ownership through donations.¹⁵² More than 4% of rural landowners engaged in land transactions during this period. However, as Duncan and Prosterman (2000 p. 7) indicate, official data on sales might not capture the true level of market activity for two main reasons: informal transactions and high notary fees¹⁵³. These factors are actually interrelated. The high level of transaction costs increases the level of informality in land markets and encourage underreporting of transactions and price levels.

Therefore, household level surveys are currently the most accurate source of information for data at regional level. The only available survey that measured these outcomes is the household survey I conducted in the summer of 2006 in the two agro-regions. Based on this survey, 13% of households have sold land since 1998. However, the majority of these transactions, originated in the Western Plain (88% as compared to 13% in the Central Romanian Plain), pointing to wide regional differences. The average amount of land being sold was 2.34 hectares in the Western Plain and only 0.96 hectares in the Central Romanian Plain. As I showed in Chapter 6, the economic structure is more diversified in the Western Plain. Hence, economic factors could provide one explanation for why landowners in the West are more likely to engage in land sales. Nevertheless, more data points to document this trend would allow me to draw more targeted conclusions. However, a higher regional economic development does create more opportunities for landowners to shift out of farming. Among the reasons for selling land, the most important ones that households listed were: a) the need for liquidities; b) lack of mechanical implements to farm the land; c) health problems and physical inability of working the land due to old age.

Purchases of land by small individual farmers are very rare. In 2006 11% of the households declared to have bought land since 1998. Therefore, in this section I focus mostly on land sales. However, Box 7-2 summarizes the profile of households that purchased land in the two agro-regions.

to provide clear and current definition of parcels for property registration, and to set up a safe and cost effective procedure for property transactions.

¹⁵² According to Duncan and Prosterman (2000 p.8), land sales have more than doubled each year since 1998.

¹⁵³ According to Ramniceanu (2004), the expenses with land transfers (notary fees, cadastral registration, intabulare, and other fees) are amounting to 7-10% of the transaction value.

Box 7-2: The profile of households that purchased land in the Western Plain and Central Romanian Plain

As in the case of land sales, there are regional differences in the share of households that purchased land since 1998. In the Western Plain 83% of the landowners bought land, while in the Central Romanian Plain, only 17% did so.

Interestingly, a sizable share, 49%, claimed to have bought land before 1998 when the Law on land transfers was passed. Similarly with the case of leases and sales, this points to the informal character of land transactions, and the market still in formation. It also shows signs that the market should have been formalized earlier since land restitution created small landowners with fragmented plots, as well as absentee and part-time landowners. Nevertheless, given the hardships of transition, informal transactions offered a low cost alternative to land reallocation, despite the lack of enforcement that would have been offered by a formal contract.

The amount of purchased land has increased between 1999-2003 to an average of three hectares. Nevertheless, it appears that from 2004 the amount of land purchased by households dropped by more than half.

Throughout this period, land prices varied significantly. Deininger (2003a) argues that in formal associations, where risks are higher and savings are the main source of income for those willing to purchase land (access to credit is limited and land plays an important function in storing wealth) prices for land can fluctuate significantly overtime. Demand for land, and hence prices, will be high in the good years when only a few households would be willing to sell land.

The average age of the households that increased their land ownership is 56 years old, lower than for the households that sold land, as we would expect. Household size is higher (3.6 individuals), and education levels are higher (on average nine years of completed education). Moreover, 34% of the households own a tractor, 51% hired labor, 17% took out bank loans, and 63% claimed to have sold agricultural produce on the local market.

This profile suggests that farmers who purchased land are more entrepreneurial, and have higher abilities, skills, and resource endowment, allowing them to enlarge and consolidate their land plots.

Official statistics on land sales compiled by the Ministry of Agriculture, Forestry, and Rural Development (MAPDR), illustrate the high increase in land sales especially after 2000, as well as in the average land prices (see Table 7-5).

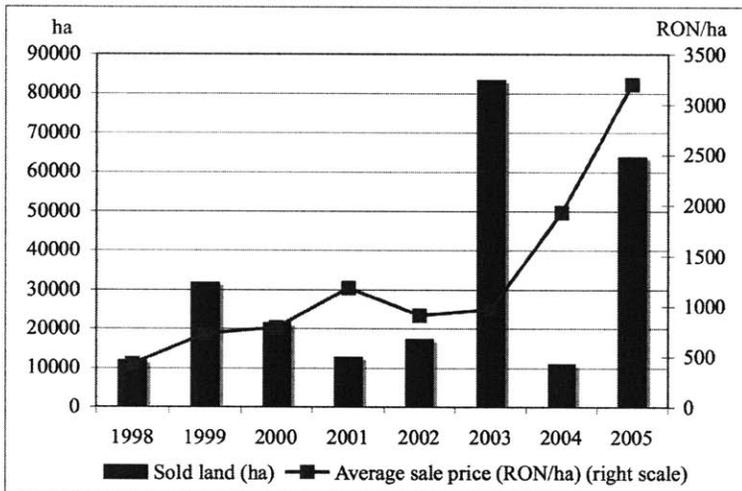
Table 7-5: Cumulative figures for extra-vilan land sales

	As of Nov. 24, 1998	As of Mar. 29, 1999	As of Dec. 31, 2001	As of Dec. 31, 2005
Nr. of sales/purchase contracts	6,047	14,335	70,549	308,488
Nr. of separate parcels sold	9,890	20,362	n.a.	339,982
Surface area sold (ha)	11,517	18,408	95,335	513,283
Land sale price (RON/ha)	434	530	n.a.	1,357

Source: For 1998 and 1999 from Duncan and Prosterman (2000); For 2001 from Dumitru (2002); For 2005 from MAPDR (2007).

By 2005 more than 500,000 hectares of land were sold, which, however, represents only 6.7% of the agricultural land under private ownership. Average land sales prices almost tripled over this period. Only in 2005 63,999 hectares of land were sold at an average price of 3,200 RON/hectare (see Figure 7-5). While there are fluctuations in terms of the amount of land sold, the price for land increased on average.

Figure 7-5: Land sales and average sales prices between 1998-2005



Source: Data from the Ministry of Agriculture and Rural Development.

Note: The spike in land sales in 2003 is difficult to explain given that the data derives from official statistics. Nevertheless, there is certainly a trend emerging in land sales, denoting volatility in the land market.

Nevertheless, as Table 7-6 shows, land prices in Romania are still very low in comparison to other EU countries. Interviews with farmers suggest that this is one reason why the sale of land is a less attractive alternative for Romanian farmers. Land prices are low even within Romania (despite regional variation) in comparison to other assets. For example, in 2000, to sell land in Transylvania amounted to trading away one hectare of land for one cow (approximately seven million lei for one hectare of land)

(Verdery 2003 p. 209). This situation points to the precarious state of household savings levels in the rural areas, as well as to the limited availability of financing.

Table 7-6: The market value of the farmland in different European countries, 2001-2004 (EURO/ha)

	1996	1997	1998	1999	2001	2002	2003	2004	2005
Netherlands	20,750	22,661	24,869	31,869	37,500	35,500	31,750	29,300	n.a.
Belgium	12,289	12,380	12,579	13,852	15,895	16,681	15,653	17,038	20,846
Italy	11,965	12,488	12,806	n.a.	14,266	n.a.	n.a.	n.a.	n.a.
Denmark	8,051	8,552	9,734	10,490	12,882	13,727	15,516	16,000	19,995
England	7,535	9,492	9,163	10,176	11,824	11,017	10,247	11,424	n.a.
France	3,188	3,191	3,287	3,461	3,710	3,860	n.a.	n.a.	n.a.
Poland	n.a.	n.a.	n.a.	n.a.	1,415	1,307	1,308	1,463	2,049
Slovakia	n.a.	n.a.	n.a.	n.a.	878	888	912	945	982
Bulgaria	n.a.	n.a.	n.a.	n.a.	721	721	731	685	n.a.
Romania	n.a.	n.a.	n.a.	n.a.	307	278	237	284	n.a.

Source: European Commission (2006a).

In the past few years, the vagaries of weather increased the demand for land sales in regions affected by drought and floods. Deininger (2003b p. 95) contends that “the need to satisfy basic subsistence constraints could give rise to a large supply of people who are forced to engage in distress sales of their land in bad years, often to individuals with incomes or assets from outside the rural economy.” This argument is confirmed for our case where the major drought that hit Romania in the summer of 2007, responsible for the losses of up to 1 billion Euro, led to farmers in the South selling land at very meager prices, way below the real market price (Pitulice and Caloian 2007). Moreover, those who sold their land in a period of crisis may not be able to repurchase land during later periods of recovery (Kranton and Swamy 1999).

At the same time, regional price differences resulted in large speculative land sales especially in the Western Plain (Timis and Arad County). There, foreigners (especially Italians and Germans) bought large areas of agricultural land with the expectation that land prices will increase following the integration of Romania in the EU, as discussed in Section 7.2.2.¹⁵⁴

As a result, there are, wide regional variations both in terms of the amount of land being sold, as well as prices. Some of the factors driving these differences are the degree of land consolidation, irrigation implements (Giurca et al. 2004) and, to a smaller degree, land quality (Popescu and Constantin 2007). For

¹⁵⁴ According to Law 54/1998, foreigners do not have the right to buy land in Romania. Nevertheless, if they set up a legal entity with majority Romanian capital, there are no restrictions on the amount of land that can be purchased.

the reasons highlighted earlier, Timis County has sold the highest amount of land (135,241 hectares, almost three times the amount sold in Arad, the second highest), while Bistrita-Nasaud County had the lowest amount of land sales (1,228.14 hectares). Similar striking disparities can be observed in terms of land prices. Teleorman County recorded the lowest price for land sales (309 RON/hectare), while Ilfov County recorded the highest average price for land sales (15,000 RON/hectare), followed by Prahova (9,200 RON/hectare) and Brasov (3,140 RON/hectare). This extremely high average land price in these counties might be due to the proximity to Bucharest (the capital) and to the rapid development that this region experienced as a result of large foreign investments. Moreover, Prahova and Brasov are resort areas where purchases of land for building vacation properties were on the rise especially in the past five years.

For the two agro-regions under study, official statistics show that 207,663 hectares were sold between 1998 and 2005 in the Western Plain, at an average price of 1,000 RON/hectare, while much less were sold in the Central Romanian Plain (33,655 hectares at an average price of 780 RON/hectare).¹⁵⁵ The Western Plain concentrated 41% of all the land sales recorded at national level since the formalization of land markets. Over the same period, land transactions in Central Romanian Plain represented only 7% from all sales at national level. In the following I discuss in more details findings from the 1996 and 2006 surveys in order to distinguish potential patterns and regional differences in the development of land markets.

As mentioned earlier, in Romania like in Russia (Lerman and Shagaida 2007), FSU countries, Hungary (Vranken and Swinnen 2006), Bulgaria, and other countries in the region, land markets for leasing and sales become more active in the past years. Land restitution is substantially completed, and legal provisions related to land transactions are specified (through changes made to Law 18/1991 and the law “On leasing”, republished in 1998, and the 1998 law “On the legal circulation of land”).

Land sales are different from other types of farming arrangements because the landowner loses all the property rights over the plot that is sold. Therefore, one can argue that households engaging in these transactions are different from households that do not. In the household survey I conducted in 2006 landowners mentioned that the main factors contributing to their decisions to sell land are: a) lack of financial resources to sustain living expenses and investment needs; b) inability to work the land due to old age or lack of expertise; c) willingness to shift out of agriculture and reliance on off-farm income sources. The constraints for land sales relate to high transaction costs exacerbated by land fragmentation, high opportunity costs, and lack of alternative sources of income.

¹⁵⁵ Since land transactions (sales and purchases) were not formal (and hence, registered) before 1998, I do not have earlier data on land market participation. We know, however, from an earlier household survey (in 1996), that 11% of the households from the Western Plain claimed that, if they could, they would sell approximately 2 hectares of land. Only 4% of the households in the Western Plain were willing to sell land at that time.

Those households that sell land do so either from being constrained by economic circumstances (limited access to resources), or due to a strong entrepreneurial drive outside the farming sector. My 2006 survey in the two agro-regions suggests that the main reasons invoked by those that did not engage in land sales were: a) social values attached to land (inheritance motives); b) not enough land to cover subsistence needs given household size; c) undeveloped land market and poor future prospects in the agricultural sector, as reflected by low land prices.

Interestingly, the attachment to land seems to be very high, with 47% of the households claiming that the main reasons for not having sold land is because they either want to leave the land to their children, or they inherited it from their parents (see Table 7-7).¹⁵⁶ Regional differences play out in this respect also: only 39% in Central Romanian Plain bring up this motive, while 55% do so in the Western Plain. This finding points to a higher social attachment to land, beyond the economic value, which due to historical legacies of private property rights, might be stronger in the West than in the South.

Table 7-7: The reasons for not engaging in land sales (% of households listing a particular reason)

	Overall	Western Plain	Central Romanian Plain
Not enough land	14.9	7.9	22.1
Land prices are too low	19.7	17.1	22.4
There are no buyers	4.7	2.3	7.2
Land is the only source of income	21.2	28.2	13.8
Inheritance	47.5	55.4	39.3

Source: Household survey in the Western Plain and Central Romanian Plain, 2006.

Twenty one percent of the households in the sample claimed that another reason for not engaging in land sales is the dependence on agriculture as the only source of income. Interestingly, 28% of those who invoked this reason are located in the Western Plain (which also has the highest share of land sales), suggesting that economic development has not reached all the farmers in the West and agriculture still remains the main income source for a large share of the population.

Nevertheless, the other reasons listed in Table 7-7 reinforce earlier findings that land markets are less developed in the Central Romanian Plain (land prices are too low, and there are not enough buyers). Also, 22% of the households in the South claim that they do not have enough land, which might be the result of both larger households as well as lower standards of living.

¹⁵⁶ Earlier research conducted in different regions of Romania by a team of researchers from the Rural Development Institute had similar findings as well as statements such as “I will never sell my land” from many young families or pensioners (Duncan and Prosterman 2000).

Land ownership shielded most of the small landowners against chronic poverty during industrial restructuring, macroeconomic stabilization and liberalization policies. The social role of land was strengthened by lack of land taxation. The exemption of land taxation since the beginning of reforms in 1991 was decided politically based on social considerations.

All these factors suggest that agriculture still plays a key role in providing subsistence means for the majority of population engaged in farming and that land markets are not sufficiently developed. If an adequate level of rent (or land prices) is not provided, within an overall context in which alternative job opportunities are lacking, the incentives for shifting land to more efficient uses (engaging in land transactions) are likely to be very low.

High transaction costs associated also affects the development of land markets. Since Romania does not have yet a fully operational cadastre, survey costs are fairly high. Notary fees and surveying fees are two major components of the land transaction costs. These costs may reach 400-600 RON per hectare, close to the average value of land, being usually paid by the buyer. Hence, transaction costs for those who want to extend and consolidate their farms are fairly high, seen as a major obstacle in the development of land markets.

Chapter 8 : Explaining land reallocation between different farming arrangements during the post-socialist transition

8.1 The puzzle of long-term outcomes in land reallocation

Given the institutional context for land reallocation laid out earlier, this chapter and the remaining of the dissertation addresses, what seems to be, an unexpected outcome of land restitution and agricultural transformation during the post-socialist period. Contrary to the expectations of transition policy-makers, various forms of associations widely persisted throughout the former communist countries in the CEE and CIS region following de-collectivization (Meurs 2001; Verdery 2003; Sabates-Wheeler 2005; Allina-Pisano 2007a p. 76). Private individual farms emerged, but in general farms are too small to take advantage of economies of scale (Slangen et al. 2004). At the same time, participation of landowners in land markets is very limited.

In Romania, by 1993 more than 40% of land was voluntarily returned to associations, despite rapid de-collectivization and land titling (Brooks and Meurs 1994). Similar outcomes were recorded in Bulgaria, where more than 40% of land is being farmed under this institutional arrangement (Lerman et al. 2004). The reallocation of land into associational forms following de-collectivization occurred despite the fact that this farming arrangement was widely criticized in the literature (see Chapter 2)¹⁵⁷ and pro-individual (family) farming was portrayed as panacea for the agricultural sector in the former socialist economies (World Bank 2007a). Hence, as Meurs (2001) claims, the reluctance of households to engage in private farming was often dismissed as irrational, ideologically motivated behavior of the rural population.

The persistence of associational arrangements is even more intriguing since in the second half of the 1990s the opening up of land markets made way to alternative farming arrangements, such as leasing and sales. Land market institutionalization was viewed as the solution to the current level of low agricultural performance and the extreme land fragmentation. Small farmers were presumed to resort to land transactions in order to consolidate scattered land plots and to release assets to more productive users. At the same time, past research consistently pointed to several characteristics of associations that hinder incentives and productivity, while highlighting the gains from land market participation (see Chapter 2). Therefore, by examining the persistence of associations throughout the transition period I

¹⁵⁷ The main critiques of farming associations were lack of incentives in collective production, appropriation of resources by managers, free-riding and principal agent problems.

show that this institutional arrangement provides some advantages for small landowners, beyond the benefits derived from land market participation.

In the previous chapter I showed that two types of associations were created following land restitution: formal and informal. Because the number of informal association is lower than any other farming arrangement (individual, formal associations, or leasing), the factors affecting the choice for this arrangement cannot be captured using statistical analysis.¹⁵⁸ Therefore, the rest of the analysis in this and the next chapter focuses specifically on formal associations, as one of the institutional alternatives for land reallocation.

Using econometric analysis, this chapter examines the factors that are associated with different land reallocation decisions in two main agro-regions in Romania, the Western Plain and the Central Romanian Plain. The research question that shapes the analysis is: *Why do landowners persist in joining associations in Romania, despite perceived collective action problems, and despite the availability of leasing as a close alternative for land reallocation?*

To fully answer this question, a few other accompanying questions need to be explored:

- (a) Why do households seek alternative farming strategies instead of farming the land individually?
- (b) What are the factors that affect landowners' choices between associations and leasing arrangements?

Following land restitution and de-collectivization, the need to improve land management in the rural areas is obvious in the changing environment specific to the transition from a centrally planned to a market-based economic system. Within this context, land consolidation poses one of the most significant challenges in Romania, as well as in other countries in Europe where land restitution resulted in very fragmented smallholdings. Land reallocation into different institutional arrangements that could facilitate this process, while accounting for household characteristics and resource endowment, is critical and should be thoroughly understood. Therefore, policies that are designed to mesh the local conditions with the needs of the farmers are more likely to lead to long-term sustainable outcomes.

One of the main assumptions in this study is that the current institutional configuration around land reflects the choices made by landowners given market imperfections and constraints specific to transition. Therefore, understanding why these choices were made, why expectations such as land market participation were not met, and what are the potential benefits and drawbacks from these outcomes, will contribute to promoting informed policies and will, hopefully, expand the literature on institutional change and land reallocation.

¹⁵⁸ In addition, because informal associations are do different from formal associations, I cannot analyze them together with the formal type, under the general heading of associations.

At the heart of this analysis is the household, as a decision-making unit, making choices with respect to land reallocation based on exogenous factors (such as market conditions), resource endowment, household characteristics, social considerations, and historical legacies. Using multivariate statistical analysis on two unique household surveys from 1996 and 2006, this chapter aims to make a first set of inquiries into why farming associations persisted throughout the transition period. The main hypotheses I explore in this chapter, by decision tree (see Figure 8-1), are summarized in Table 8-1 and described below. These hypotheses are derived from the overview and analysis of farming arrangements in Chapter 7.

Table 8-1: Research hypotheses by decision tree

Hypothesis	Level 1: Individual vs. Alternative	Level 2: Association vs. Leasing
H1: Land fragmentation	-	+
H2: Physical capital	+	+
H3: Land per household member	+	-
H4: Age	-	-
H5: Productivity	+	+
H6: Alternative income opportunities	-	-
H7: Earlier private property	+	-

Hypothesis (1):

- L1: Households with more fragmented plots are more likely to seek alternative farming arrangements.
- L2: Households with more fragmented land plots are likely to join associations rather than lease out land because of lower transactions costs.

Hypothesis (2):

- L1: Landowners that own more physical capital are more likely to farm individually rather than seek alternative farming arrangements.

Hypothesis (3):

- L1: Households with a higher ratio of land to adults in the household are more likely to farm individually.
- L2: Households with a higher ratio of land to adults in the household are more likely to lease out.

Hypothesis (4):

- L1: Older households are more likely to seek alternative farming arrangements.
- L2: Older households are more likely to lease out land rather than join farming associations.

Hypothesis (5):

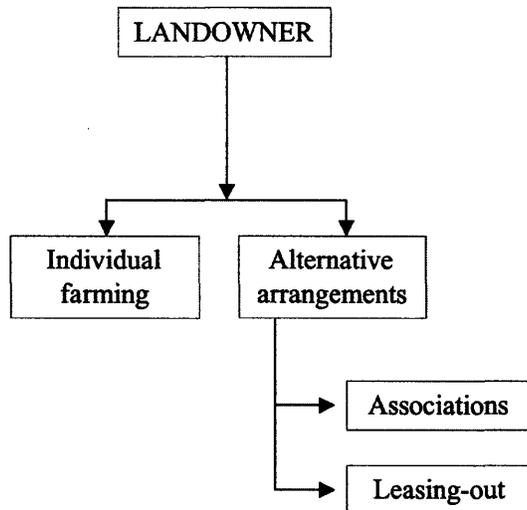
- L1: More productive farmers are more likely to farm the land individually.
- L2: More productive farmers are more likely to join associations.

Hypothesis (6):

L1: Landowners with non-farming income opportunities are more likely to seek alternative farming arrangements.

L2: Landowners with non-farming income opportunities are more likely to lease out land.

Figure 8-1: Landowners' decision tree in respect to land reallocation¹⁵⁹



The diagram in Figure 8-1 reflects the alternatives for land reallocation available to landowners following land restitution in the beginning of the 1990s. Within the boundaries imposed by economic and social constraints, the new landowners were free to decide how to best make use of the land assets they received in ownership. Given that the full set of choices was restricted, the main decision early on was whether a landowner should farm all the land individually, or seek alternative (mixed) institutional arrangements. The second major decision that households could make, and which was less explored in the literature, is the choice between becoming a member of an association and leasing out land, as two forms of land reallocation into alternative farming arrangements. Even if there are records of informal land

¹⁵⁹ I have not included the decision to sell land in the decision tree for two reasons. First, land sales were formally allowed only after 1998, and since only 13% of the households sold some land. The majority of these transactions (88%) occurred on the Western Plain. Second, and most importantly, I consider sales to be quite different than the other land reallocation alternatives. Land sales, as opposed to the other choices, assume complete transfer of ownership rights over the land plot that is the object of transaction. Nevertheless, future research should be undertaken once land markets develop further, to inquire into the factors that affect landowners' choices to sell or not land. I have conducted preliminary analysis on this question, where I found that the only main factors that differentiated household that sold from those that did not sell land were the age of the landowner, whether the household had capital endowment, and the legacy of private property rights in the region as a proxy for entrepreneurship. Given the small sample of households that engaged in land sales by this date, I will not discuss in further detail these findings.

leasing in the very first years of de-collectivization, I expect this choice to weight more in the decision process after 1998 when land market transactions were fully institutionalized.

Hence, decisions for land reallocation were made at different points in time. In the first half of 1990s, farmers had only the choice of farming in associations or farming individually, although cases of informal leasing arrangements were found. In 1994, Law 16 was implemented, which institutionalized leasing transactions. Later on, in 1998, Law 65 has significantly changed the earlier leasing law, and Law 54 was implemented to formalize the market for land sales, although, as in the case of leasing, informal transactions were recorded prior to 1998.

Figure 8-2: Availability of land reallocation alternatives throughout the transition period

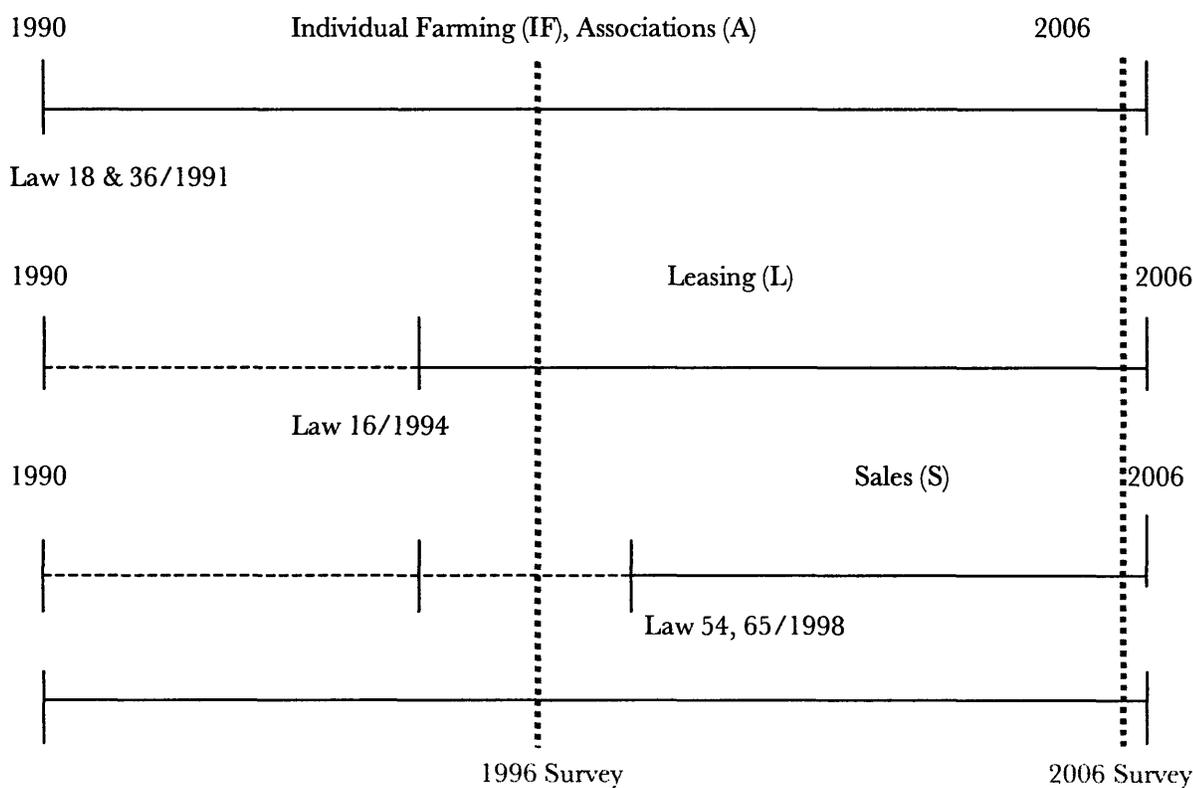


Figure 8-2 graphs the availability of land reallocation alternatives throughout the transition period. The dashed line indicates that, as fieldwork and other research studies have found, land market transactions were recorded even before the market was institutionalized. The timing of the two surveys is indicated by the dashed red vertical lines for year 1996 and 2006. As the figure illustrates, the 2006 household survey was able to capture important institutional changes mainly related to land market development, but also other changes such as complete elimination of subsidies for agricultural producers

in 1997, and efforts to adjust the sector to EU requirements prior to enlargement in 2007, process which was accelerated after 2001.¹⁶⁰

As I emphasized in the literature review discussion, Chapter 2, private individual farming was previously examined in the context of post-socialist transition and de-collectivization. Nevertheless, there is relatively less research on the farmers' choices for alternative arrangements and on the persistence of associations, in the context in which institutional change has proceeded at an unprecedented scale. In general, the literature is very critical of associational forms of farming, focusing on collective action problems, and in general on their tendency to generate lower returns. However, with no exception, the point of comparison in these studies is individual farming, through the lens of capitalist family-farms. There is less emphasis on comparing the reasons behind farmers' choices for associations relative to other market-based choices, such as land market transactions, when farming individually is not an option.

The next sections lay out the methodology, data, and the variables included in the statistical analysis. The last section discusses the main results and interpretations.

8.2 Econometric evaluation of the choice of institutional arrangements for land reallocation

The key question that frames this analysis is: Why do farmers persist in joining associations in Romania, despite perceived problems of collective action and the availability of leasing as a close substitute?

Because of the decision making process related to land reallocation, mapped by Figure 8-1, a few additional questions need to be explored. First, why do households seek alternative farming strategies instead of farming individually? Second, what are the factors that affect landowners' choices between associations and leasing arrangements? The hypotheses that will be examined through statistical analysis aim to capture the structural factors that explain the choices made by individual households, and the persistence of associations during transition.

8.2.1 Econometric methodology

Choice analysis is about explaining variability in behavioral response in a sampled population of individuals (Hensher et al. 2005 p. 72). Theories of individual choice behavior, that are at the core of empirical discrete choice models, require the specification of several assumptions.

¹⁶⁰ This figure is very important because it shows the important contribution that this study is making to the literature on post-socialist transition in Romania by extending the data available for research and policy decisions. In addition, this figure also suggests that if longer time series were available prior to 1996 and between 1996 and 2006, to form a panel, we could have conducted a quite detailed and in-depth statistical analysis to explain the outcomes from land reallocation.

The overall assumption is that individuals act rationally, that they take into account all the information they consider relevant in choosing an alternative. This means that we are accounting for a very complex interaction between an individual decision maker and his or her environment. Nevertheless, as Ben-Akiva and Lerman (2000 p. 38) mention, unless defined by a specific set of rules, the notion of rationality is not a very useful concept in describing individual behavior, because it is based on the beliefs of an observer about what the outcome of a decision should be. In this analysis, I use rationality to describe a decision maker with “consistent and transitive preferences.”¹⁶¹

Another assumption is that an individual acting rationally is assumed to compare alternatives and choose the one which gives the greatest level of utility (satisfaction). This means that each alternative is compared, and the individual chooses the alternative that yields the highest level of utility. Utility, in this case, can be defined as a function of higher returns (π), commune characteristics (γ), and social factors (θ).

$$U_{ij} = U_{ij}(\pi_{ij}, \gamma_{ij}, \theta_{ij}) \quad (1)$$

I assign a utility level U_{ij} to each alternative $j=1, \dots, J$, for each decision maker $i=1, \dots, I$. The utilities are determined by a large number of characteristics of the decision maker and the alternatives. The researchers have information on some of those determinants, but not on all. This is reflected in splitting the utilities into a deterministic part V_{ij} and a stochastic part ε_{ij} :

$$U_{ij} = V_{ij} + \varepsilon_{ij} \quad (2)$$

Based on the utility maximization assumption, an individual compares U_1, U_2, \dots, U_J , and chooses the one with maximum utility, i.e. $\max(U_j)$. For instance, if we had two alternatives, for which the utilities are defined by U_1 and U_2 , the choice would be made such that $C=1$ if $U_1 > U_2$, and $C=0$ if $U_1 \leq U_2$, where $C=1$ represents the choice for the first alternative, and $C=0$ represents the choice for the second alternative.

The term V_i is often referred to as the “representative component of the utility” (Hensher et al. 2005 p. 76) because it includes the observed and measured attributes. In its simplest form, V_i can be defined as a linear expression in which each variable is weighted by a unique weight (parameter) to account for that variable’s marginal utility input. I can write this definition as:

$$V_i = \beta_{0i} + \beta_{1i}(X_{1i}) + \beta_{2i}(X_{2i}) + \dots + \beta_{ki}(X_{ki}), \quad k=1, \dots, K \quad (3)$$

where β_{ki} is the parameter associated with variable X_k and alternative i .

¹⁶¹ For instance, it implies that an individual, under certain circumstances, will repeat the same choice of farming arrangements, and if farming arrangement ‘1’ is preferred to farming arrangement ‘2’ and farming arrangement ‘2’ is preferred to farming arrangement ‘3’, then farming arrangement ‘1’ is also preferred to arrangement ‘3’.

Because the researcher has less information, than the decision maker, to evaluate the outcomes, one can explain an individual's choice only up to a probability of an alternative being chosen.¹⁶² The probability P_{ij} that individual i chooses some alternative j is equal to the probability of U_{ij} being the largest of all $U_{i1}, U_{i2}, \dots, U_{ij}$. With $y_i \in \{1, \dots, J\}$ denoting the alternative that decision maker i chooses, this probability can be written as (Heiss 2002):

$$\begin{aligned} P_{ij} &= \Pr(y_i=j) = \Pr(U_{ij} \geq U_{ik} \quad \forall k=1, \dots, J; k \neq j) \\ &= \Pr(V_{ij} + \varepsilon_{ij} \geq (V_{ik} + \varepsilon_{ik}) \quad \forall k=1, \dots, J; k \neq j) \\ &= \Pr(\varepsilon_{ik} - \varepsilon_{ij} \leq (V_{ij} - V_{ik}) \quad \forall k=1, \dots, J; k \neq j) \end{aligned} \quad (4)$$

This equation states that due to lack of full information, the individual decision maker's utility maximization is a *random utility maximization*. The random utility approach was first formalized by Manski (1977). Given the deterministic parts of the utility functions V_{i1}, \dots, V_{ij} , this probability will depend on assumptions on the distribution of the stochastic error terms, $\varepsilon_{i1}, \dots, \varepsilon_{ij}$.

Depending on the number of alternatives, there are different types of discrete choice models. In this analysis, I examine the choice between three farming arrangements: private individual farming, formal associations, and leasing out land. Given the structure of the decision tree (see Figure 8-1), I chose to split the analysis into two binary logistic models: a simple logistic regression to account for the first decision level, and a logistic regression conditional on the earlier choice (on a sample subset). The decision a landowner takes on land reallocation can be described by two phases:

(i): Given resource endowment, other endogenous (specific to the household) and exogenous factors, the farmers decide whether to farm all the land themselves or to seek alternative farming arrangements.

(ii): If the farmers decide to seek alternative farming arrangements (hence, conditional on this choice), they will choose between joining associations or leasing-out land.

The probabilities that I will estimate based on the two binary logistic models are the following:

(a) The probability that a landowner farms all land individually:

$$\Pr(Y^I = 1/X) = \frac{\exp(X^I \beta_I)}{1 + \sum_{l=1}^J \exp(X^l \beta_l)}, \text{ for choice } j=0, 1 \quad (5)$$

¹⁶² Manski (1973) identified four distinct sources of randomness: unobserved attributes, unobserved taste variations, measurement errors and imperfect observation, instrumental (or proxy) variables.

where Y^I stands for the choice of farming individually ($Y^I=1$) or choosing alternative arrangements ($Y^I=0$), and X and β are the explanatory variables and the standardized regression coefficients, respectively, for the first stage binary choice model.

(b) The probability that a landowner seeks alternative farming arrangements:

$$\Pr(Y^I = 0 / X) = \frac{1}{1 + \sum_{l=1}^J \exp(X' \beta_l)}, \text{ for choices } j = 0, 1 \quad (6)$$

(c) The probability that a landowner chooses to join associations, given that he/she opted for alternative farming arrangements:

$$\Pr(Y^A = 2 / Y^I = 0) = \left(\frac{\sum_{l=1}^J \exp(Z' \gamma_l)}{1 + \sum_{l=1}^J \exp(Z' \gamma_l)} \right) * \left(\frac{1}{1 + \sum_{l=1}^J \exp(X' \beta_l)} \right), \text{ for choice } j=2,3 \quad (7)$$

where Y^A is the choice of farming the land in associations ($Y^A=2$) or leasing it out ($Y^A=3$), and Z and γ are the explanatory variables and the standardized regression coefficients, respectively, for the second stage binary choice model.

(d) The probability that a landowner chooses to lease-out land, given that he/she opted for alternative farming arrangements:

$$\Pr(Y^A = 3 / Y^I = 0) = \left(\frac{1}{1 + \sum_{l=1}^J \exp(Z' \gamma_l)} \right) * \left(\frac{1}{1 + \sum_{l=1}^J \exp(X' \beta_l)} \right), \text{ for choice } j=2, 3 \quad (8)$$

8.2.2 Data and variables

The data for this analysis derives from two household surveys (see Chapter 3 for more details on the survey description). The first survey was implemented in 1996 by the Ministry of Agriculture with funding and expertise from the European Commission and the World Bank, from which I extracted a regional sub-sample for the Western Plain and Central Romanian Plain. In the summer of 2006, I conducted a second survey, as a follow up, in the same villages and using the same sampling strategy. The sample size for this study is 246 households for 1996, and 619 households for 2006.

The statistical analysis¹⁶³ is carried out separately for the two years because, from an institutional point of view, I consider these two years very different from each other. Between 1996 and 2006 important legislative changes were adopted (as shown in

Figure 8-2), influencing the set of alternatives that landowners had in terms of land reallocation. Hence, by separating the analysis for the two years I am able to capture changes in behavior subsequent to these legislative adjustments.

Moreover, due to the specific characteristics of informal associations, as discussed in Chapter 7, I am including only households that joined formal associations. Family associations represent a special case of associations, which can only be examined separately. Moreover, as survey data shows, this institutional arrangement has seen a steady decline, in the past decade.¹⁶⁴ As a result, 40 households are excluded from the analysis.

Lastly, Table 6-7 and 6-8 in Chapter 6 showed that some households engaged in mixed farming arrangements, joining associations with part of the land, and leasing out other plots. However these observations were too few to be considered a separate category (10 households in 2006 and 6 in 1996). Hence, I included these households in the leasing category, given that they leased out a higher share of land than they were farming in associations.

The dependent variables for the discrete choice models are: 1) the choice of farming all land individually versus not, and 2) the choice of joining associations versus leasing out land. Table 8-2 shows the distribution of households in the different choice categories for the two dependent variables.

Table 8-2: Summary stats for the dependent variables used in the discrete choice models

	1996	2006
Phase 1		
- farming all land individually	48.8%	64.5%
- choosing alternative arrangements	51.2%	35.5%
Phase 2		
- joining associations	74.7%	43.1%
- leasing-out land	25.3%	56.9%

Source: Household surveys in 1996 and 2006.

The independent variables include a series of household specific variables (i.e. human capital, household productivity, endowment with physical capital, purchases of seeds), land characteristics (i.e. fragmentation), commune specific variables (i.e. land quality, distance to markets, share of arable land),

¹⁶³ Data were analyzed using STATA, Version 10.0.

¹⁶⁴ Among the households that joined associations, in 1996 32% were in informal associations. By 2006, this share declined to 26% of the households, as I showed in Figure 7-1 in Chapter 7.

and regional fixed effects. In the following section I describe each of the variables hypothesized to affect the choices for different property rights arrangements. .

Table 8-3 provides summary statistics for the independent variables included in the two models, grouped under three categories: household characteristics, farming characteristics, and commune characteristics. In the following sections I discuss each of these variables in greater detail.

Table 8-3: Summary statistics for the variables included in the analysis

		1996		2006	
		Mean	St. Dev.	Mean	St. Dev.
Household characteristics					
AGE	Age of the household head (years)	60	(14)	62	(14)
EDUC_YRS	Years of completed education for the household head (years)	6.56	(3.26)	7.53	(3.42)
LAND_ADULT	The share of owned land to the number of adults in the household (ha/person)	1.57	(1.61)	1.55	(1.99)
PRODUCT	Household productivity level	-0.001	(.81)	0.001	(0.68)
AGRIC_OCC	DV for agriculture as primary occupation	0.83	(0.38)	0.70	(0.46)
Farming characteristics					
FRAGM	Land fragmentation (# of plots) normalized by total land in ownership	1.38	(0.91)	1.55	(1.07)
TITLE	DV for possession of ownership title on land (nr. Of plots)	0.46	(0.50)	0.90	(0.30)
HIRE	DV for hired labor	0.19	(0.39)	0.31	(0.46)
HH_LABOR	The number of labor-days expended by household members	419	(229)	362	(252)
CREDIT	DV for contracting bank credits in the past year	0.05	(0.22)	0.13	(0.34)
CAPITAL	Capital index	.225	(.33)	0.001	(1.62)
SEEDS	DV for seeds purchase	0.46	(0.50)	0.59	(0.49)
LIVESTOCK	Livestock (# of animals)	3.68	(3.11)	3.13	(3.31)
Commune characteristics					
DISTANCE	Distance from the commune to the closest city (km)	17.70	(7.27)	18.28	(7.46)
PRIVATE	The share of land in private ownership by county in 1985	2.40	(3.21)	2.85	(3.32)
DENSITY	Population density in the commune	.573	(.30)	.571	(.29)
ARABLE	Share of arable land in the commune (%)	71.89	(14.82)	70.85	(15.11)

(*)The values in parentheses are standard deviations. (**) DV=dummy variable.

Household characteristics

Under the general heading of household characteristics I include conventional variables that measure the level and quality of human capital (age and education), measures of wealth, occupation, and household productivity.

Broadly speaking, human capital reflects the managerial skills and capabilities of rural households (Sahn and Alderman 1988; Foster and Rosenzweig 1994; Rizov 2003). Using the 1996 survey data for Romania, Rizov (2003) showed that human capital has a significant effect on the choice of farming

arrangement in Romania.¹⁶⁵ He finds that low skilled households are more likely to join associations. The human capital variables used here are the age and education of the household head. I consider that the head of the household is likely to have more decision power over the farm than other household members.¹⁶⁶

Age

In Chapter 7 I showed that the age of the household head varies by farming arrangement. Younger households tend to farm individually or to join associations, while older households are likely to lease-out land. Therefore, the effect of age on the choice of farming arrangements can be interpreted in different ways. Higher age generally implies a higher risk aversion, while it can also suggest higher managerial experience and ability.¹⁶⁷ Hence, I hypothesize that age has a nonlinear effect on the choice of institutional arrangements. I assume that older individuals have more farming experience and accumulated knowledge, and therefore they are more likely to farm the land themselves, or to join associations if they lack key resources for individual farming. Nevertheless, at higher age levels, leasing becomes a better alternative due to decline in farming abilities. Therefore I also add the square of age in the estimation process in order to account for this non-linear effect. Moreover, as I described in Chapter 6, average age is lower in the Western Plain relative to the Central Romanian Plain, suggesting that age may play an important role in explaining regional variation in the persistence of farming associations.

Education

I measure the level of education as years of education completed by the household head. I hypothesize that education matters not only as a proxy for managerial skills and ability to start up and run a farm but also as an indicator of access to off-farming job opportunities. As the level of education increases, so does the opportunity cost for labor. At one point, landowners would be able to find non-farming occupations with higher returns, and therefore one would expect them to seek alternative farming arrangements (i.e. join associations or lease-out).

Land-adult ratio

The land-adult ratio, is measured as the amount of owned and rented-in land in hectares divided by the number of people over 15 years living in the household. It represents a proxy for farm size as well as a measure of wealth. The average land-person ratio in 1996 was 1.5 hectares, almost the same as in

¹⁶⁵ His study examined the choice between individual farming, cooperative farming, hybrid farming, part-time and full time farming, and absentee owners.

¹⁶⁶ Rizov (2003) finds, however, that intra-household decision-making is fairly democratic and that there is an active exchange of knowledge within the household. Nevertheless, fieldwork shows that in general the opinion of the household head in the rural areas has higher weight in the final decision.

¹⁶⁷ In addition, as Field (1975) shows, young individuals may prefer off-farming employment, while older individuals may prefer to go back to full (or part) time farming. This finding is also confirmed by the fieldwork I conducted in the rural areas.

2006 (1.6 hectares per person). The average size of land farmed individually has not changed significantly in the past decade. In 1996 a household farmed on average 3.1 hectares of land, while by 2006 the share increased to only 3.3 hectares. This finding is rather surprising since based on economic theory, policy makers expected that once land markets are formalized and the leasing legislation becomes less cumbersome, small farms will increase to a more economical size, closer to the western model of family farms.

A higher share of land relative to adults in the household means that landowners can benefit not only from economies of scale, but also from increased opportunities for financing as land is most commonly used as collateral in transitional economies. Moreover, since land is the most important asset in farming, more land relative to labor is supposed to encourage individual farming. Therefore, I expect that households with a higher land-adult ratio will be more likely to engage in individual farming arrangements. Nevertheless, when the type of agriculture practiced is subsistence-based, and markets are imperfect (preventing landowners to match the amount of land with the availability of other assets), farmers with more land are likely to seek alternative farming arrangements, primarily leasing. Having more land reduces the transaction costs for participating in land markets.

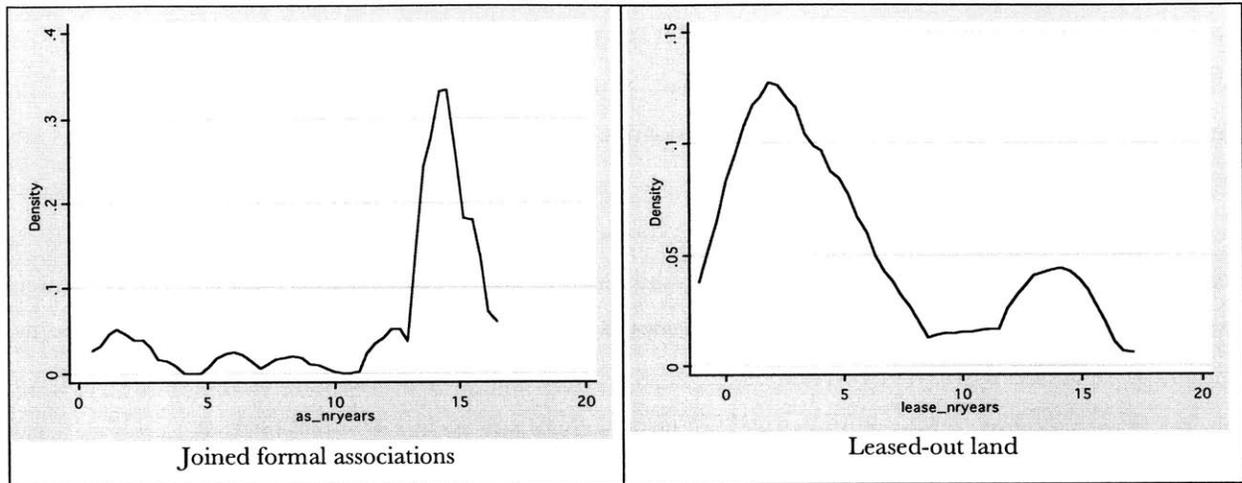
Agriculture as primary occupation

I also measure whether the primary occupation for the household head is agriculture. This is an important variable in the model because it also proxies for the availability of alternative sources of income and for whether the household is engaged in full time or part time farming. In 1996 83% of the households had agriculture as main occupation, while by 2006 the share declined to 70%. This decline might be a slight indication that the rural economy diversified. My hypothesis is that households with agriculture as the primary occupation are more likely to farm individually or within the institutional framework of associations. Hence, households that are either part-time farmers, or have alternative sources of income will be more likely to lease-out land.

Household productivity

Household productivity is a measure of farming ability and knowledge on the land farmed individually. As I discussed in Chapter 7, most households joined associations earlier in the transition. Hence, Figure 8-3 illustrates this pattern, showing that most households made the decision to join associations more than ten years ago. Also, households that leased-out land did so mostly two or three years before our last survey.

Figure 8-3: Kernel density distribution for the length of time since the household joined associations and leased out, respectively (2006 data)



Because these decisions were taken in the past, yields level in the survey year are not an appropriate measure to capture household productivity. The yield in 2005 (or 1995) includes all things that affect yield in that year, including a long-term measure of productivity of the household, all inputs used by the household, as well as shocks to yields in that period (e.g. pests, weather fluctuations). However, since I am examining choices ex-post, I need a measure of productivity that is time invariant, and more permanent, unlike the yields measure that depends on the resource endowment (i.e. use of physical and human capital, and inputs such as fertilizer and seeds) and weather conditions at the time of data collection.

Hence, to calculate productivity, I decomposed the level of yields into observable and unobservable factors through simple OLS multivariate regression.¹⁶⁸ By controlling for the endowment with different factors of production and human capital differences, I am able to isolate, what I call, the true measure of productivity reflected in the inherent farming knowledge, unaccounted for by other factors (such as inputs). Some of the factors that would be reflected in the level of productivity are better entrepreneurial skills, higher levels of farming expertise, better organizational structures, newer equipment, land quality at the parcel level, the care and timing of planting and harvesting.

¹⁶⁸ A better alternative for capturing the long-term productivity element in yields would have been the use of forecasting models, for example using the autoregressive coefficient from an AR model to predict a more permanent version of yields. I tested such models based on more aggregate yields data at the county level for seventeen years. However, because there is too much variation in yields at county level, the AR models are not well specified. However, this method would produce better results if we had a longer time-series (i.e. detailed yields data at commune level over a longer period of time). Nevertheless, in Romania, secondary statistics at commune or village data are not very reliable and agricultural production data prior to 1990 is subject to strong biases due to the communist production targets and presumed over-reporting of harvest levels. But, the AR models should be considered an option for future research.

I hypothesize that households with a higher productivity level are more likely to farm the land themselves rather than to seek alternative property rights arrangements. The assumption embedded within this hypothesis is that they households would seek alternative farming arrangements only as long as the their productivity level is higher in other sectors than farming. Moreover, in the choice between associations and leasing, households with a lower productivity level are expected to lease-out land and engage in non-farming activities, or to focus their productive energy on smaller plots of land. The model based on which I estimated household productivity is:

$$Y_i = \alpha_i + \beta_{1i}Labor + \beta_{2i}Land + \beta_{3i}Capital + \beta_{4i}Seeds + \beta_{5i}Fertilizer + \beta_{6i}Livestock + \beta_{7i}LFrags + \beta_{8-10i}Rainfall + \beta_{11i}Agroreg + \beta_{12i}Corn + \epsilon_i \quad (9)$$

where Y_i is the log of yields ($i=1, \dots, N$) and X_i includes a set of inputs used for farming, β_i are the estimated coefficients on the inputs, and ϵ_i is the error term. Below I will define each of the variables included in the productivity estimation model (9).

The measure for *yields* (Y_i) is the ratio of the quantity of output¹⁶⁹ and the number of hectares under cultivation. I choose to consider only the households that produce corn and/or wheat in order to avoid aggregation of different crops that might exhibit different production technologies. Moreover, corn and wheat are the main crops that have been traditionally cultivated in Romania. In our data, in 2006, 76% produced corn, 42% wheat, with an average acreage of 0.89 hectares for corn and 0.46 hectares for wheat (out of an average of 1.6 hectares of land farmed individually). The rest of the households produced a combination of other grains and crops (i.e. mainly vegetables).¹⁷⁰ A similar distribution of crops across households can be seen in 1996.

By including only households producing corn and/or wheat, the sample size was reduced from 619 to 491 cases in 2006, and from 246 to 185 cases in 1996. The 2006 sample is distributed in the following way based on crop type: 229 households produced only corn, 23 produced only wheat, and 239 produced both corn and wheat. From the difference of 128 households that cultivated no corn or wheat, 48 households have all owned land in associations, 49 households leased out all land to other farmers, and 31 households cultivated other crops than corn and wheat (see Table 8-4 for the relative distribution of the households across these characteristics).¹⁷¹ For 1996, 100 households produced only corn, 4 produced

¹⁶⁹ See Chapter 3 for a detailed description of the output measurement.

¹⁷⁰ 31% of the households produced vegetables, 22% hay, 13% sunflower, 13% grapes, 12% oat, 7% barley, 2% fruit, and 1% sugar beats and soy. The shares do not sum to 100% because several households cultivate more than one type of crop.

¹⁷¹ The households that do not work any of the land individually are older in age, have a lower level of education, and do not have children living in the households that could help with farming.

only wheat, and 81 produced both. The difference of 61 households cultivated other crops than corn or wheat.

Table 8-4: Farm types based on crop mix (%)

	1996	2006
Only corn	40.7	37.0
Only wheat	1.6	3.7
Both corn and wheat	32.9	41.7
Other crops*	24.8	20.6

*In 2006 some households released all land to associations or leased out, which are included in this category as well. Source: Household surveys in 1996 and 2006.

Labor stands for the number of days-labor by full-time and part-time household¹⁷², hired, and exchange labor on the farm. To convert the labor variable to labor-days I used Eurostat (2007) measurements according to which a worker employed on a full time basis in Romania works 245 days per year. Therefore, a half-time worker is considered to work 122.5 days and less than half-time 61.3 days. The 1996 labor data will be slightly underestimated because there is no record of the number of exchange labors (relatives and non-relatives) used between spring and autumn by the household. It has been often argued in the literature that hired (and exchange) labor should be valued lower than family labor effort due to labor monitoring problems, principle agent, and moral hazard problems (Rizov 2003; Sabates-Wheeler 2005). However, one limitation for this variable is that I did not account for the quality variation in labor inputs. Nevertheless, as Sabates-Wheeler (2005 p. 125) mentions, hired labor is not widely used in Romania, and most of the time they work side-by-side with the owner of the land, reducing monitoring problems. Moreover, day-laborers gain a reputation in small communities such as villages and communes, which acts as an indirect monitoring instrument and moral hazard prevention for the hired labor.

The other variables included in the model are the log of land farmed individually, the index of capital endowment (which will be described later), dummies for whether the household purchased seeds and fertilizer, livestock endowment, the log of land fragmentation (measured in number of land plots). In addition I use three measures for rainfall: the amount of rainfall in the year of study (1995 and 2005 respectively) at county level, average rainfall levels over the period 1901-1990 and 1901-2000, and seasonal rainfall for the two crops included in the yield measure (April to August for corn, and January to June for wheat). The distribution of productivity estimates is shown in Figure 8-4 below. The mean of the distribution is zero because household productivity was calculated as the residual of the estimation. In that sense, it measures relative productivity across the households.

¹⁷² The concept of family (household) labor is important in this context. This type of labor, as Chayanov (1966) argues, operates in a more or less closed universe where the producers also constitute the consumption unit, and therefore there is no separately identifiable concept of wage costs.

Figure 8-4: The Kernel density of household productivity in 1996 and 2006

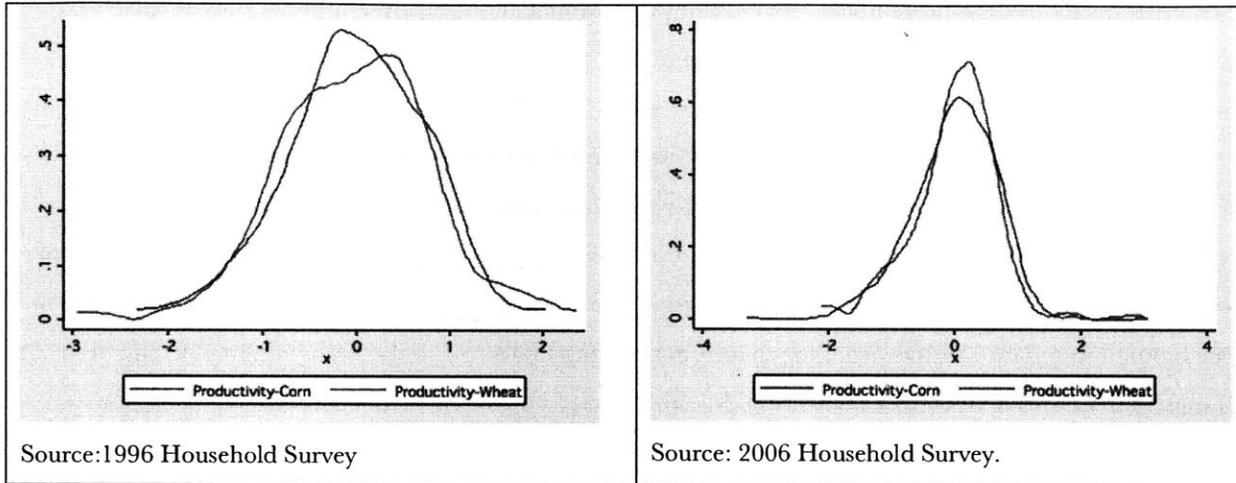


Figure 8-4 shows that distribution of household productivity for those that cultivate wheat and those that cultivate corn in 1996 and 2006. As we can notice from the figures, the k-density distributions are similar for the two crops (in 1996 the scores are slightly lower and more spread around the mean) reflecting the long-term component of household productivity across years.

Moreover, given that there is not much difference between the distribution of the productivity scores for households cultivating corn and wheat, I computed a weighted average of the two measures for each household. I use this weighted productivity average for the choice models. The average household productivity scores were calculated using a weighted average of the two household productivity measures where the weights are the inverse of the standard deviations.

Farming conditions

The variables included in this category measure the availability of resources necessary for farming (labor, capital, seeds, access to credit, livestock), and the degree of land fragmentation.

Labor

To measure labor I use the number of days spent on the farm by household members (part time and full time), as described above. I hypothesize that households who use more household labor are more likely to farm the land themselves rather than choose alternative farming arrangements.

Physical capital index

Capital is very scarce in the Romanian countryside. The survey instrument includes a list of eight different physical capital (agricultural equipment) items: truck, tractor, plough for tractor, combine for cereals, carriage, seeder, irrigation equipment, and processing equipment. The distribution of these different agricultural implements across households varies. In 2006, 13% owned a tractor, 12% owned

plough for tractor, and fewer than 6% owned any of the other items, with the exception of carriages that were owned by 29% of the households. Owning physical capital allows a household not only to farm at a larger scale, but it can also provide a source of revenue by allowing households to rent services to other farmers.

In order to get an index of capital stock, I used Principal Component Analysis (PCA), based on which I determined the weights of asset indices using the variables listed above. PCA is helpful when we have data on many variables and wish to develop a small number of (possibly) artificial variables (principal components) that will explain most of the variance in the observed variables. In PCA, it is assumed that there is some redundancy in the variables collected, implying that some of the variables are correlated with one another and are possibly measuring the same thing. The first principal component is the linear combination of variables with the largest amount of information common to all of the variables. The result obtained from the first principal component is usually used to develop the asset index based on the following formula:

$$K_j = f_1 * \left(\frac{k_{j1} - a_1}{s_1} \right) + \dots + f_n * \left(\frac{k_{jn} - a_n}{s_n} \right) \quad (10)$$

where K_j is the capital index for the j th household; f_i is the scoring factor for the first asset as determined by the procedure; k_{ji} is the j th household's value for the first asset; and a_i and s_i are the mean and standard deviation of the first asset variable over all the households.

Table 8-5: Physical assets weights determined by PCA

	1996	2006
Truck	0.010	0.176
Tractor	0.477	0.545
Plough	0.501	0.549
Combine for grains	0.392	0.315
Carriage	0.026	0.109
Seeder	0.399	0.440
Irrigation equipment	0.332	0.140
Equipment for processing	0.297	0.214

The weights determined from the above formula (see Table 8-5), for each type of asset, were used to determine the index for physical capital endowment.

Purchased seeds

Another variable to capture farming conditions and endowment with resources is a dichotomous variable that measures whether the household purchased *seeds* in the past year.¹⁷³ Because only a few households specified the amount of seeds they purchased, I was not able to account for the total quantity of seeds that was used by the household. Purchasing agricultural inputs suggests a tendency of the household to move away from traditional farming. Most of the time, subsistence farmers rely on seeds that result from domestic production, which are of lower quality affecting the level of production.

Livestock

Livestock is another measure for resource endowment, measured as the total number of animals in the household. A large livestock suggests, on the one hand, that the household is wealthier, and hence it would be likely to farm the land individually. On the other hand, it also suggests that the household is diversifying production away from crops, which in turn means that the landowner is likely to seek alternative farming arrangements.

Credit

Access to *credit*, is measured as a dummy variable for whether the household contracted a bank credit in the previous year or not. This variable aims to capture the ability of the household to invest and take risk. I hypothesize that farmers that contracted bank credits in the previous years are more entrepreneurial and will be more likely to farm their land individually.

Land title

The variable *title* shows the share of households with full ownership rights over the land in ownership. In the past decade significant progress was made in title distribution in the past decade. By 2006 almost 98% of the households had title deeds. Based on the two surveys, in 1996 the share of households with full title was 45%, while by 2006 this share has increased to 90% in the two regions, Western Plain and Central Romanian Plain. Hence, I assume that in our model the statistical significance of land titles will be higher in the 1996 sample.

The hypothesis here is that having full ownership rights over land gives landowners more security over their assets, allowing them to choose alternative farming arrangements (such as joining association, or leasing-out) without endangering their private ownership over the tenure period (as discussed in Chapter 2). Nevertheless, aside from the issue of security, cost in seeking alternative property rights arrangements is also important. For instance, if a household does not have full title for the land in ownership, leasing out will be very costly (both for him and for the tenant) because of registration fees and information gathering.

¹⁷³ Initially I also included a dummy variable for the purchase of fertilizer, but it did not prove to be a good estimate for the model.

Hence, I hypothesize that because of the informal contracting nature of associations, households with less secure property rights will be more likely to join associations rather than to lease out.

Land fragmentation

Land fragmentation is measured as the total number of plots that the land in ownership is divided into. This measure was normalized by the size of landownership (total land a household owns) in order to capture the “true” degree of fragmentation, rather than a wealth affect. In addition, I also took the log of

A plot, in this analysis, is not defined by what is cultivated on a piece of land, as is the case in the African context (Suri 2007). Rather, in studies focused on the CEE countries, a land plot is defined by its physical boundaries, as a measure of physical separation of land ownership into different units.

In 1996 the average number of plots owned by a household was 4, and by 2006 there was almost no improvement in land consolidation (an average of 3.7 plots).¹⁷⁴ Land fragmentation is probably the most frequently mentioned predicament to improving performance in the Romanian agriculture, not only by policy makers in Romania, but also by researchers and academics, and has been indeed one of the main challenges that Romanian agricultural was confronted with following land restitution.

As Currie (1981 p. 37) argues, there is wide agreement among scholars that the size, compactness and connectedness of an “operating unit”¹⁷⁵ determines the production possibilities available to the farmer and thus influences his activities, and the performance of agriculture. The problem of spread-out land plots (heterogeneous land) resides in higher transactions costs for the landowners, and inability to gain from economies of scale and the use of technology especially since the Romanian agriculture is mainly based on the production of corn and wheat. As Dumitru (2004) also argues, fragmentation is a major obstacle to technological progress, as subsistence farmers, farming a large portion of the land, do not have the capacity to invest in modern machinery. Therefore, because of small and fragmented land plots farmers had no choice but to resort to traditional (manual) production techniques.

Nevertheless, at times, in a traditional economy, and when market imperfections are pervasive, land fragmentation can act as an economic risk buffer despite higher costs incurred by needing more labor at peak harvesting times, and commuting between the different plots. In addition, extensive land consolidation could leave many people landless, putting higher social pressure on the rural communities (FAO 2005). Land fragmentation can reduce risk through the differences in land quality among plots (Scott 1976). Nevertheless, despite the positive aspect of fragmentation for subsistence farmers, the costs spawned as a result (especially when it comes to crops such a corn and wheat requiring more mechanical implements) are not negligible.

¹⁷⁴ The average ratio of number of plots to the land in ownership was 1.4 in 1996 and 1.5 in 2006, showing little improvement over the decade.

¹⁷⁵ By operating unit, the author refers to a land area which is farmed as a single unit by some individual or group. The land comprising of an operating unit need not be contiguous.

Aside from this debate between positive and negative outcomes from land fragmentation, a more nuanced aspect relates to the degree of fragmentation (the number of spread out plots). First, I hypothesize that land fragmentation does pose a cost for landowners wishing to farm the land themselves. But, whether they choose to farm the land in associations or to lease it out, depends on how severe is the level of fragmentation. Hence, I hypothesize that at higher degrees of land fragmentation, landowners benefit more from farming in associations (rather than leasing out), where consolidation can be achieved easier and at lower cost (see Chapter 7). By doing so, landowners (and to a certain extent, the association) gain from risk-spreading strategies. FAO (2002) also makes a similar argument, but not sufficiently articulated, claiming that the presence of associations is an asset for land consolidation, especially if the perceived association advantages are analyzed.

When I discuss the issue of land fragmentation, it is important, however, to understand why the restitution policy resulted in such a fragmented land distribution in Romania. As Dumitru (2002 p. 5) argues, the pattern of land holdings behind the 1990s land restitution emerged from the radical reform in 1918 that expropriated large areas of land from foreigners, absentee owners, and native owners with more than 250 hectares of land (see Chapter 4 for more details). Landless and smallholders were given an average of three hectares. However, as Dumitru (2002) further explains, due to high population growth in the rural areas, lack of non-farm employment, the inheritance right existent at that time (based on equal distribution between heirs) became “a veritable land ownership chopper.” As a result, “the subdivision of households could not be avoided and the households were divided and re-divided and interchanged as a result of marriage until a single peasant ended up farming a dozen of tiny plots, often widely spread.” Moreover, it has been suggested in the literature that where land is fertile, affording its cultivators relatively high living standards, population increases are likely to be relatively high (Sen 1966). As a result, fragmentation of units thorough inheritance may be most rapid on fertile land when improved farming methods are available (Currie 1981 p.140).¹⁷⁶

Commune characteristics

Land quality

Land quality is measured as the share of good quality land (category I and II) into total agricultural land at the commune level. One of the limitations of this dataset is the unavailability of farm

¹⁷⁶ Drawing from the England case, Currie (1981 p. 140) argues that large land estates are rarely subdivided between family members. He claims that in England, when divisibility was established, the majority of large landowners adopted as customary the previous law of primogeniture, based on which the property descends to the eldest son. Because consolidation was a laborious process, every effort was made to preserve intact the estates. Moreover, the device of settlement was employed preventing the current incumbent from selling land. Therefore, the degree of land fragmentation is contingent on the legal framework with respect to inheritance.

(or plot) level land quality information. To partially overcome this drawback, commune level data is supposed to provide some indication of land quality in the particular areas included in the analysis.

The literature suggests that landowners are more likely to give associations land that is of poorer quality (Verdery 2004b). Therefore, one could argue that in regions where land quality is not very high, the probability of landowners farming in associations, or leasing out land, is higher.

Distance to markets

The distance from the commune to the closest city is a proxy for the access of the households to local markets. The average distance in the communes included in the survey sample is 18 kilometers. Nevertheless, there is quite a significant variation in access to markets across the 45 villages. The effect of market access on the choice of farming arrangements is important, but hard to predict ex-ante because of its close interconnection to the local economy and broader market conditions. One hypothesis is that easier market access lowers the cost of landowners to commercialize their products and increases access to information on market conditions (i.e. price and demand). This should facilitate individual farming. As a result, holding other factors constant, a more difficult market access (i.e. longer distance to the urban areas) should determine farmers to seek alternative farming strategies (associations or leasing opportunities), which, because of their larger scale of operation, are able to better commercialize the harvest. Nevertheless, a higher distance to markets (to the urban areas) could also mean that private entrepreneurs (who could lease land from small landowners) are less interested in investing in an area that is more remote from markets, and which calls for higher transaction costs. Therefore, I hypothesize that when this is the case associations are the only alternative for reducing transaction costs for landowners.

Initial conditions

In order to account for the path-dependent effect of property rights or farming practices, I use a variable that measures the share of land in private ownership in 1985 at county level, before de-collectivization, first used by Rizov et al. (2001). A high share of land in private ownership during socialist agriculture is a proxy not only for a higher attachment to land but also for a stronger entrepreneurial behavior. Generally, the regions with more land in private ownership during collectivization were either in mountain areas (where collectivization was hard to carry out) or in areas where the history of private property rights was longer (such as in Transylvania) and as a result there was more opposition to the imposition of collective farming practices. Nevertheless, despite similarities in geography, regional differences in the level of private land ownership in 1985 are significant: 5.5% of total agricultural land in the Western Plain as compared to 0.1% in the Central Romanian Plain. This disparity is even more striking since the southern plains are more uniform in topography, while in the West there are more hilly areas. Such differences can only be explained through historical variation in property rights and subsequent collectivization practices, as I will discuss in Chapter 9.

Therefore, this variable captures both path-dependent as well as entrepreneurial regional characteristics. I hypothesize that in regions that had a higher share of private property in 1985, the probability of households engaging in private individual farming is higher than seeking alternative farming arrangements.

Share of arable land

The share of arable land in the commune aims to capture the specialization of the commune in agriculture. More arable land in the commune suggests that there is a higher potential for large scale agriculture, which would make associations or leasing more attractive alternatives.

8.3 Results and interpretations

The analysis is conducted at multiple levels across a decade of transition. Therefore, the results are presented and discussed separately for the two years. However, I tested how the coefficients changed across the two decades by pooling the data for the two years together and interacting a time dummy with all the variables.

Within each year, I broke down the results into the two types of household decisions: a) farming individually versus choosing alternative institutional arrangements; and b) conditional on choosing alternative farming arrangements, whether the household chose to join associations rather than to lease-out land. However, because the sample size is small for the 1996 dataset, the logit regressions allow only for a very limited estimation. Therefore, comparisons between the two years on this model should be made with care.

Table 8-6, Table 8-7, Table 8-8 and Table 8-9 display marginal effects for the two decision levels in four different models (i.e. controlling for different variables). Table 8-10 displays the marginal effects for the model that tests the difference in coefficients between the two years.

Discrete choice models can reflect a large amount of complexity, which is rarely done justice to by conventional results interpretation (King et al. 2000). Hence, in this analysis I rely on the technique of statistical simulation¹⁷⁷, to extract the overlooked information and present it in a reader-friendly manner along different dimensions.

Below, I discuss the main results (in light of the hypotheses stated earlier), in order to reach an explanation for why associations persisted throughout the transition period.

¹⁷⁷ “Statistical simulation uses the logic of survey sampling to approximate complicated mathematical calculations [...] We learn about a distribution by simulating (drawing random numbers) from it and using the draws to approximate some features of the distribution. The approximation becomes more accurate as we increase the number of draws” (King et al. 2000 p. 349). In this analysis, I use a number of 1,000 draws.

Table 8-6: Estimation results (2006)– Logit Regression: Individual farming (1) vs. Alternative arrangements (0) (marginal effects)

	(1)	(2)	(3)	(4)
Household characteristics				
Age	.014* (.007)	.021** (.009)	.018** (.008)	.021** (.009)
Squared age	-.0001 (.000)	-.0001* (.000)	-.0001** (.000)	-.0002** (.000)
Years of education	-.007 (.006)	-.009 (.006)	-.013* (.007)	-.014* (.007)
Ratio of land to adults	-.044** (.017)	-.060** (.019)	-.039** (.017)	-.044** (.019)
HH productivity	.032 (.047)	.002 (.039)	-	-
Agric. main occupation	-.120* (.060)	-.114* (.064)	-.094* (.040)	-.064 (.057)
Farming conditions				
Land fragmentation ratio	.061** (.025)	.039 (.027)	.059 (.039)	.052 (.039)
Ownership title	-.001 (.051)	-.005 (.054)	-.084 (.084)	-.089 (.106)
Use of HH labor	.0003** (.000)	.0001* (.000)	.0005** (.000)	.0001** (.000)
Took credit	.099** (.047)	.125** (.040)	.097 (.074)	.149* (.065)
Capital index	.179*** (.041)	.166*** (.020)	.248** (.063)	.222** (.078)
Purchased seeds	.204** (.078)	.090 (.075)	.291*** (.065)	.240*** (.065)
Livestock	-.006 (.007)	.000 (.009)	-.007 (.009)	-.002 (.011)
Physical characteristics				
Land quality	-.002* (.001)	-.004** (.003)	-.004** (.001)	-.005** (.002)
Access to markets	.009** (.005)	.009** (.004)	.003 (.006)	-.006 (.007)
Share of arable land	-.002 (.004)	.005 (.004)	-.004 (.005)	.003 (.006)
Dummy-Western Plain	.363*** (.125)	.430** (.146)	.370** (.117)	.366* (.216)
Commune fixed effects	No	Yes	No	Yes
Pseudo R-Squared	0.422	0.520	0.372	0.451
Observations ^(a)	457	457	613	613

Note: Clustered standard errors in parentheses. The table reports the coefficients and the standard errors with various independent variables, namely the age (and age squared) of the household head, the number of completed education years for the household head, the ratio of owned land to the number of adults in the family, household productivity, dummy variable for whether agriculture is the main occupation, the log of land fragmentation normalized by owned land, a dummy for whether the household has ownership title, the share of household labor, whether the household took loans, the capital index, a dummy for whether the household purchased seeds, the stock of animals, land quality at commune level, distance to markets, share of arable land in the commune, and a dummy for the Western Plain region. Model (2) and (4) control for commune fixed effects by adding commune dummies.

Significance levels: (*) $p < .10$; (**) $p < .05$; (***) $p < .01$.

^(a) In Model 1 and Model 2, the difference of 162 households from the total number of observations (619) derives from missing cases on the productivity calculation (19 households in labor_days, 49 in land, 5 in livestock, 1 in land fragmentation, with 30 of these overlapping). In Model 3, the difference of 6 households from the total number of observations derives from missing cases on land fragmentation (1 case) and livestock (5 cases).

Nevertheless, the results are similar along all the covariates when the model is restricted to 457 households.

Table 8-7: Estimation results (2006) – Logit Regression: Associations (1) vs. Leasing-out (0) (marginal effects)

	(1)	(2)	(3)	(4)
Household characteristics				
Age	.042** (.015)	.031** (.017)	.032* (.018)	.028 (.020)
Squared age	-.0003** (.000)	-.0002 (.000)	-.0003* (.000)	-.0002 (.000)
Years of education	.022* (.012)	.024 (.016)	.033** (.015)	.035** (.017)
Ratio of land to adults	.080** (.029)	.130** (.032)	.021 (.032)	.037 (.032)
HH productivity	.302** (.095)	.256 (.165)	-	-
Agric. main occupation	-.107 (.128)	-.081*** (.126)	.031 (.103)	.069 (.102)
Farming conditions				
Land fragmentation ratio	.393** (.161)	.498** (.215)	.318*** (.078)	.364*** (.092)
Ownership title	-.012 (.123)	-.031 (.184)	.239* (.091)	.265* (.098)
Use of HH labor	.001* (.000)	.001 (.001)	.0004** (.000)	.0004* (.000)
Physical characteristics				
Land quality	.010* (.005)	.010* (.005)	.009** (.003)	.009** (.003)
Access to markets	-.041** (.013)	-.057** (.018)	-.030*** (.009)	-.034** (.012)
Dummy-Western Plain	-.199 (.149)	-.247 (.150)	-.241** (.101)	-.250** (.115)
Commune fixed effects	No	Yes	No	Yes
Pseudo R-Squared	0.396	0.526	0.367	0.412
Observations ^(a)	108	108	192	192

Note: Clustered standard errors in parentheses. The table reports the coefficients and the standard errors with various independent variables, namely the age (and age squared) of the household head, the number of completed education years for the household head, the ratio of owned land to the number of adults in the family, household productivity, dummy variable for whether agriculture is the main occupation, the log of land fragmentation normalized by owned land, a dummy for whether the household has ownership title, the share of household labor, the capital index, land quality at commune level, distance to markets, share of arable land in the commune, and a dummy for the Western Plain region. Model (2) and (4) control for commune fixed effects by adding commune dummies.

Significance levels: (*) $p < .10$; (**) $p < .05$; (***) $p < .01$.

^(a) In Model 1 and Model 2, 85 households dropped out of the analysis because of missing values on the independent variables. In Model 3, only 1 household (out of a total of 193 observations) dropped out because of missing values in the land fragmentation variable.

Nevertheless, the results are similar along all the covariates when the model is restricted to 108 households.

Table 8-8: Estimation results (1996)– Logit Regression: Individual farming (1) vs. Alternative arrangements (0) (marginal effects)

	(1)	(2)	(3)	(4)
Household characteristics				
Age	-.049** (.013)	-.025 (.022)	-.049** (.018)	-.027 (.023)
Squared age	.0004** (.000)	.0001 (.000)	.0004** (.000)	-.0002 (.000)
Years of education	-.028** (.013)	-.015 (.019)	-.025** (.013)	-.010 (.018)
Ratio of land to adults	-.051 (.046)	-.032 (.067)	-.043 (.039)	-.040 (.070)
HH productivity	-.093 (.061)	-.186* (.092)	-	-
Agric. main occupation	.011 (.129)	.147 (.172)	-.074 (.130)	-.194* (.100)
Farming conditions				
Land fragmentation ratio	.240*** (.071)	.307** (.107)	.188** (.082)	.320** (.117)
Ownership title	-.263** (.114)	-.245** (.173)	-.078 (.118)	-.196 (.176)
Use of HH labor	.0002 (.000)	.0004 (.000)	.0003 (.000)	.0005* (.000)
Took credit	-.261** (.088)	-.300** (.124)	-.183 (.120)	-.295** (.103)
Capital index	-.211 (.246)	-.012 (.034)	-.225 (.193)	-.584** (.153)
Purchased seeds	.119 (.083)	.206 (.131)	.229** (.094)	.234* (.136)
Livestock	.070*** (.019)	.110*** (.032)	.058** (.024)	.114*** (.031)
Commune characteristics				
Land quality	.006** (.002)	.168*** (.015)	.002 (.024)	.172** (.013)
Access to markets	.010 (.009)	-.418*** (.031)	.006 (.009)	-.427*** (.028)
Share of arable land	-.007 (.006)	-.239*** (.020)	-.010 (.008)	-.246*** (.017)
Dummy-Western Plain	.316** (.120)	.461*** (.143)	.303** (.117)	.487*** (.140)
County fixed effects	No	Yes	No	Yes
Pseudo R-Squared	0.348	0.517	0.304	0.526
Observations ^(a)	179	179	228	228

Note: Clustered standard errors in parentheses. The table reports the coefficients and the standard errors with various independent variables, namely the age (and age squared) of the household head, the number of completed education years for the household head, the ratio of owned land to the number of adults in the family, household productivity, dummy variable for whether agriculture is the main occupation, the log of land fragmentation normalized by owned land, a dummy for whether the household has ownership title, the share of household labor, whether the household took loans, the capital index, a dummy for whether the household purchased seeds, the stock of animals, land quality at commune level, distance to markets, share of arable land in the commune, and a dummy for the Western Plain region. Model (2) and (4) control for commune fixed effects by adding commune dummies.

Significance levels: (*) p<.10; (**) p<.05; (***) p<.01.

^(a) In Model 1 and Model 2, 49 households dropped out of the analysis because of missing values on the independent variables. In Model 3, 18 households (out of a total of 246 observations) dropped out because of missing values in the land fragmentation variable.

Nevertheless, the results are similar along all the covariates when the model is restricted to 179 households.

Table 8-9: Estimation results (1996)– Logit Regression: Associations (1) vs. Leasing-out (0) (marginal effects)

	(1)		(2)		(3)		(4)	
Household characteristics								
Age	.032	(.064)	.011	(.062)	.005	(.037)	.005	(.043)
Squared age	-.0004	(.000)	-.0003	(.000)	-.0002	(.000)	-.0002	(.000)
Years of education	.026	(.021)	.012	(.015)	.025*	(.014)	.024**	(.014)
Ratio of land to adults	.095**	(.054)	.075	(.054)	.017	(.031)	.017	(.031)
HH productivity	.037	(.095)	.005	(.097)	-		-	
Agric. main occupation	.585*	(.282)	.785**	(.198)	.710***	(.106)	.713***	(.107)
Farming conditions								
Land fragmentation	.222	(.197)	.244	(.176)	.163	(.156)	.164	(.155)
Ownership title	.254**	(.153)	.293*	(.163)	-.064	(.085)	-.067	(.094)
Commune characteristics								
Dummy-Western Plain	.099	(.165)	.238	(.237)	.029	(.134)	.050	(.179)
Commune fixed effects	No		Yes		No		Yes	
Pseudo R-Squared	0.301		0.323		0.266		0.267	
Observations ^(a)	45		45		77		77	

Note: Clustered standard errors in parentheses. The table reports the coefficients and the standard errors with various independent variables, namely the age (and age squared) of the household head, the number of completed education years for the household head, the ratio of owned land to the number of adults in the family, household productivity, dummy variable for whether agriculture is the main occupation, the log of land fragmentation normalized by owned land, a dummy for whether the household has ownership title, the capital index, and a dummy for the Western Plain region. Model (2) and (4) control for commune fixed effects by adding commune dummies.

Significance levels: (*) $p < .10$; (**) $p < .05$; (***) $p < .01$.

^(a) In Model 1 and Model 2, 14 cases dropped out of the analysis because of missing values on the household productivity variable. In Model 3, 14 cases (out of a total of 91 observations) dropped out because of missing values in the land fragmentation variable.

Nevertheless, the results are similar along all the covariates when the model is restricted to 45 households.

Table 8-10: Testing the difference between the two years (1996 and 2006) along the independent variables in the two choice models

	Individual vs. Alternative		Associations vs. Leasing	
Age	-.040***	(.011)	.079	(.078)
Squared age	.0003**	(.000)	-.001*	(.001)
Years of education	-.023**	(.009)	.077	(.047)
Ratio of land to adults	-.040	(.032)	.307**	(.155)
HH productivity	-.070	(.045)	.182	(.227)
Agric. main occupation	.012	(.104)	.751***	(.106)
Land fragmentation	.187***	(.056)	.230	(.224)
Ownership title	-.172**	(.052)	.462**	(.180)
Use of HH labor	.0001	(.000)	.002**	(.001)
Took credit	-.162**	(.083)	-	
Capital index	-.017	(.015)	-.344***	(.057)
Purchased seeds	.092	(.070)	-	
Livestock	.057***	(.016)	-	
Land quality	.005**	(.002)	-	
Access to markets	.007	(.007)	-	
Share of arable land	-.006	(.005)	-	
Dummy-Western Plain	.256**	(.094)	.329**	(.164)
Year (1=2006, 0=1996)	-.853**	(.164)	.818	(.892)
Year*Age	.056***	(.015)	-.013	(.082)
Year*Squared age	-.0004**	(.000)	.001	(.001)
Year*Years of education	.015	(.012)	-.064	(.050)
Year*Ratio of land to adults	-.015	(.041)	-.265*	(.151)
Year*HH productivity	.113*	(.054)	.020	(.241)
Year*Agric. main occupation	-.164	(.110)	-.872***	(.097)
Year*Land fragmentation	-.127**	(.063)	.044	(.262)
Year*Ownership title	.226*	(.123)	-.295	(.188)
Year*Use of HH labor	.0002	(.000)	-.001	(.001)
Year*Took credit	.174***	(.041)	-	
Year*Capital index	.094***	(.016)	.398***	(.054)
Year*Purchased seeds	.108	(.101)	-	
Year*Livestock	-.069***	(.020)	-	
Year*Land quality	-.007***	(.002)	-	
Year*Access to markets	.003	(.007)	-	
Year*Share of arable land	.003	(.006)	-	
Year*Dummy-Western Plain	.131	(.152)	-.522*	(.185)
Commune fixed effects	No		No	
Pseudo R-Squared	0.408		0.289	
Observations ^(a)	636		153	

Note: Clustered standard errors in parentheses. The table reports the coefficients and the standard errors with various independent variables and their interaction with the year dummy (1 for 2006 and 0 for 1996). Significance levels: (*) p<.10; (**) p<.05; (***) p<.01.

8.3.1 Why do households seek alternative farming strategies instead of farming the land individually?

The decision to farm the land individually was often described as a structural problem, depending on the degree of access to resources and on farming ability (Rizov et al. 2001; Sabates-Wheeler 2005). My findings confirm these earlier explanations and add additional nuances to understand why some households seek alternative institutional arrangements rather than farm all land individually. For a more thorough interpretation of the results in Tables 8-6 through 8-9, I used statistical simulation for different variables and I generated graphs and confidence intervals around the estimates.¹⁷⁸ I computed predicted outcomes (probabilities) as a single independent variable changes over a specified range, holding other variables constant. New variables containing these values were generated and then plotted. Computing predicted outcomes is important because it allows us to be more precise in interpreting the results, as the figures below illustrate.

The results differ significantly along several variables between the two years, 1996 and 2006. These differences are interesting in that they point to changes in economic and social circumstances across the decade of transition. Qualitative fieldwork is able to better capture these changes over time. Another important note to make is that since two separate regressions were run for 1996 and 2006, the results for the two years are not comparable in terms of magnitude. What matters in this comparison is the sign of the coefficients.

Hypothesis (1): Land Fragmentation

As discussed in the previous chapters, land fragmentation poses major challenges for the development of agricultural sector in Romania. The multitude of tiny and spread out land plots prevent mechanization and increase transaction costs for the small farmers. Nevertheless, there could also be a positive side of land fragmentation. Having many spread out tiny plots may offer a risk spreading strategy for the farmers by diversifying their crops across plots with different physical characteristics (i.e. land quality).

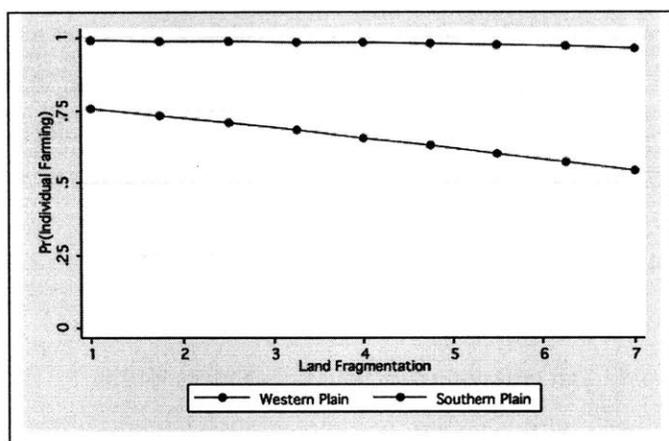
The results for the relationship between land fragmentation (normalized by the land in ownership) and the decision to engage in alternative farming arrangements show interesting findings. First, in both years households with a high degree of land fragmentation were more likely to farm the land individually. This suggests that, due to the subsistence character of agricultural production, land fragmentation offers a risk spreading strategy for the small farmers wishing the farm the land themselves. In 1996 the statistical significance of land fragmentation persisted even after I controlled for commune fixed effects. By 2006,

¹⁷⁸ To obtain predicted values I used the Long's set of Stata commands described in Long and Freese (2003).

however, the effect of land fragmentation diminished, as also shown by the result in Table 8-10 (i.e. the interaction between the 2006 year dummy with land fragmentation is negative and significant at 5% level).

Another interesting finding, less explored in earlier literature, is that there are regional differences between the effects of land fragmentation on the decision to reallocate land away from individual farming. Figure 8-5 shows that in the South the probability of seeking alternative farming arrangements at higher levels of land fragmentation is higher than in the West, where this factor does not seem to play a critical role. Since capital endowment is higher in the Western Plain, land fragmentation can be overcome much easier, and can even be used as a positive attribute for risk spreading. In the Central Romanian Plain, however, aside from physical resource constraints, age levels are also higher, as we saw in earlier chapters (Chapters 6 and 7). Hence, this suggests that risk spreading by farming individually tiny plots is more costly for farmers in the South as compared to farmers in the West.

Figure 8-5: The probability of farming individually and land fragmentation by agro-region in 2006



Hypothesis (2): Physical capital endowment

As was also emphasized by earlier research (Rizov et al. 2001; Sabates-Wheeler 2005; Lerman et al. 2004), access to physical capital is another critical factor that affects the decisions households take in terms of land reallocation, influencing their ability to farm efficiently. Therefore, it is not surprising to find that households with a higher capital endowment are more likely to farm their land individually. The results in

Table 8-6 show that in 2006 a one-unit increase in the capital index raised the probability of farming individually by 0.17 (slightly higher when we do not control for productivity differences).

In 1996 the relationship between the capital index and the choice between farming individually was statistically significant (at 5% level) but negative (a one unit increase in the capital index raised the

probability of seeking alternative farming arrangements by 0.56 when controlling or commune fixed effects). One explanation for this outcome resides in the very different economic and social conditions a decade earlier. In 1996 only a few households owned anything else aside from carriage and basic tools for farming.¹⁷⁹ Because of lower capital endowment, earlier in the transition landowners were more likely to draw on the benefits from joining associations. However, a decade later, when the ability to purchase agricultural equipments (i.e. tractors) improved, as well as the market conditions, landowners viewed farming individually as entailing lower risks.

Nevertheless, the effect of physical capital endowment (as measured by the capital index) on the choice between farming individually and choosing alternative arrangements was much stronger in 2006 than it was in 1996 (significant at 1% level), as Table 8-10 illustrates.

Hypothesis (3): Land ratio to adult household members

Land-adult ratio, measured as the amount of owned land and rented-in land (in hectares), divided by the number of adult individuals living in the household (over 15 years old), represents a proxy for farm size as well as a measure of wealth. I hypothesize that a higher share of land relative to the household adult members means that landowners can benefit from economies of scale as well as from increased opportunities for financing, land being commonly used as collateral. As I discussed earlier, in Romania it is considered that landowners can benefit from economies of scale for farms larger than 5 hectares, while currently, most farms average less than 2 hectares (Gavrilescu and Gavrilescu 2007).

What I find, however, is that households with a higher endowment of land per adult member are more likely to engage in alternative farming arrangements. As the land-person ratio increases by one unit, the probability of engaging in alternative farming arrangements increases by 0.05, significant at 5% level only in 2006. Nevertheless, the difference between the two years is not statistically significant, as Table 8-10 shows.

This result confirms again the subsistence character of private individual farming in Romania, as well as the small scale of farming (potentially constrained by lack of access to finance and capital). Table 8-11 also shows that there is a large difference between the 25th (0.2 hectares per adult) and the 95th (5 hectares per adult) percentile of land-adult ratio (low and high levels). In 2006 the probability of choosing alternative farming arrangements was 0.355 for a high land-adult ratio, while only 0.052 for a low land-adult ratio. A similar trend can be observed for 1996, although the probability of choosing alternative institutional arrangements is higher for low levels of land-adult ratio.

¹⁷⁹ In the second half of the 1990s the government subsidized the prices for tractors, increasing the access of small and medium farmers to agricultural equipments.

Table 8-11: The probability of choice and confidence interval for high and low values of land-adult ratio

	Probability of farming individually	Probability of farming in alternative arrangements
2006		
Low land-adult ratio	0.948 CI: [0.909 0.988]	0.052 CI: [0.013 0.091]
High land-adult ratio	0.645 CI: [0.433 0.857]	0.355 CI: [0.143 0.567]
1996		
Low land-adult ratio	0.885 CI: [0.782 0.988]	0.115 CI: [0.012 0.218]
High land-adult ratio	0.689 CI: [0.439 0.939]	0.311 CI: [0.061 0.561]

Note: Low – 25th percentile; High – 95th percentile; CI – confidence interval for the probability estimate.

Therefore, only households that have surplus of land beyond what they need to secure a minimum standard of living for the family will contract out land to associations or would lease it to other private farmers. Since land is the main source of income and food for the majority of the rural population, land reallocation occurs only for households with a higher endowment of land relative to household size.

These findings also suggest that because of high transaction costs associated with the alternative farming strategies (leasing in particular), it is easier for households with more to participate in land transactions.

Figure 8-6 shows that in 2006 the probability of engaging in alternative institutional arrangements for farming increased from 0.05 at a low level of land-adult ratio, to 0.36 when the ratio is higher. A similar trend can be observed for 1996.

Figure 8-6: The probability of choosing to farm individually and in alternative arrangements, at different levels of land-adult ratio in 2006

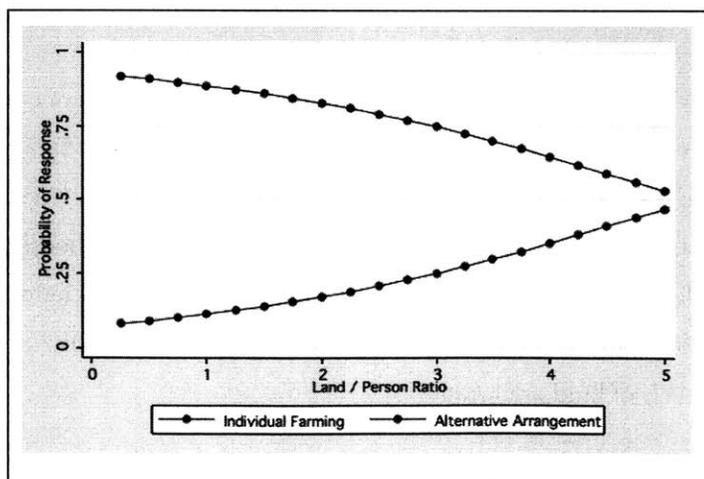
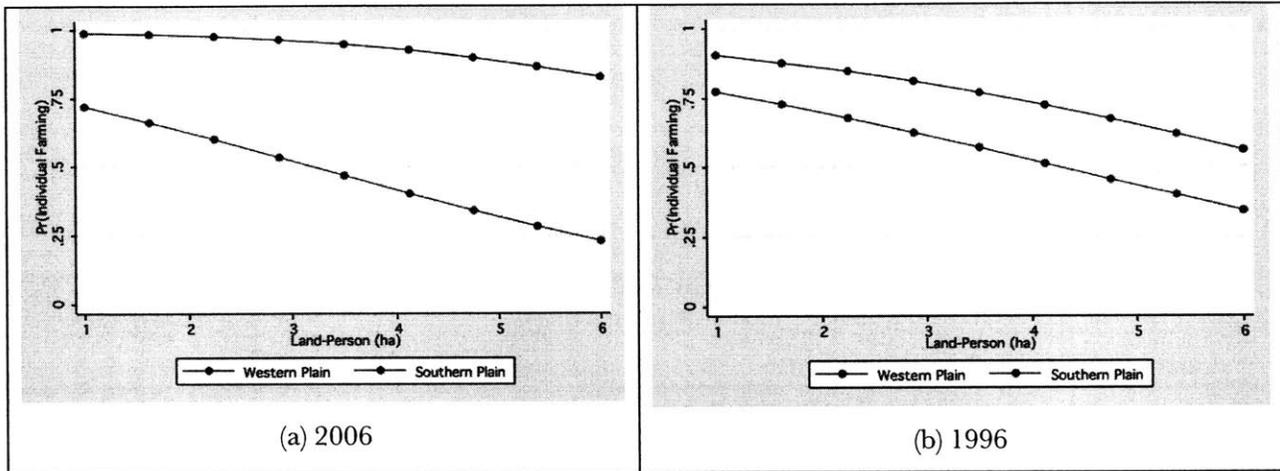


Figure 8-7 shows that while the probability of farming individually decreases as the share of land per adult household member increases, the magnitude of decline is different not only between the two regions, but also over time. The most drastic change in the probability of farming individually, over the decade under study, can be seen in the Southern Plain, where the probability has declined from roughly 0.75 to 0.25 along different levels of land-adult ratio.

Figure 8-7: The probability of choosing to farm individually and land-adult ration by agro-region



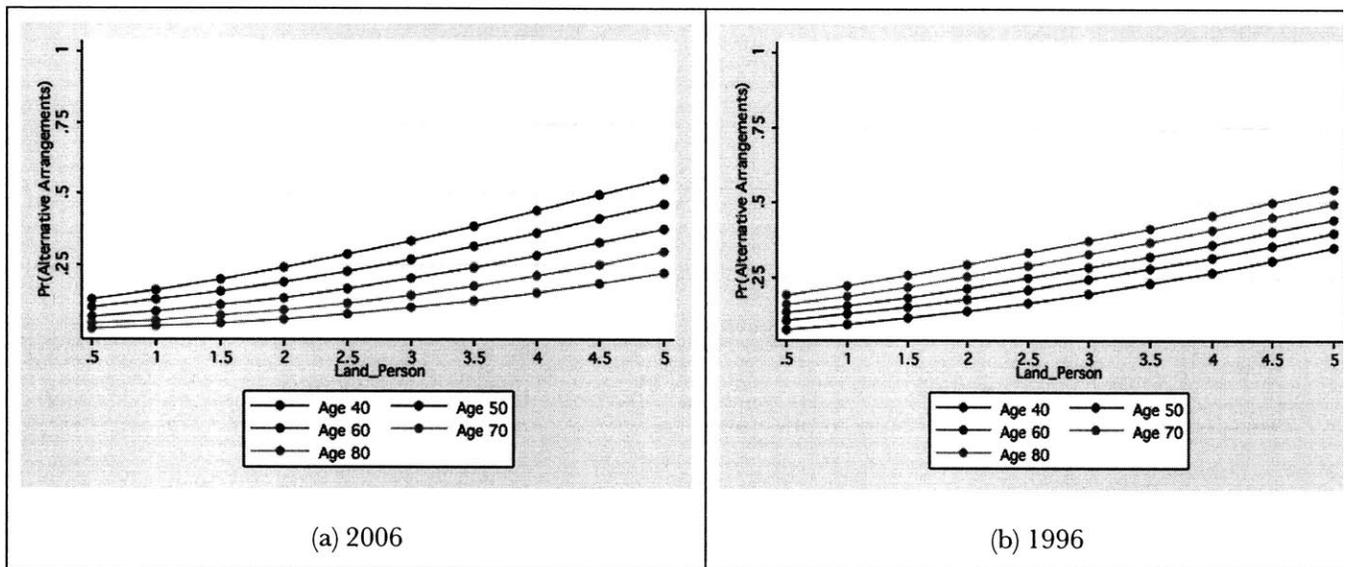
This trend can be explained by the worsening of the economic situation in the rural areas in the South, which makes individual farming more costly. In addition, we saw in Chapter 6 that population is much older in the South than in the West (an average of 64 years as compared to 57 years in the West). This suggests that once alternative farming arrangements became available, landowners in the South are more likely to join association or to lease-out land, given that alternative sources of income are lacking. In Chapter 9 I emphasize other factors that could have played a role in these outcomes, such as historical legacies and collective memory of collectivization.

Another interesting angle to explore is whether this trend varies in any way along different age groups. Figure 8-8 shows that between 40-80 years old households are more likely to seek alternative farming arrangements as the land-adult ratio is higher in both 1996 and 2006. However, we observe that in 2006 the probability is actually higher for households where the household head is younger, while the reverse is true for year 1996.

This suggests that in 2006 alternative job opportunities outside farming might prevent these households from engaging in full-time farming, while older households, more than 70 and 80 years old might find security from holding on to their land. Interviews with farmers and participatory observation also revealed that because of the low returns from farming, and the sunk cost character of agricultural investments (which most households cannot afford), younger households seek part-time employment in

non-farming activities that could supplement their income from agriculture. Since they cannot fully commit to being present at critical times during harvest and land preparation, they prefer to reallocate land in alternative farming arrangements, if such an opportunity arises, rather than leaving the land fallow. However, in 1996 there were fewer alternative job opportunities available, as land was the main source of income for most households, which explains the lower probability of seeking alternative arrangements.

Figure 8-8: The probability of choosing alternative farming arrangements by different levels of age and land-adult ratio levels



Hypothesis 4: Human capital (Age and Education)

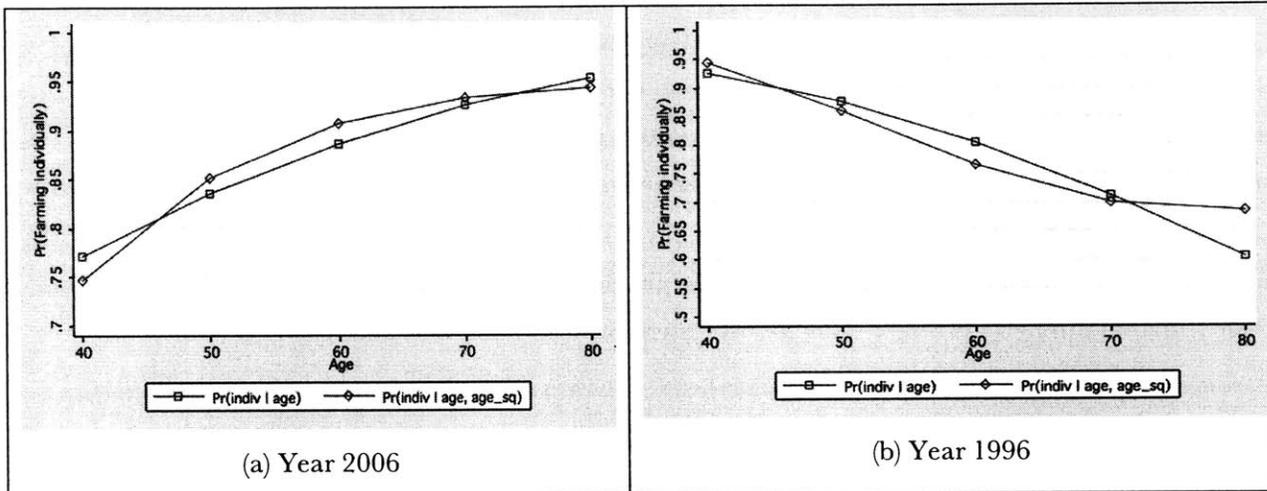
Human capital, as measured by age and education of the household head, is widely researched as a reflection of managerial skills and capabilities of the rural households. As mentioned earlier, I hypothesize that age has a non-linear effect on the choice of institutional arrangements for farming. While I find that in 2006 there was a non-linear relation between age and the choice for land reallocation, interestingly the effect of age was very different in 1996.

In 2006 I find that for older households, the probability of farming the land individually is significantly higher than for choosing alternative farming arrangements (an increase in age by one unit increases the probability of farming individually by approximately 0.0t (significant at 10% level only if I do not control for fixed effects). Nevertheless, as Figure 8-9 shows, age has a slightly non-linear effect on this decision level. The graph shows that as the age of the household head increases from 40 to 80 years¹⁸⁰, the probability that the landowners farm individually starts decreasing for those that are older

¹⁸⁰ Holding the other variables to their mean values.

than 60 to 70 years. This finding is interesting in that it reinforces how important agriculture is as a source of income for the majority of the rural population. In addition it points to the lack of alternative sources of revenue in the countryside, resulting in longer years of active farming.

Figure 8-9: The probability of farming individually by age levels



A decade ago, only five years after land reform was implemented, the relationship between age and the probability of farming the land individually was entirely different, as Figure 8-9(b) shows. Older households were more likely to seek alternative farming arrangements (a one unit increase in age increased the probability of choosing to reallocate land by 0.05 at 5% significance level). One explanation could be that, alternative institutional arrangements were viewed as self-help options for farmers with lower abilities for individual farming (entrepreneurship and willingness to take risks).

Hence, one would expect the same trend at higher age levels (indicated by the square value of age). However, we see that at higher age levels, after 70 years, landowners chose to farm individually. The non-linear effect of age (statistically significant but with a low magnitude) is worthy to note because it suggests that earlier in the transition we might have observed the phenomena of “collective memory” as suggested by the path-dependent argument (Hann 1993). Accordingly, older landowners who experienced the coercive character of collectivization, and lived through the inter-War period when property rights were granted (even if for short periods of time in some regions), and the struggles for land were the defining features of rural life, wished to maintain full control of their property rights following restitution. As we saw in Chapter 7, farming land in associations and leasing-out results in releasing some rights to other private entrepreneurs. Hence, at a time when land rights were not clearly defined and the memory of communist injustices and control from large landowners (haciendas prior to collectivization mainly in the South) is still vivid, older landowners prefer to subject themselves to “self-exploitation” (Chayanov 1966) and shield themselves from the perceived risk of losing their land, despite potentially lower returns

and much higher costs and effort from farming individually. Nevertheless, this hypothesis (interpretation) will be examined in more depth in Chapter 9 through findings from qualitative fieldwork.

However, as the results in Table 8-10 show, the effect of age on the choice between individual farming and alternative arrangements was much stronger in 2006 than it was in 1996 (significant at 1% level). But, the non-linear effect of age (age-squared) was stronger in 1996 (significant at 5% level).

There are few explanations for these different outcomes across the decade under study. First, by 2006 the share of part-time farmers and unemployed moving in the countryside for supplementing incomes increased, as showed in Chapter 5. This pattern of reverse migration could explain why more senior households were farming the land themselves. Moreover, by 2006 some associations were declared bankrupt (Verdery 2004b) while the land markets did not develop fast enough. Therefore, more households ended up farming the land individually. In addition, in 1996 older farmers (those that were in their 70s) went through a different generational experience than those who were 10 or 15 years younger. The results for 1996 suggest a relatively stronger attachment to land, showing a higher probability of farming individually regardless of resource availability.

The coefficients for years of completed education show that households where the household head is more educated, are more likely to seek alternative farming arrangements in both years (a one unit increase in years of education increases the probability of seeking alternative arrangements by approximately 0.01, with a larger effect in 1996). This result suggests that more education increases the opportunity for outside job opportunities, creating a disincentive for farming all the land individually.

Hypothesis 5: Household productivity

In 2006 households that had a higher productivity level, as measured by the long-term proxy for ability and knowledge, were more likely to farm the land individually. However, the relationship is not statistically significant. A one-unit increase in productivity level raises the probability level of farming individually by 0.01 (if I control for commune fixed effects). Nevertheless, in 1996, productive households were more likely to farm their land in alternative farming arrangements, as Table 8-8 shows. These different results suggest that because of higher constraints on access to credit, higher inputs prices, and generally unfavorable conditions for small farmers (as discussed in Chapter 5), landowners were more likely to capitalize on their higher productivity by reallocating land in different institutional arrangements.

Table 8-12 shows that in 2006 for low levels of productivity (the 5th percentile) the probability of farming individually is 0.83, while for high levels of productivity (the 95th percentile) the probability increases to 0.93. This is interesting because it suggests that households who are farming by themselves have more experience and knowledge, regardless of access to resources or any other characteristics. As emphasized above, a different trend can be observed for year 1996. The probability of households with

low productivity farming individually is lower, 0.93, while the probability of households with high productivity seeking alternative farming arrangements is higher, 0.35.

Nevertheless, the results in Table 8-10, testing how the coefficients changes across the two decades shows that the effect of capital on this decision level was stronger in 2006 than in 1996 (significant at 10% level).

Table 8-12: The probability of choice and confidence intervals for high and low values of household productivity

	Probability of farming individually	Probability of farming in alternative arrangements
2006		
Low productivity	0.831 CI: [0.738 0.924]	0.169 CI: [0.076 0.262]
High productivity	0.933 CI: [0.876 0.989]	0.068 CI: [0.011 0.124]
1996		
Low productivity	0.929 CI: [0.870 0.988]	0.071 CI: [0.012 0.130]
High productivity	0.667 CI: [0.549 0.786]	0.333 CI: [0.215 0.451]

Note: Low – 25th percentile; High – 95th percentile; CI – confidence interval for the probability estimate.

This difference in the relationship between household productivity and the choice of alternative farming arrangements can also be explained through a regional perspective. In 1996 average productivity scores were slightly higher for households in the South than in the West. However, as I discuss in Chapter 9, the push for creating associations on the structures of the former collective farms was much stronger given the communist legacies and the socio-economic conditions in the area. Hence, one could argue that because of these circumstances, individual farming was a less appealing option even for the more productive households, who had to compete for inputs with the larger associations. Nevertheless, given the that in the West the familiarity with markets was higher, as the economic conditions for individual farming improved (i.e. improved access to inputs, formalizing land markets), more productive landowners were more likely to farm the land individually.

Hypothesis 6: Agricultural occupation

Another factor hypothesized to affect the decision of choosing alternative farming arrangements is whether agriculture is the primary occupation for the household head. As mentioned earlier, my hypothesis is that households having agriculture as the primary occupation are more likely to farm individually, holding other factors constant (such as access to resources). In

Table 8-6 we see that in 2006 landowners with agriculture as the main occupation were more likely to actually seek alternative farming arrangements (significant at 10% level). One explanation for this result could be that as the transition process advanced, landowners realized that farming by themselves is not “optimal” anymore due to higher costs and difficulty in accessing markets. Therefore, reallocating part of the land in other arrangements and keeping some for individual farming seemed a better alternative, allowing them to spread risks across different arrangements. In 1996, however, households with agriculture as a primary occupation had a higher probability of farming individually (although not statistically significant). By then, however, the worst has not yet materialized for small farmers, as subsidies were fully removed only in 1997 and the price scissors worsened even more afterwards.

In addition, as Table 8-13 shows, in 2006, the probability of farming individually for households with agriculture as the primary occupation has increased in the West (from 0.895 in 1996 to 0.972 in 2006), while in the South it has decreased (from 0.751 in 1996 to 0.614 in the 2006). In light of the overall economic development differences between the two regions, this results shows that over time economic conditions became more favorable for individual farming in the West, offering positive incentives to active farmers to pursue land exploitation by themselves.

Table 8-13: The probability of farming individually by agro-region and primary occupation

	Western Plain	Central Romanian Plain
1996		
Primary occupation-Agriculture	0.895	0.751
Primary occupation-Not agriculture	0.849	0.676
2006		
Primary occupation-Agriculture	0.972	0.614
Primary occupation-Not agriculture	0.994	0.805

Table 8-13 also illustrates that in the Central Romanian Plain the probability of farming individually has increased for households that do not have agriculture as a primary occupation between 1996 and 2006. Since membership in associations has been mostly an early 1990s phenomenon and associations have reached a scale at which they are not willing to take in more farmers (issue which will be discussed more in the next chapter), this trend points to the underdevelopment of land markets. Landowners prefer to farm individually rather than lease-out land, even if their primary occupation is not farming. A similar outcome can be observed for the Western Plain, but at a lower magnitude.

Other factors found to explain the choice of alternative institutional arrangements

Other variables for which I tested the relationship with the choice of seeking alternative farming arrangements are: land titles, hiring outside labor, land quality in the commune, and the share of arable land in the commune.

Land titles are important because they offer security of tenure to the landowners, allowing them to take risks in investment and offering them the option of using land as collateral for bank loans. Land titling proceeded rather rapidly in Romania, but nevertheless, by 1996 only half of the title deeds were distributed. A decade later more than 90% of the land was fully registered, although cadastral measurements were still lagging behind and litigations and disputes of land boundaries and locations are widespread (Luca 2007).

The results rightfully show that land titles bared more importance earlier in the transition in the choices farmers made in respect to farming arrangements. In 1996, for farmers with full ownership rights over their land, the probability of joining associations or lease-out land increased by 0.25 (significant at 5% level). This result shows that land titles gave owners the security (or certainty) of ownership, reducing the likelihood of losing the asset in case contractual problems arise. By 2006, when almost all landowners had titles for their land, the statistical significance of titles over the choices between farming individually and alternative property rights arrangements diminished, as expected.

The availability of labor outside the household is a major concern for small farmers during transition, when youth migration for jobs abroad has increased (a phenomenon entirely foreign to rural areas fifteen years ago), and occupations in agriculture became less appealing due to low and unpredictable returns. Therefore, the ability to rely on hired labor plays an important role in enlarging farming operations.

In 2006, households that hired labor were more likely to farm the land themselves (statistically significant at 5% level), denoting an increased entrepreneurial behavior, as one would expect, even after controlling for commune fixed effects. Nevertheless, earlier, in 1996, the relationship between hired labor and the choice of farming arrangements was very low. One explanation for this difference could be that earlier on the use of paid labor was more limited. Interviews with farmers suggested that, oftentimes, especially earlier in the transition, working for pay for someone else in the village was fairly stigmatizing. Collectivization has imposed an artificial sense of equality in the rural communities by stripping the middle and upper-class by land and physical assets. However, following land restitution, all of a sudden a more clear division between wealthy and poor, transpired, and with it, a sense of pride and marginalization. Nevertheless, a decade later, in the face of economic pressures, these social hierarchies become less constrictive.

Aside from household specific variables I find that commune level variables also play a role in the pattern of land reallocation. For instance, the quality of land at commune level is an indication of the environmental conditions for agriculture in the region. The importance of land quality in the choice for farming arrangements varied over the decade under study. In 1996, a higher share of good quality land in the commune was associated with landowners choosing to farm the land themselves. Nevertheless, by 2006, this relationship did not hold anymore, and good land quality in the commune did not represent a premium for farming individually. Rather, good quality land was associated with households choosing to farm the land in alternative arrangements. This result could simply suggest that because of increased costs of individual farming, associations were better able to benefit from good land quality, drawing on scale economies.

Moreover, the higher the share of arable land, the higher the probability of households engaging in alternative farming arrangements. More arable land in the commune, given that main crops are grains and corn, suggests that economies of scale through land consolidation are critical.

Summary of findings

The analysis of the first decision level for landowners, that of farming all land individually or choosing alternative institutional arrangements, revealed some interesting findings, pointing to regional differences as well as variations in the choices made across time. Moreover, the findings in this section confirm earlier studies showing that the choice of farming individually (as opposed to seeking alternative arrangements) is structural in nature (i.e. it depends on access to physical capital and on human capital), and therefore household farms could thrive if better access to inputs and markets is facilitated.

I found that households with more fragmented land plots (relative to the land in ownership) are more likely to farm the land individually, emphasizing the risk-spreading character of land fragmentation, and the subsistence character of agricultural production. In the next section I examine whether higher fragmentation increases the likelihood of joining associations or leasing out. I also found regional differences in land reallocation along different levels of land fragmentation. In the South, where endowment with physical capital is lower and the economy is less developed, households with more fragmented holdings were more likely to seek alternative farming arrangements. In the West, the transaction costs associated with fragmentation, were partially overcome by improved access to capital. These findings are important from a policy point of view given that the current layout of land plots is considered the most challenging problem for agricultural development.

Moreover, several household characteristics matter for deciding whether to farm individually or to reallocate land in alternative farming arrangements. In 2006, households for which the household head is older are more likely to farm individually denoting more experience with farming. Nevertheless, above

60-70 years old, households are more likely to seek alternative land reallocation options. In addition, households where the household head has more years of education are more likely to seek alternative farming arrangements.

Households with a larger endowment of land (mostly above 3 hectares per person) have a higher probability of joining associations or leasing-out land rather than farming all land individually. This trend holds across different age groups, but younger households are more likely to exhibit this behavior, potentially because of the availability of alternative sources of income. In addition, more productive households are more likely to farm the land themselves, holding other factors constant.

Nevertheless, a decade earlier some of these findings differ, pointing not only to different economic and institutional conditions in terms of market access, availability of non-farming income sources, and land market development, as discussed in Chapter 5, but also to a different generation of landowners with different experiences of ownership and collectivization, aspects which will be discussed in more depth in the following chapter.

8.3.2 What are the factors that affect a landowner' choice between joining an association and privately leasing their land?

In the previous section I examined the factors that affect the choice between individual farming and alternative property rights arrangements. I found that households that choose not to farm all land individually are either resource constrained (limited access to capital), they own land plots that are too fragmented, or they own too much land per adult household member given the previously mentioned constraints. Moreover, these are also households that are older and hence have lower farming abilities, despite higher farming experience.

While some of these aspects were previously examined (for the Romanian case Rizov 2001, Sabates-Wheeler 2005), there is no research, to my knowledge, of the factors based on which landowners choose between associations and leasing, as land reallocation alternatives. This question becomes even more relevant given that the literature abounds with critiques of associations as being plagued by collective action and free riding problems.

The main hypothesis, as seen in Table 8-1, is that households with a higher degree of land fragmentation are likely to join associations because of higher transaction costs entailed by participating in land transactions. In addition, landowners with more physical capital are more likely to join associations as they can capitalize on easier access to inputs and distribution markets. However, household with a higher ratio of land per person, are more likely to lease out rather than join associations. Here, the assumption is that because of limited access to labor and capital, landowners are likely to release some of

the resources to others to farm. Moreover, because of transaction costs, it is easier to lease out a larger plot of land.

Another hypothesis relates to the age of the household head. Older households are more likely to lease-out part of the land in ownership, as well as the landowners that have alternative income opportunities. Lastly, I hypothesize that more productive households are more likely to join associations.

Because of limited data in the two regions in 1996, this part of the analysis will be mostly focused on the 2006 survey. Nevertheless, I am still hoping to draw some light comparisons with the data a decade earlier, since, as I will discuss in the next chapter, associations have gone through some institutional adjustments in the past years.

Table 8-6 and Table 8-8 show that the factors affecting households' decisions over reallocating land to associations or leasing have slightly changed overtime, suggesting both a change in the overall institutional environment for agriculture and rural development, as well as demographic patterns and changes internal to the organization.

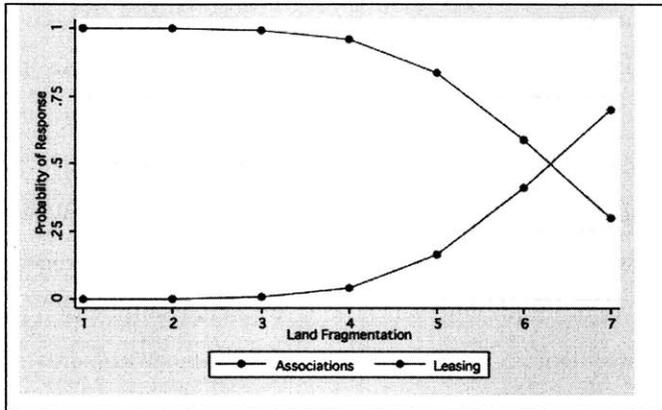
Hypothesis (1): Land fragmentation

One of the most interesting findings for why associations persisted throughout the transition period, which has not been previously discussed in the literature, refers to the degree of land fragmentation. I found that households with more fragmented land plots are more likely to join associations rather than to lease out land. A one-unit increase in land fragmentation increases the probability of joining associations by 0.50, significant at 5% level. Figure 8-10 shows that at low levels of fragmentation, households are more likely to lease-out land. However, for households with more fragmented plots, especially more than 3-4 different plots, the probability of joining associations is much higher. Hence, one can argue that decisions on land reallocation reflect a response to multiple dimensions of fragmentation.

This result brings to light an interesting difference between associations and leasing arrangements. Due to high transaction costs for leasing (i.e. land registration, notary fees), land consolidation through the land market seems difficult at this stage. Land registration is not completed in most areas of the country, and, as I will discuss in the next chapter, other factors related to social stratification and embeddedness of these institutional arrangements in the local economy, make consolidation through leasing a more tedious process. As I discussed in the previous chapter, most associations were created on the structures of the formal collective farms, which facilitated farming on larger plots without additional costs related to contractual arrangements and land registration. In addition, as Meurs (2001) argues, there is an additional social costs emerging from the unfamiliarity with new arrangements and market circumstances, which farmers are factoring in their decision-making process. It is likely that as land markets develop and

landowners become more accustomed with these transactions, consolidation through leasing could become a closer alternative for landowners. Nevertheless, as Chapter 9 emphasize, other factors, such as social institutions, also play a role in the decisions that farmers make for land consolidation.

Figure 8-10: The probability of joining associations and leasing at different levels of land fragmentation in 2006



Therefore, policies that address the problem of extreme land fragmentation should look at farming associations as the primary channel for consolidating disperse land plots. However, it is also critical for land registration to be addressed, in order to reduce transaction costs associated with land market participation.

Hypothesis (3): Land-adult ratio

The ratio of land to adult members in the households shows that in 2006, households with more land were more likely to join associations rather than lease-out (significant at 5% level), against my initial hypothesis. A similar result was found for 1996 as well. However, the effect of land-adult ratio on the choice between associations and leasing is stronger in 1996 (at 10% significance level).

This finding suggests that currently, land markets are not likely to be an option not even for households with more land. The factor that could be invoked to explain this outcome is transaction costs. Land registration, especially in the Central Romanian Plains, are still not finalized, delays which could contribute to constraining land market participation.

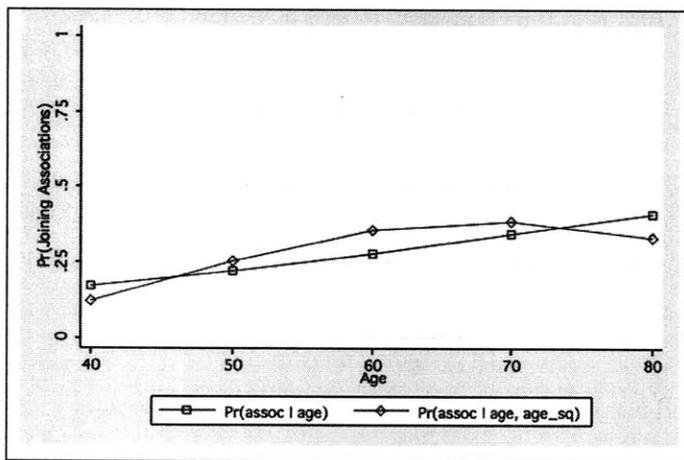
Hypothesis (4): Human capital (Age and Education)

One interesting distinction between households that joined associations and those that leased-out land comes from the demographic profile of the landowners. If we take age as an indicator of ability and experience with farming, we observe that its effect on the choice for land reallocation is two-dimensional.

First, senior landowners are more likely to join associations, while much older landowners are more likely lease-out land. To understand these results, it is important to mention that non-farming occupations are extremely limited in the Romanian countryside. Hence, given the low level of non-farming incomes (i.e. pensions and salaries) landowners with more farming experience prefer to join associations. Under this framework landowners have more control over their land and over the harvest, and they can benefit from access to physical capital for farming the land. Hence, the coefficient for age shows that those who have the capabilities to work the land (but lack sufficient resources to work all the land themselves) will join associations where they can contribute with both land and labor, rather than lease-out land and renounce additional rights over the land.

As Figure 8-11 clearly shows, the probability of joining associations is higher for households where the household head is more than 50 years old. But, beyond 70 years old, landowners are more likely to lease out land (as indicated by the non-linear effect through the squared value of age). Hence, leasing is the land resort for households that lack the ability to farm. Joining associations, as I will examine in more depth in the next chapter, does require some involvement and higher responsibility, either with labor, or just monitoring and marketing. Therefore, associations are better suited for households that can be more actively involved in farming.

Figure 8-11: The probability of joining associations along different age levels in 2006



Education also plays a role in the decision farmers make between joining associations and leasing out land. Households where the household head is more educated are more likely to join associations (a one unit increase in education increases the probability of joining associations by 0.03 in both years). The difference, between the two years, however, is not statistically significant, as the results in Table 8-10 show. These results are interesting in that they suggest that even if those that have higher opportunities for non farming jobs (as suggested by higher education), prefer to join associations rather than participate in

land markets. One can argue that because associations are more embedded in the social communities, they offer lower risks (i.e. more predictability) as compared to leasing. I will further examine these aspects in Chapter 9, based on interviews and participatory observations in the villages.

Hypothesis (5): Household productivity

On a different level, I find that more productive households are more likely to join associations both in 1996 as well as in 2006. In 2006 a one-unit increase in productivity, results in a probability of 0.01 for joining associations (although not statistically significant). This suggests that households that are more productive but lack the necessary resources for farming the land individually are more likely to join associations. As association members, landowners can still be active farmers and they can maintain a higher control over land.

Hypothesis (6): Alternative income opportunities

Moreover, in 1996, households with agriculture as primary occupation were more likely to join associations (significant at 5% level). This can be viewed as a self-help strategy. Landowners who want to remain active farmers, can get easier access to inputs, physical capital for the planting and harvesting season, as well as improved access to distribution networks.

In 2006, however, landowners with agriculture as primary occupation were more likely to lease out (statistically significant at 1% level). Since associations require a certain degree of active participation in farming activities (either with labor or through marketing activities, as discussed in Chapter 7), this result suggests that by 2006 landowners were less able to perform these tasks, making increasing the likelihood of leasing-out.

Other factors related to commune characteristics

On a different note, variables related to the physical characteristics of the region also play a role in the persistence of associations. In 2006, in communes with better land quality the probability of households joining associations is 0.50, significant at 5% level. As I discuss in more detail in the next chapter, associations were created mostly in areas with better land quality, hence in the southern areas. The leaders on the old collective farms were able to make a stronger case for setting up associations as these farms received more support from the communist state (in the form of equipment and preferential access to markets and distribution networks) and therefore were more productive. Hence, following de-collectivization, because of better performance (and better position in the market due to their networks in the upstream and downstream industries), these organizational structures persisted and landowners were more willing to join as members in the newly formed associations.

Moreover, we see that in communes with worse access to markets, landowners are more likely to lease out land. Oftentimes joining association means that the landowners receive all the production back, without the cost for mechanical services (and sometimes for labor), case in which the responsibility for marketing the products rests with the landowners. But, when access to markets is costly (due to distance and difficult access to information), it might be better for households to lease-out the land to other private farmers, based on contracts that require the tenants to market the harvest themselves, and to pay the landowner a pre-determined rent.

8.4 Summary of findings

To summarize, this analysis showed that the issue of choosing how and whether to reallocate land is mostly structural (it depends on resource availability and human capital). However, when landowners who cannot farm all land individually decide between joining associations or leasing out land, there are several subtleties that need to be considered. First, formal associations appear to be a good option for farmers that are resource constrained but are still willing and able to be engaged in farming. Associations provide security of tenure, and capital access (through mechanization), allowing landowners to draw on the benefits of scale economies.

More importantly, formal associations are better able to address the problem of extreme land fragmentation as compared to leasing arrangements. Because land registration and cadastral maps are not completed, transactions costs related to leasing are much higher than those associated with membership in associations. This finding has important policy implications at a time when the Romanian agriculture is confronted with high inefficiencies from extreme land fragmentation. The myriad of small spread out plots prevent farm upgrading through investment and mechanization, within an overall economic and financial system that is not well adapted to small farming. Hence, given the transaction costs currently necessitated by land transaction, farming associations should be emphasized as a channel for achieving the much needed land consolidation. But, are transaction costs the only barrier to land consolidation through land markets? Would the transition away from association be achieved once land transactions become less costly? In the next chapter I examine other factors related to social institutions (such as historical legacies and social costs of familiarizing with new institutions) that might factor in the choice between associations and leasing transactions.

In addition, I also found that age play a role in landowners' decision to join associations. Households that have a higher ability level and experience, as reflected by age, are more likely to join associations. But, beyond 70 years in age, landowners are more likely to lease out. Given that associations require a certain level of engagement, either through labor or monitoring of the production process (in

general a higher commitment on the part of the landowner), those who are part time farmers are benefiting more from leasing out.¹⁸¹

Hence, leasing becomes a viable alternative for elderly and for younger landowners who can engage in non-farming activities. Hence, from a policy point of view, one channel for stimulating land market participation lies in the macroeconomic realm. By diversifying the rural economy and by creating job opportunities outside the rural areas, important rural-urban linkages could be created, which would shift out of agriculture part of the active labor force and it would induce the development of land markets. The case of Town Village Enterprises (TVEs) in China offers interesting examples to draw on for diversifying the rural economy into a mix of non-farming and farming activities. Such model ensures that further urban and international migration is kept under “reasonable” boundaries, without placing too much burden on the urban job-market¹⁸² and without losing the rural active labor force for long periods of time through emigration.

All in all, associations appear to be a preferred alternative for landowners that intend to remain actively engaged in farming, for those that are physically able to work the land and are more productive. In addition, given the high fragmentation of land plots, landowners need an institutional framework (i.e. formal associations) to draw on in order to consolidate and use mechanical implements. Leasing, however, addresses the needs of the rural population who is younger and has alternative job opportunities, and of those with lower productivity and more land than what they can physically work.

Nevertheless, since land provides the main source of income for most of the rural population, as discussed in earlier chapters, and given the type of jobs that are being created in the larger economy, it is very unlikely that there will be a large flux of rural out-migration (aside from international migration) in the near future. Hence, the role played by farming associations in the local communities remains critical. In the next chapter I highlight other factors related to the embeddedness of these institutions in the rural communities and in the historical legacies, adding to the explanations of why farming associations persisted throughout the transition period.

¹⁸¹ Verdery (2003) also finds that associations are not a very good option for part-time farmers, for those who are not in the village at all times. She finds that association managers tend to expend less effort on their land and offer lower returns at the end of harvest.

¹⁸² Post-socialist transformation and the more recent integration of these countries in the global market and the EU larger institutional and economic framework, has created a strong shift in the economic structure of the transition countries. Secondary statistics show that industry has made way to services, as a result of investment from multinational corporations and outsourcing of services. Hence, most jobs that are being created are white-collar rather than blue-collar, suggesting that migrants from the rural areas might find less job opportunities even in a growing economy.

Chapter 9 : Alternative explanations for the persistence of farming associations

9.1 Introduction

This dissertation addresses two key questions on the post-socialist transformation of the Romanian agricultural sector: 1) why did landowners persist in joining associations throughout the transition process despite the availability of alternative farming arrangements, and 2) why do we see wide regional differences in the pattern of land reallocation. The previous two chapters offered a detailed analysis of different farming arrangements and the factors that affect landowners' choices during transition. This chapter brings a qualitative, reflective approach to explain regional differences in the persistence of associations.

In Chapter 7 I discussed in detail the variety of institutional arrangements currently available to the Romanian landowners (i.e. private individual farming, associations, land market transactions). In addition, using survey data and secondary statistics, I described the type of households that engaged in each of these arrangements. This analysis allowed me to generate research hypotheses to be tested in Chapters 8 and 9.

Having laid out the institutional background for land reallocation, in Chapter 8 I tested empirically a series of hypotheses on the choice between farming arrangements, evaluating factors related to capital endowment (i.e. human and physical capital) and farm characteristics between 1996 and 2006. I showed that the choice for alternative institutional arrangements depends on the availability of physical and human capital, farm size, productivity and the degree of land fragmentation. In addition, structural factors (capital constraints, land fragmentation) also explain the persistence of formal associations, pointing to key differences between this institution and leasing transactions. I found that because of transaction costs related to land registration, associations are better suited to achieve the much-needed consolidation of land plots, while consolidation through leasing is still too costly and institutionally cumbersome.

But, focusing only on the capital constraints argument to describe land reallocation patterns during transition is unlikely to unearth a complete set of explanations for the persistence of formal associations. As Ostrom (2000 p. 173) argues, "while all forms of capital are essential for development, none of them are sufficient in and of themselves."

This chapter captures a more comprehensive story of land reallocation during transition, by focusing on the role of past institutional legacies, experiences with collectivization, and the interaction of different actors in affecting change. These factors contribute to explaining regional differences in the formation and persistence of associations, as a more dynamic process. In addition, I examine the main differences between the old collective farms and the formal associations as well as the risks and opportunities embedded in different arrangements. This more in-depth evaluation of the outcomes of land reform allows me to examine the social meaning and the social process at the local level explaining the regional differences in land reallocation.

Earlier studies of farming arrangements during transition were limited to a more static approach, of looking at household characteristics, capital endowment, and productivity differences in the post-socialist period (Mathijs and Swinnen 2001a; Rizov et al. 2001; Rizov 2003; Sabates-Wheeler 2005). In addition, other scholars analyzed the role of social relations, the value of land and property, and the effect of local politics on the organization of agricultural production during transition (Verdery 2003; Allina-Pisano 2004a; Allina-Pisano 2007b). Nevertheless, there is hardly any research on why associations were formed only in some regions, how earlier institutional arrangements and the process by which collectivization was achieved in the first place influenced the choices landowners made and their interaction with other actors, and the criteria by which landowners assess the risks and benefits of different arrangements.

By focusing on these aspects, I offer a more dynamic perspective on the persistence of farming associations and on regional differences during transition. I examine how aspects related to historical legacies, the specificities of de-collectivization, and social relations in the local communities contributed to shaping farmers' choices during transition.

The role of institutional legacies and the relevance of past experiences are important in developing this story, but should not be viewed as binding. As Creed (1999 p. 224) mentions, "people can be influenced and even constrained by history without being its prisoners." Moreover, one should be wary of arguments based on path-dependent explanations because what might look like legacies are often better seen as responses to contemporary processes and environments (Creed 1995, 1999; Verdery 2003). It follows that a complete analysis of land reallocation during transition needs to account for both these factors: how aspects from the past affect landowners' choice between farming alternatives within the constraints and incentives offered by new market conditions.

Hence, I expand the interpretation of findings from Chapter 8 and probe motivations for regional differences in the observed behavior. The following questions are the focus of this chapter:

- (1) Why were associations formed only in some regions, while in others they were not, given that at the time of de-collectivization everyone was emerging from the socialist agriculture with a similar capital endowment?
 - a. Did the legacies of property reforms and the process of collectivization contribute to the differences in formation and persistence of farming associations between the two regions?
 - b. How were individual agents' decisions with respect to their land affected by their interaction with others in their local communities?
- (2) How different or similar are the associations for from the old collective farms?

Methods

Qualitative research was carried out over several months in the summer of 2005 and 2006. I conducted preliminary research in the summer of 2005 when, through semi-structured interviews and participant observation, I identified the main problems that the agricultural sector, and small farmers in particular, were facing, as well as the regional sites in which to conduct my larger research. A second round of interviews was carried out during the summer of 2006.

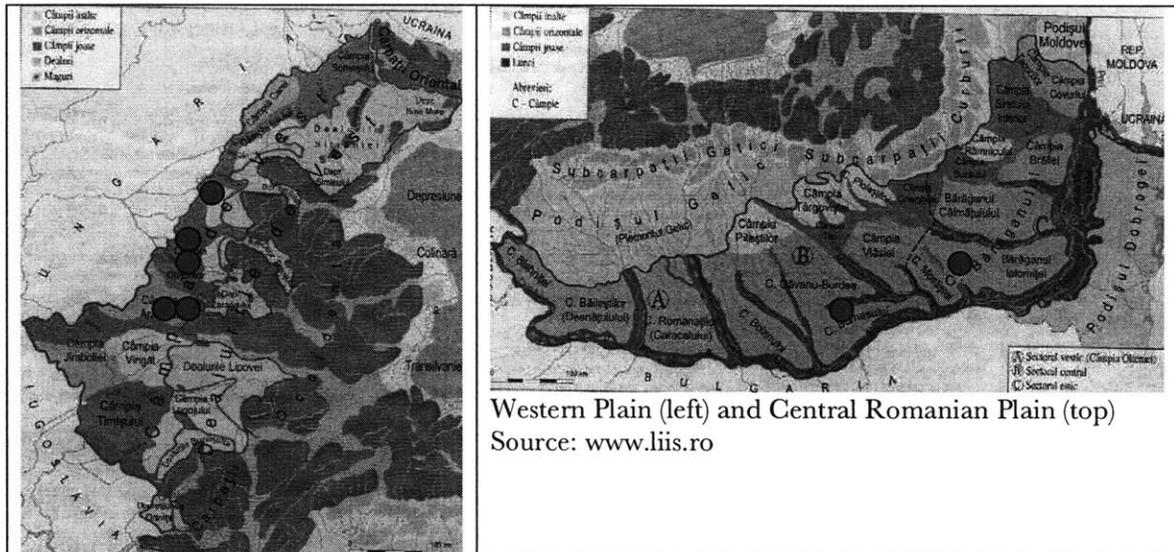
I interviewed small farmers (landowners) in different villages in the two agro-regions, as well as a total of fourteen engineers, eight policy makers from the Ministry of Agriculture and research institutions, four academics, and five local officials. In order to maintain confidentiality of the individuals I interviewed, in compliance with the Committee on the use of Use of Humans as Experimental Subjects (COUHES) at the Massachusetts Institute of Technology, whenever I refer to (or a cite) a specific individual, I use a fictitious first name.

The villages where I did most of the interviews are: Curtici, Zarand, Capalna and Petid in the Western Plain, and Vlad Tepes and Lita in the Central Romanian Plain. I chose these villages to capture a broader set of experiences, within different settings and development levels. The fieldwork I conducted in the two agro-regions, as well as in-depth village specific ethnographic studies, point to the existence of very diverse contexts and experiences with agricultural transformation. The Romanian countryside, unlike other similar places in Eastern Europe, is characterized by varied and distinctive social and economic patterns that have been shaped not only by post-war political history, but also by the communist economic growth policies that have been very regionally oriented.

Figure 9-1 shows the sites' location for interviews and participatory observation within the two agro-regions. The villages in the Western Plain were chosen such that some were closer to developed urban centers, such as Curtici and Zarand, and some were further away from urban centers, such as Petid

and Capalna. When selecting these villages, a hypothesis was that in more economically developed villages landowners would be more likely to farm the land individually rather than to join associations. Nevertheless, I found the opposite. In more developed villages, landowners were more likely to join associations. In the Central Romanian Plain, the two villages were selected based on the same rationale (i.e. closeness to developed urban centers). Nevertheless, here, landowners joined associations in both villages.

Figure 9-1: Site location for interviews and participatory observation



During several trips I spent time talking to farmers and local officials and I occasionally participated in harvesting activities along with the villagers, mainly in the western villages. In addition, I attended meetings between the association managers and the members, and between tenants and landowners. Participatory observation allowed me to capture the type of problems that farmers were confronted with, their concerns and perspectives based on personal experiences and values, as well as their motivations behind different individual and collective choices related to land.

In-depth qualitative interviews and participatory observation are part of what Burawoy (1998) calls “reflective models of science.” This approach promotes engagement in the local environment, and “extraction of local knowledge (Geertz 1973, 1983) through “thick descriptions” (to use Geertz’s terminology). Integrating research techniques (quantitative and qualitative methods) opens enormous opportunities for mutual advantage in research design, data collection, and data analysis. Such “mixing” (Kanbur and Shaffer 2007) allows to interpret counterintuitive or surprising findings from household surveys, probing motivations, and explaining observed behavior.

Chapter organization

The structure of the chapter lays out the narrative for what aims to be a more comprehensive explanation of the current pattern of land reallocation and the persistence of associations in Romania's agriculture.

Based on the research questions laid out above, Section 9.2 examines why formal associations were created mostly in the Central Romanian Plain and less so in the Western Plain immediately after the fall of the communist region. I examine factors that draw on both the perspective of former collective farm managers as well as small farmers. The main argument is that institutional legacies, drawing on past property rights arrangements and collectivization experiences, as well as social relations, limit the choices available for land reallocation to those that are acceptable in the historical and social context.

Formal associations appear to address these needs better than land markets. Given the common critiques of associations found in the literature, as discussed in Section 2.5.1 of Chapter 2, in Section 9.3 I examine how closely formal associations resemble the old collective farms. I argue that associations are able to overcome collective action problems because of a self-enforced monitoring mechanism. This process is made possible by the deeper embeddedness of associations in the rural community. Section 9.4 concludes with a narrative about why associations persisted throughout the transition and why landowners were slow to engage in land market transactions as alternative institutional arrangements.

9.2 Why were associations created in some villages and not in others?

The formation of farming associations, as soon as Land Law was implemented, was not uniform across and within the country. While in the Western Plain individual farming predominates, in the Central Romanian Plain formal associations persisted throughout the transition. This section explores why in some regions associations were formed while in other they were not. At the time of de-collectivization everyone was emerging from state and collective farming with similar capital endowment. Therefore, explanations based on structural factors (i.e. physical and human capital) cannot fully account for those outcomes. Hence, the following questions are examined in this section in order to account for broader explanations to land reallocation: a) What role did the legacies of property reforms and the process of collectivization play in the formation and persistence of farming associations? b) How did different actors at the local community level interact in shaping these outcomes?

The main protagonists directly involved in shaping the outcomes of de-collectivization and land reallocation at local level are: 1) landowners, 2) association managers and 3) new entrepreneurs (tenants). In this dissertation the term landowners refers to small household farmers, former workers on the socialist collective farms, who received private property rights following land restitution. Association managers are

former professionals (agronomists or other specialists) on the old collective farms, who took charge of the newly formed formal associations (agricultural societies) in the early 1990s. The new entrepreneurs are the resource-rich tenants that leased-in land from small landowners, in a so-called process of reverse tenancy.

Explanations for the diverse outcomes at regional level are multifaceted. Historical legacies, networks, and social relations, are interlinked and contributed to making the presence of associations a result of individual as well as regional characteristics. Interviews with farm managers and landowners revealed some factors that shaped the decisions to create farming associations in the early 1990s. Table 9-1 summarizes these factors, reflecting different time horizons, incentives and concerns.

Discussions with agronomists and association managers depicted a rather top-down process in the formation of associations and the breaking down of the collective farms, where small farmers had limited agency. Yet, interestingly enough, interviews with landowners showed that agricultural transformation was far from a one-way process. Legacies from collectivization and beyond, as well as socio-economic conditions in the local communities, led to the active participation of landowners in shaping the outcomes of land reform.

Table 9-1: Factors affecting the formation of farming associations following land reform in the 1990s

Actors	Factors	Outcome	
		Associations were created	Associations were not created
Farm managers/ Agronomists' motivations were conditioned on:	Economies of scale	Retain	Low
	Supply chain network relations	Retain	Low
	Pre-reform farm performance	Good	Low
Landowners/ Households' motivations were conditioned on:	Collectivization experience	Good	Harsh
	Social capital and relations	Low	High
	Capital endowment	Low	High

Table 9-1 shows that for agronomists, current leaders of associations and/or former professionals on the old collective farms, the factors that framed their reaction to de-collectivization and land reallocation were: (a) the potential to retain economies of scale in agriculture; (b) the desire to retain the supply chain network relations inherited from the communist system; and (c) the pre-reform performance of the old collective farms they were managing (or they were working in). The outcome of whether associations were created or not varied along these different factors that conditioned their motivations. For instance, if the old collective farm had a high pre-reform economic performance, the likelihood of forming associations was higher. Similarly, if the supply-chain network relations, inherited from the old

collective farms were weak, the likelihood of breaking down the collective farms and shifting to individual farming was higher.

On the other hand, the small landowners (the households) were taking into account other factors in their decisions for retaining the associations or farming all the land individually. For them, the following main factors mattered: the collectivization experience, the strength of social capital and relations in the community, and the level of capital endowment (discussed in Chapter 8). Where collectivization was imposed in a more forceful way, such as in the West, the likelihood of joining associations was lower. Similarly, where social capital and relations were stronger, the likelihood of farming individually was higher. Social capital, in the post-socialist context, is mostly limited to kin relations, offering a support network at times of uncertainty.¹⁸³ Where social capital is lacking, landowners are less able to confront market imperfections characteristic of transition.

Ultimately, the pattern of land reallocation following de-collectivization, resulted from the constant interaction between the interests of both actors and the importance of these factors in the local community, within the overall framework created by market imperfections during transition. In the following sub-sections I discuss these factors from the perspective of both sets of actors involved in the early decisions on de-collectivization.

9.2.1 The agronomists

Engineers on the former collective farms argued that the main problem following de-collectivization was not the decline in production but the actual breakdown of the distribution networks between the socialist enterprises (i.e. old collective and state farms) and the state institutions supporting the production system. Large farms were part of a wide network for collecting agricultural products, storage, distribution, and processing. The threat of creating a rupture in these networks, without the prospect of replacing them in the near future, created a sense of crisis among the agronomists who were taught to value the vision of Soviet agriculture and the modernizing ideals of large-scale mechanization. Consequently, these values were very much at odds with the proposals for de-collectivization and privatization of state farms. Ghita, an engineer trained in one of the best agricultural colleges in the country, claimed that while he understood the importance of land restitution, he viewed the process of de-collectivization almost as “a crime against the earlier accomplishments for modernizing the sector.” He further argued that his generation of professionals was educated in the ideology of the US and Soviet models of large-scale agriculture, and they grew disillusioned to see the shift in institutional emphasis.

¹⁸³ The Prosperity Index developed by Legatum (2007) shows that broader notions of social capital (i.e. community networks, local political and social organizations) are under-developed in Romania.

Ghita, however, was not alone in his perceptions of de-collectivization. The commitment for large-scale agriculture has been deeply rooted in the skills and mentality of the professional class. Without exception, engineers and other professionals on the former collective farms had similar beliefs. The common reaction almost everywhere was to seek ways to preserve the status quo, preventing the dissolution of the former collective farms.

Economies of scale, networks, and performance

Discussions with policy makers and agricultural professionals involved in the initial phases of reform suggest that there was an abiding faith in the efficiency of large-scale production. From their point of view, the only available option for modernizing, for increasing the competitiveness of the agricultural sector, and for reducing the poverty nucleus in the rural areas was to support large corporate farms on the structures of the former collective and state farms.

In the South, collective farms were larger than in the West, mainly due to the predominance of corn and wheat crops, but also due to legacies of land distribution prior to collectivization. Therefore, association managers, such as Florian, argued that breaking down the old collective would have been simply infeasible in this region. The costs of dismantling the collectives would have been too high, and land quality varied significantly across different land plots. The association, he said, had the interest of holding on to the best quality land, which had the potential to generate wide conflicts for restitution. Therefore, in the interest of avoiding such clashes, the association managers and the villagers, decided to maintain the structures of the former collective farms, and to distribute the harvest to the members proportional to their land contribution in the association.

Nevertheless, aside from economies of scale, agronomists were responding to more practical dynamics. In trying to decide the future of collective farms, the former leaders were weighing not only the needs of the community but also the capacity of the farms to perform in the new conditions imposed by the post-communist transformation. Given the fast pace of change and the socially sensitive aspects of land reform, a long-term vision was difficult to imagine. The focus was on evaluating the assets at their disposal and how they could capitalize on those resources following de-collectivization. Therefore, according to this rationale less emphasis was placed on individual choices and preferences. What mattered most for the agronomists was the economic condition of the collective farms at the end of the 1980s.

The main assets that old collective farms had, as opposed to individual farms, were machineries and networks of production and marketing. In order to survive in the socialist and transition challenges, farm managers had to cultivate extensive and far-flung networks with banks, fertilizer and herbicide distributors, or with customers for their produce. These networks proved crucial in taking advantage of early opportunities in the context of imperfect markets. However, the quality of these networks, as assets,

varied across different collective farms and, hence, were differently converted to a positive advantage in the post-socialist period.

Interviews with former engineers on collective farms, now managers of associations, suggest that these factors played a key role in maintaining the structures of former collective farms by forming associations. Small landowners (former workers on the collective farms) were reassured, by the association managers and the policy makers supporting this transformation, that the new associations will be able to operate more effectively than they could farm by themselves in the absence of those resources. In addition, the standard of living was fairly low in the South and alternative job opportunities were lacking. Therefore, investment capacity for land improvements and mechanical work was very low.

In the West, the values and visions embraced by the professionals were similar to those found in the South. Nevertheless, there, collective farms were, in general, smaller, having less physical capital and weaker supply chain networks. In villages where association were not formed, local engineers argued that “collective farms were simply too run down and the equipment was too old to be able to continue farming well” at a time when the price of gasoline was higher than ever, there was no access to bank credits, and the level of subsidies (mostly in the form of vouchers) from the state was low. These circumstances created a different dynamic between the collective farms managers and the landowners, compared to the South.

However, one example from the Western Plain also shows similarities with the southern experience. For instance, the Agro-Industrial Complex in Curtici, Arad County, was formed as an association immediately after Law 36/1990 was adopted. This was one of the largest collective farm in the region, highly connected with the communist political elite at the regional as well as the national level. As the association leader mentioned, the collective farm benefited enormously from investments in inputs and machineries prior to 1989. Moreover, given its strong networks within the system, it had access to first class information on current trends in policy debates related to agriculture, which allowed him to maintain a first-mover position during transition. At the time of de-collectivization, it was very clear that the old collective was to remain intact. The leader promised high returns (which he delivered in the years to come), investments in land improvements, but he required complete independence in decision-making. Given that the village is close to a dynamic urban center and a large part of the population was commuting to non-farming jobs, this strategy has not raised much opposition from the villagers. Some farmers still decided to farm the land individually at the time of de-collectivization, and generally these were wealthier households willing to build up self-sufficiency by being actively engaged in farming.

The association started in 1990 with 1,800 hectares, but, seeing higher and steady returns, more farmers joined in. The association is currently farming 5,200 hectares. On average, each member household contributes with two hectares, which raised the number of members to approximately 2,000. The manager, Ion, argued that even if more farmers want to join in, he is not willing to expand. Farming

all these different land plots has been very difficult and the consolidation of land plots has only now been achieved. Despite the hardships of transition, Ion managed to carry on several large investment projects to upgrade his agricultural equipments and also to diversify the activity from only crops to also include livestock and food processing. Ion estimated that he made one million Euro investments every year in preparation for EU enlargement, placing the other producers in the region at a clear disadvantage for competing in the new environment.

This case was the most successful and dynamic association I came across in the two regions. Landowners also obtained higher revenues than what they were able to obtain by themselves or from smaller leasing arrangements. In this particular case, the fact that landowners did not have a lot of power in decision-making did not seem to raise concerns in the local community. The leadership of the association inspired trust among the members.

Nevertheless, in many other cases where associations did not benefit from this initial capital, leaders “felt abandoned by the state.” They argued that without state support throughout the transition, they are “isolated from the rest of the economy,” as one agronomist argued. The state has not succeeded in integrating the large class of local engineers and agricultural professionals in the post-communist transformations of the rural economy. One agronomist, Popica, in a village where the collective farm was entirely dismantled currently works in the mayor’s office, where he is responsible for land cadastre and land transactions. When I asked him what exactly his role is, he acted very dismayed, replying that he did “nothing but paperwork...a waste of time.” Moreover, given that he became a small farmer without access to the means of production (i.e. inputs and equipments) like everyone else, he saw the outcome as a complete neglect of his expertise as an engineer. He argued that during the communist regime he was assigned to this village (to the collective farm) to increase productivity and enhance production. Nevertheless, now he feels limited in his alternatives, further degrading his knowledge and professional preparation. He claims that: “now we work the land by hand, as during the medieval times.”

Despite the willingness of the collective farm managers to maintain the structures of the collective farms and despite their expert training, weak networks prior to the 1990s, and degraded material base (i.e. machineries and building stock) imposed too many risks. On the one hand, the agronomists were not willing to take these risks. On the other hand, the material condition of the associations did not inspire trust among the landowners. Hence, this outcome suggests that expertise and strong networks are complementary for creating opportunities to forming farming associations early on.

Nevertheless, the period of transition was also a time when those with power and resources had a large amount of discretion to fill the vacuum created by de-collectivization and the withdrawal of the state. Laws and regulations were frequently changing to the point that legislation became an inaccessible domain for ordinary individuals. As a result, there was space for maneuvering for those who wanted to

appropriate the resources and opportunities that opened up. This was hardly an isolated phenomenon. Rather, such practices were highly specific to the transition period, and at times they were viewed as critical for the success of these new organizational forms, given market imperfections.

Verdery (2004) and Allina-Pisano (2007) thoroughly document the process by which local elites took advantage of this momentum to appropriate assets that resulted from the breakdown of the collective farms, given the uncertain legal environment and lack of familiarity with public auctioning activities. In certain cases this process prevented the associations from forming, and led to the creation of an entrepreneurial class that was seeking to gain profits from land rentals (and later purchases). Verdery (2004) calls this process the emergence of “super-tenants,” a new form of tenancy arrangements, “reverse tenancy,” as I discussed in Chapter 2 and 7. For instance, in one village in the Western Plain, the former collective leader was too old to be able to handle the wide institutional and economic transformations following land reform. As a result, the local elite that surfaced once the veil of social equality was lifted was quick to realize the opportunities that became available as a result of de-collectivization in terms of easy and cheap access to capital (i.e. machineries, even if highly depreciated) and infrastructure (i.e. stables and storage for grains). The auctioning process was “easily manipulated,” as one of the new local tenants acknowledged, due to the vague legal system and regulations, and the overall unfamiliarity with such transactions. The whole process developed in a very anarchic way. “Everyone grabbed what they could,” a farmer recalls, “bricks, tools, anything.” People felt justified to act in the most unruly manner. But, those with more financial capital at the time were able to strategize and maneuver the system to their benefit. In these circumstances, the interest in maintaining farming associations was lower as assets were shifted to the hands of private entrepreneurs.

These different perspectives stress the importance of initial conditions. The performance of former collective farms and the social and productive capital that the association managers inherited, as well as strong supply chain networks were critical for the emergence of associations. These networks provided a “first mover advantage” for the associations in comparison to the new private farmers (or entrepreneurs) who had to build such relations following land reform.

Nevertheless, as I will show in the next section, decisions were not made by only one set of actors. As Verdery (2004 p. 362) also mentions, “people do not wait quietly for institutions to form at the top and percolate downward.” Following their own interests and values, landowners reacted to what the leaders of the former collective farms proposed, with varied intensities in different regions.

9.2.2 The new landowners

Despite imperfect access to information and sources of power (i.e. capital and networks), landowners were not passive to the events that were unfolding at the national level and to the strong biases

of the agricultural professionals in their communities. While some villagers were very critical of the collective farms, many others supported them, resulting not only in different outcomes but also fomenting discontent in the local communities. Different views of de-collectivization, as well as conflicts over land boundaries, strongly divided local communities and broke down social relations in the villages. As one farmer from the Western Plain, Nelu, mentioned, “land became a blessing and a curse at the same time.” Aside from the economic burden that land became for most households (not having the necessary resources to extract value from it) almost overnight “friends became foes” when conflicts over land broke out, in a clash of competing social memories.

The local reaction to the engineers’ efforts to maintain the structure of the old collectives as formal associations is quite different when we compare cases from the Western Plain with the Central Romanian Plain. To understand regional dissimilarities between the West and South, in this section I examine factors related to historical legacies and social dynamics as reflected by interviews with farmers, historical facts, and earlier literature. Ethnographic studies, such as those collected by Dobrinicu and Iordachi (2005), show wide variation between villages in the outcomes of land reform and in terms of local characteristics. This pattern is also reflected in the household surveys for the two agro-regions.

Therefore, in this section, I argue that the experience of collectivization and the strength of social capital and social relations in the local communities contribute to explaining the formation and persistence of farming associations following land restitution. These experiences and local conditions result in different valuations of land, which in turn, affect the choices farmers make in respect to land reallocation.

The experience of collectivization and historical legacies

When discussions about reforming the agricultural sector began in the early 1990s, those who promoted the creation of associations as reformed collective farms faced severe criticism and opposition in the local communities in the Western Plain. Popica, one of the agronomists in the old collective farm, who was hoping to convince the locals to leave their land in the association, recalled the tension that such a proposal created, and their labeling by locals as “communist partisans.” The only acceptable option for those farmers was to get their land back at any cost. One farmer argued that he could not have imagined a different outcome. “They took their land from me and my family and when I had a chance to get it back, it would have been an affront not to do it,” Dumitru said. At that time, most people in the area shared his opinion. As a result, even today, there are no farming associations in the village. This case cannot be explained through a structural argument (resource availability) since the population was aged, alternative sources of income were not available, and the village was not very close to urban centers. Similar stories were found in other villages as well.

In a study of entrepreneurial behavior in the West, Baga (2004 p. 46-48) claims, “Banatian¹⁸⁴ peasants came to define themselves in terms of land ownership. In order to conserve and enlarge it, they took over a series of practices from the German settlers, whom they regarded as technologically more advanced and culturally superior.”¹⁸⁵ Large investments were made in agricultural improvements, which were financed by off-farm employment in the nearby cities. In addition, the domination of the one-child family prevented the fragmentation of property among heirs (Hitchins 1994 p. 373-374). In turn, this led to higher competitiveness in the agricultural sector, and to the replacement of family with property as a central focus of personal identity (Baga 2004 p. 47).

In the South, however, this process has been quite different. Florian, association manager from Calarasi County, recollected that there was almost no resistance to continuing the tradition of collective production system in the Central Romanian Plain. Actually local farmers “were worried that there would be no interest in forming associations.” He further argued that the new landowners had no interest in farming the land themselves because they felt they had no experience and resources to farm all the land individually.

To find explanations for this strong and different reaction at the local level, we need to look back in time at the process of collectivization and even before. While it is true that one cannot do justice to the complexities involved in the process of collectivization in only a few paragraphs¹⁸⁶, for the purpose of this dissertation, I focus on few aspects, emphasized by farmers, which help explain the initial reaction to joining associations.

First, collectivization was implemented at different times and with different intensities across the country. Verdery (2004) has clearly articulated the social and political implications of collectivization in the rural communities: “the party-state would seek to insinuate itself directly into rural communities and even into families, breaking down existing social relationships and creating wholly new alliances and enmities between newly formed groups while completely refashioning villagers’ sense of who they were.”

In order to secure support for collectivization at the local level¹⁸⁷, the Agrarian Commission established in 1949 to carry out this task, decided that the process should start gradually, in only a few counties (Levy 2005). In a meeting of the Agrarian Commission in August 1949, Ceausescu said: “We discussed the issue of not starting now in all counties and all households. We need to start first in a few counties around the country, to see what the environment is, and how things develop. There will be

¹⁸⁴ Banat is the historical region in the south west of the Western Plain agro-region.

¹⁸⁵ This quote refers to the 18th century when many German settlers, mainly merchants, arrived from Swabia, Alsace and Bavaria, as well as people from Austria.

¹⁸⁶ Verdery (2004) explored the aspects of collectivization from the angle of peasant-state relations. Other anthropological analyses of this historical time are discussed in the edited volume by Dobrescu and Dobrescu (2004).

¹⁸⁷ The slow pace in collectivization was also intended because of lack of cadres to carry out the “persuasion” (“munca de lamurire”) process at the local level.

hardships...we could stumble. We thought of starting in Ialomita where lands are easily consolidated. The county is relatively well off but there are only few villages [...] We could also do Constanta, Teleorman, Timis, Olt, Vlasca, Falciu, Braila...in total ten counties. Let's do one now, and see how things develop.”¹⁸⁸ This was the overall approach in the first wave of collectivization, before the “final assault” (Oprea 2005). The party cadres intended to create collective farms as role models for the rest of the country (“heroes of the socialist movement”). Scott (1998) viewed such examples of the new socialist vision as a process of “social engineering.” Hence, investment in these farms was higher, and the early system of incentives and production was quite appealing to the rural population.

The villages in the South, where land had better quality, were the first to experience this production system. The main crops cultivated there were corn and wheat. Because the Socialist Agrarian Commission intended to shape these farms on the model of large-scale US grain farms, the types of crops cultivated were important. Other appealing factors were lower population density and a recent history (due to migration from other regions on the country), which meant that villagers were not so rooted in the land structure.

Chelcea (2005 p. 426) describes that in the 19th century Baragan plains had large latifundiar estates and experienced successive colonizing waves up until the beginning of the 20th century. Given the low population density, these circumstances resulted in high in-migration and the creation of new villages. Because newcomers (“veniti”) formed the population majority, social cohesion was less pronounced and individuals were less rooted in one place as compared to the West. Interviews with farmers in the South suggest that the level of community bonding was weak because oftentimes the newcomers would return for part of the year in their native regions (generally hilly or mountainous areas) where part of their family was still living. They would come South for harvest time and leave in the winter.¹⁸⁹ The relationship between these people and their land was fluid because at the time of collectivization some families decided to return to their native regions, while other stayed in the South.

Another aspect relates to the size of farms prior to collectivization. Because of the very large estates (haciendas) owned by landlords (“boieri”), farmers (households) owned small plots far away from villages. Hence, they had to bear high costs associated with “waking up in the morning and coming back late, high depreciation of the carriages, food for animals, absence from the household, and sleeping in the field” (Chelcea 2005 p. 428). Therefore, the socialist cadres believed that land consolidation into collective farms would face less resistance in this region.

With few exceptions, in the South, the socialist collective farms were embraced by the local communities in the 1940s. In a way, collectivization replaced the servitude system on the large estates of

¹⁸⁸ From “Stenograma sedintei Secretariatului PRM, 26 august 1949, ANIC, fond “CC al PCR-Cancelarie”, dos. 72/1949, ff. 3-4”, in Levy (2005).

¹⁸⁹ Similar findings are found in Chelcea (2005) based on Reviga Village.

the landlords with a system of wage payments and other informal benefits that the small farmers drew on (i.e. access to inputs, education, and health services). Many believed at the time that this more structured system played to their benefit. One farmer in the South claimed that collectivization was inevitable. For many villagers, socialist collective farms provided more stability and security in their lives. Hence, the first to join the collective farms were the poorer farmers with fewer resources and alternatives.

Moreover, as I discussed in Chapter 4, private property has been very limited in the Central Romanian Plain, and therefore, the sense of ownership deprivation did not create strong resentment to collectivization. In my fieldwork I did not come across individuals who projected a high attachment to land as private property, but Chelcea (2005), in a more ethnographic study concludes that even in the South, some of the individuals who received land 20 years before collectivization showed intense sentiments of regret for having to give away the land. Nevertheless, I argue that these cases are more isolated in the Central Romanian Plain as compared to the Western Plain.

All these factors discussed above (history, institutions, demography) contributed in different ways to limiting the response of farmers to the reverse process, de-collectivization, as individuals preferred to rely on a system that they were more familiar with, and which exposed them to less risks. As Petru, a small farmer in the South argued, “the responsibility as individual farmers was too high, and I, for one, was not willing to take it. The stake was too high”.

In the West, however, as mentioned earlier, collectivization was met with a lot of skepticism as peasants tried to withstand “the social conformity handed down from above” (Verdery 2006 p. 353). As a result, resistance built up on both sides (the peasants and the state), as the party cadres moved to forced confiscation of land, livestock, and physical assets “for the benefit of the socialist state,” as one farmer sarcastically recollected. The state, anticipating resistance, resorted to measures such as high taxes and quotas on agricultural production, arbitrary arrests, confiscations, and even physical violence.¹⁹⁰

One explanation for these different reactions to collectivization and hence different strategies adopted by the socialist state resides in the structure of property rights prior to collectivization. As I discussed at length in Chapter 4, private property has a much longer history in Transylvania as compared to the historical region of Greater Romania, in the South. In Transylvania property registration was introduced by the Austro-Hungarian Empire in the 1860s. In other parts of Romania land records were introduced much later and in a more provisional form. Hence, in the South for instance, anyone who had to prove ownership had fewer and less reliable documents at hand. This legacy was reflected in all my interviews with farmers in the Western Plain where landowners have projected a much stronger sense of

¹⁹⁰ The system of quotas on agricultural production for individual farmers has not been unique only to the West. Roske (2005) documents that high quotas were imposed in the South as well, in order to coerce farmers to join the collective farms. Most of the time these requirements were so high that farmers had to purchase additional produce to supplement the harvest fill in the quota level.

attachment to land, viewing it as a reflection of individual and class identity. Villagers recalled the sense of fear for re-collectivization at the time of restitution. These sentiments were augmented by the intense political campaign organized by the historical Peasants' Party and Liberal Party in the villages, especially in Transylvania.

For instance, one farmer, Dumitru, claimed that at 60 years old, when he got his land back, he felt he "was alive again", and finally he was able to cherish the "land for which his parents gave their lives." Dumitru argued that "there was nothing that could stop" him from getting his land back, and he "will no longer be a slave to anyone on his own land." He, along with others in the village, were very quick to clearly signal their property rights and demarcate their plots "with sticks, stones and ditches" in the lands once farmed by the association. This attitude towards the new status of owners has also been captured by Verdery (2004 p. 193) in Transylvania, among farmers that decided to work the land individually despite the difficulties highlighted earlier: "we couldn't do anything under the communists; now at least we can do something."

Farmers remembered the times of exhilaration and tension in the early 1990s, when villagers took to the fields to find the exact location and size of their plots based on old maps, kin and neighbors' testimonials, and early memories from almost half a century ago. More impressively, thousands of ownership titles from the time of the Austro-Hungarian Empire came to light from hidden drawers and were brought as evidence in disputes and claims as proof of private ownership. This process, as one would expect, has not been free of conflicts as all of a sudden older disputes over land boundaries and inheritance, that were rendered irrelevant as a result of collectivization, have surfaced in the local communities. Nevertheless, in general, landowners aimed for independence and freedom from other sources of authority hoping for the ability to strive for themselves in the new economic environment.

These reactions, however, have been hardly felt in the Central Romanian Plain. There, decades of servitude on large land estates, and short periods of private ownership (as discussed in Chapter 4) together with lack of cadastral maps and property titles, almost erased the memory of private ownership. As a result, farmers knew how much land they owned, but did not know exactly in what location. When I asked landowners where their land plots were located, they pointed elusively in a certain direction and said "around there" ("cam pe acolo"). This was an entirely different reaction when compared to the farmers in the West, where they would insist in showing me the exact location, and in sharing the story of that piece of land and all the disputes around its irregular boundaries. Hence, in the South it was much easier to maintain the associations rather than distribute land plots given ambiguities related to property.

But, as I discussed in Chapter 5 and 6, these outcomes, have to be understood in the broader economic context that differentiated these regions, the South being historically poorer, with fewer resources and a less diversified economy. Therefore, farmers preferred to continue the arrangement with

the former collective farms, transformed in associations, where they became “members” instead of “workers,” were not obliged to contribute with labor, and they had a secure source of income in the form of rent (generally as a percentage of the harvest).

Another factor (but closely related to the legacy of property rights) that explains different reactions to collectivization (and later on to de-collectivization) draws from the geo-political conditions in the region. Massive uprisings against collectivization (and land takings) in the West in Arad, Timis, and Bihor counties in the 1950s were associated not only with a stronger sense of property (which created disincentives for collectivization), but also with a potential influence from the more reformed socialist Yugoslavia under Tito. The perceived threats to the communist state resulted in considerable deportations from these counties in Baragan (Central Romanian Plain), mainly Germans, Serbs, but also many Romanians.¹⁹¹ Nevertheless, in 1955, as a result of international pressure, around 75% of the deported individuals were allowed to go back to their regions, but they did not receive their land back (Levy 2005).

These specific circumstances in which collectivization was implemented in the West certainly affected the reaction of the farmers to land restitution and privatization. As a result, de-collectivization gained a meaning of social justice through which the unfairness of the socialist times was to be undone. The manifestation of this process was through a wider return to private individual farming and quick dismantling of the collective farms. As I showed in the previous chapter, households who chose to farm the land themselves had access to sufficient technology and draft animals to support their decision.

Social networks and social pressures

Interviews with farmers show that not all who opted for withdrawing land from collective farms were equally endowed. Marioara, for instance, was living with her three young children and her mother, without any technology for farming the land, but they still decided to farm the land themselves, seeking more independence and, what she thought, more security in terms of access to land for her children. To farm her land, she relied on her social networks, limited mostly relatives, and they engaged in a series of activities that required exchange labor during harvest time.

Land restitution has been a very emotionally charged process, running deep into issues of social identity and class at individual and community level. As Kideckel (1993 p. 218) argues, de-collectivization

¹⁹¹ The interlinkage between ethnicity, collectivization, and post-socialist agricultural transformation might be worthwhile to explore in future research. Historical events such as deportations to Baragan, partially targeted at other nationalities are very likely to have shaped later responses to de-collectivization in these ethnic groups. Interviews with farmers in the West brought out some interesting differences that were perceived in comparison with a neighboring village where the population was mostly Hungarian. Aspects of higher social cohesion and level of trust in the community were associated with ethnicity and past experiences of discrimination. Also, Levy (2005 p. 68) makes a very brief reference to a quote reflecting the prejudices committed by communist cadres during collectivization against ethnic minorities (i.e. excluding Hungarians from collective farms). Verdery (2004) also refers to the fact that Germans formed their own association following land restitution.

was “as socially wrenching as collectivization had been in the first place.” Land has always been an essential part of the peasant mentality (Iancu 2001). Hence, by regaining land rights villagers could assert their dignity and worth in addition to providing livelihood and future security. Moreover, as Verdery (2004 p. 364) mentions, for many Transylvanian landowners, “receiving their land was a promise of the prosperity they associated with the years before World War II.”¹⁹²

Hence, I argue that social networks and the level of social cohesion at the local level played a role in whether associations were created, and in later land reallocation decisions. Access (or lack of access) to politically connected relatives or neighbors, the diversity of the occupational backgrounds, as well as the quality of relationships among network members affected choices and perceptions of the opportunities available to them.¹⁹³ As opposed to association managers and engineers, small landowners relied mostly on social networks in the local community, not having the opportunity to reach outside the community and kin. The sociologist James Coleman (1994) claimed that, “like other forms of capital, social capital is productive, making possible the achievement of certain ends that would not be attainable in its absence... In a farming community... where one farmer got his hay baled by another and where farm tools are extensively borrowed and lent, the social capital allows each farmer to get his work done with less physical capital in the form of tools and equipment.”¹⁹⁴ Therefore, social capital (mostly limited to relatives) enabled landowners who wished to farm the land individually to overcome market imperfections in relation to physical capital and finances.

In addition, land restitution disrupted the sense of equality in the local communities by partially recreating the pre-collectivization class structure defined by ownership of assets. Even if initially restitution was limited to 10 hectares of land per household, the re-creation of ownership based on the 1940s land records, made possible the re-definition of land-rich and land-poor in the local communities. The massive expropriation efforts imposed through collectivization erased such class hierarchies, only to be recreated 40 years later. As a result, old conflicts resurfaced and new ones emerged.

Some farmers were reluctant to farm in associations or to lease out because of perceived feelings of pride and socially constructed attitudes of inferiority created at the community level, associated with certain farming arrangements. For instance, Floresu, an engineer, landowner and tenant in a village in the Western Plain, who started a small agricultural business by raising livestock and leasing in land, argued that it was very difficult to convince villagers to lease out land even if he was willing to pay decent rents and offer good contractual arrangements. He argued that because he came from a poor family, villagers

¹⁹² However, no one informed them that farming individually in the current environment, when the state has withered away and price and trade liberalization became the mantra of mainstream policy advisors, implies different risks and market circumstances than prior to collectivization.

¹⁹³ Kideckel (1993) also points to these factors, as well as to perceptions of a households' position, prestige, and possibility within the village.

¹⁹⁴ This quote was cited in Putnam (1993).

were reluctant to lease-out land to him out of “pride and envy.” Floresu was highly educated as an agronomist, but he argued that villagers would rather “struggle by themselves” than let him work their land. There were cases in which he could not consolidate a larger plot of land because one landowner, whose plot was located in between Floresu’s plots, was refusing to reach an agreement to lease-out his plot in order to allow consolidation, and hence to make possible the use of mechanical implements. Such an arrangement would have helped him as well as Floresu, but consensus was far from being achieved. When I asked the farmer why he would not lease-out, he said that he has not reached such a “helpless stage” (“nu am ajuns atat de neajutorat”) as to have his land worked by Floresu, whose family was the poorest of the poor (“cei mai sarantoci”) in the local community.

This case shows how land became a measure of status, differentiating the villagers along earlier social structures in the community. Their meaning, however, one generation later, was at odds with the present reality.

Similar attitudes were also seen from farmers who refused to join associations or to lease out land to other villagers who were wealthier before collectivization and immediately after land restitution seized the moment to regain status and power in the community. One farmer argued that even if “he dies on the field,” he will not “beg *them*” to farm his land. Without discounting the hardships of returning to active farming, he argued that he will continue farming as his ancestors did, and he will not step on his pride to have someone else “take advantage of his land.”

This behavior was common in the West, due to historical circumstances discussed earlier, but it was hardly felt in the South. In the West, private individual farming was the supreme form of land management, while, oftentimes, formal associations and leasing transactions were seen as exploitative.

Such a perception on alternative farming arrangements derives from the scars of (and lessons learned from) collectivization in this region (but not only). The strong resistance displayed by the rural population in the West resulted in larger “garden plots” for individual households during the socialist era. It has been widely documented that during collectivization households (and the leadership of the collective farms) appropriated resources from the collective and state farms for individual use due to significant shortages. The channels through which these resources were appropriated relied on informal exchanges and favors, petty theft and the like.

Nevertheless, the downside was that these coping strategies inhibited cooperation among households that were not directly related to each other, eroded trust and promoted conflicts that undermined social networks and advanced a self-interested behavior to the detriment of social cohesion. Because these relations were more intense in the West, the incentives to form associations were limited in a context in which the appeal of private property was much stronger. Landowners aimed for

independence and freedom from other sources of authority, hoping for the ability to strive by themselves in the new economic environment.

The sacrifices that landowners were making in the name of private property and the set of values attached to land (Verdery 2003) brings back the concept of “self-exploitation” used by Chayanov (1966) to describe the Russian peasantry. One landowner, Maria, from a village in the West, reminisced her family’s experience and decisions they made in terms of land management. When property rights in land were restituted, farming individually was the only alternative her husband envisioned, despite their children (living in the urban areas) advising them otherwise. They were in their late 60s and they could imagine at the time the hardships they would later encounter. At the time, however, they were very hopeful. They had a carriage that stayed unused for decades in their storage, for which they bought a horse. These two “equipments” proved to be instrumental in the years to come. Nevertheless, the plunge in the prices for agricultural products and the increase in farming costs, made the life of Maria and Nicolae progressively harder. Nevertheless, while there was no association in the village, Nicolae refused to even consider the option of leasing-out the plots that were further away. “As long as I am alive no one else will step on my land,” Nicolae would say. After he passed away, his wife had no choice but to request help from a neighbor, a wealthier tenant, to farm her plots for “whatever return he considered appropriate.” “It was a hard decision to make,” she recalls, because the villagers were “judging” her, saying that now that she is alone she became negligent with her property. Her fellow villagers were saying that “only the helpless have their land worked by someone else.” Nevertheless, she overcame the community critique and now she feels very content with her decision since the garden plot was more than enough for herself. She lamented that if they would have done this earlier, her husband might have been alive now.

An additional, quite interesting, factor that transpired from discussions with farmers in this region, is the strong sense of “shame” and “stigmatizing” among landowners for leaving their land fallow. As a result, the outcome has often been an excessive effort to farm the land with limited resources and insignificant returns, beyond what one would consider an optimal level.

These cases, not uncommon at all in the West, suggest that the value individuals attach to land is socially constructed. It depends on community enforced norms and values of what a good landowner means, shaping social relations around land. These norms and social relations define, ultimately, the decisions farmers take in respect to reallocating their land assets among different institutional arrangements. The case also suggests that individual farming, the predominant arrangement in the West, is not necessarily the most “efficient,” or economically “rational.” Rather, it is shaped by historically defined and socially accepted norms of behavior.

Stories like these are fairly common in the Western Plain and they point to the dramatic changes in the local communities as a result of land restitution. The rearrangements of the social structures into “rich and poor,” along with the strong attachment to land due to historical circumstances, contributed to defining the pattern of land reallocation during transition.

However, in the Western Plain, not everyone felt that private individual farming was the best option following land restitution. In villages where associations were not formed in the early 1990s some farmers were unsatisfied and argued that lack of trust and social cohesion in the local community were the primary factors for this outcome. The expression “everyone for their own” (“fiecare pentru al lui”) was often mentioned as an explanation for the reduced motivation to join farming associations where farmers could benefit from economies of scale and shared mechanical services. National surveys such as The Opinion Barometer (Barometrul de Opinie) conducted by the Open Society Foundation in 2002, found that lack of trust and involvement in community related decisions have characterized the transition period especially in the rural areas.¹⁹⁵ Nevertheless, the issue of trust requires much more detailed examination through ethnographic research, which could be a topic for future research.

Even in the West, where associations were formed following de-collectivization, membership gave a sense of security, and shared risk during periods of uncertainty following high inflation and difficult market access. Kideckel (1993 p. 221) brings out another nuance, by arguing that some farmers got accustomed to shorter workdays in the collective farms and were unwilling to commit more hours of work by farming all land themselves. Moreover, those who commuted to work in the nearby towns needed the extra-help provided by associations in farming their land.

To summarize, in this section I discussed why farming associations were created mostly in the Central Romanian Plain and less so in the Western Plain. I showed that to a large extent, historical legacies of property rights structures, and collectivization experiences explain these different patterns of land reallocation after de-collectivization. A longer experience of private property in the West, as well as a more forceful and violent collectivization, created resistance to any remnant institutional structures (i.e. associations) from the socialist regime. There, private individual farming prevailed. I also showed that the choices landowners made were constrained (or embedded) in a system of social relations in the local communities. Land restitution led to the re-creation of class differences between “rich and poor” based on the pre-collectivization social structure, where land became a symbol of status and identity. These social

¹⁹⁵ Some of the findings from this survey show that 72% of the rural population in the sample has not participated in community meetings. If they would participate, 41% claimed that they would not bring up or discuss any issues. Moreover, if they would have any complaints or need some type of community assistance, 53% responded that they would not bring it up in a meeting. Kideckel (1993 p. 129) also notes the lack of involvement in political and community life, which he explains through the villagers’ “understanding of the limits of their influence” shaped by the bitter socialist takeover and arbitrary authority.

relations ultimately constrained the choices considered by landowners. Cases from the Western Plain are illustrative for this argument, showing that even if individual farming predominated in the West, this arrangement is not necessarily the most “efficient,” or economically “rational.” Rather, it is shaped by historically defined and socially accepted norms of behavior.

9.3 How different or similar are the associations from the old collectives?

Given that associations were formed immediately after de-collectivization, in the previous section I showed that this process resulted from the intersection of historical, institutional, and social factors at the regional and local level. As I mentioned in earlier chapters (Chapters 2 and 8), the persistence of farming associations is an unexpected outcome because there is an abundance of literature critiquing this farming arrangement as inefficient and plagued by collective action problems, such as free-riding and principal agent problems. For the post-socialism countries in CEE, the main concern is that farming associations are too entrenched into the practices and management of the old socialist collective farms. Hence, the unbroken link with the collective farms would make associations unsustainable in the future, being replaced by individual farming and land market transactions. However, what we actually see is that farming associations are still playing an important role in the Romanian agricultural landscape. Hence, the question of how different or similar associations are from the old collective farms requires a more in-depth examination.

The transformation of the Romanian agricultural sector in the post-socialist period was followed by expectations that the collective farms, the most inefficient component of the agricultural sector, will be replaced by private individual farming. It was expected that market forces, through the operation of land markets, will transfer land in the hands of more efficient private farmers. However, the general trend has been for collective farms to be restructured into formal associations, maintaining the same leadership and professional staff. This outcome led many critiques to argue that associations are propagating the practices of the old collective farms, preventing them from responding to market incentives in a new economic and institutional environment. In this section I show that associations are responding to market stimuli, this being one reason for their persistence throughout the transition process. The following aspects proved important: learning and adaptation to a new economic environment, solving collective action problems, and the fluidity of associational forms.

Adaptation and learning

Even if formal associations are the heirs of the old collective farms, many undergone visible changes. The most notable change is the significant reduction in size, both the total amount of land

farmed and the number of associated members (Sabates-Wheeler 2005). Nevertheless, as other authors show, due to a lack of expertise among the new landowners to manage large-scale farms (Kideckel 1995), the leadership of the collective farms (engineers and technocrats) pushed for and took over the setting up of the new associations (Sarris and Gavrilescu 1997; Verdery 2003; Sabates-Wheeler 2005). Some of the professionals in the socialist collective farms either succeeded in convincing farmers to keep their land in the formal association, or started an agricultural enterprise by themselves, leasing-in land. Yet, it is hard to know whether changes in the association reflect meaningful internal restructuring or whether the management has merely changed the “sign on the door” (Sabates-Wheeler 2005).

Based on fieldwork in the two regions, I found that formal associations were forced by circumstances to operate differently than the old collective farms. Following land reform in 1991 and the policies for stabilization and liberalization during transition, the new associations are operating in an environment governed by the price mechanism and not by production quotas. As a result, even if the management has remained by and large the same, the new institutional arrangements were able to survive only if the leadership shifted their strategy from achieving production targets to generating economic profits. Those associations that were not able to adjust to the new environment were gradually driven out of business.

Moreover, despite fiscal facilities offered in the beginning of transition, associations were not able to rely on state support anymore, as the old collectives did. State subsidies continuously declined especially after 1997, due to the slow withering away of the state. The soft budget constraints of the collective farms were replaced by hard budget constraints where the goal to expand production was replaced by profit maximizing targets (Kornai 1992).¹⁹⁶ At the same time, the government removed all the contracting channels with the state for product distribution and input procurement. Hence, these farms were forced to operate under a real threat of bankruptcy if they were not able to cover their costs, relying mostly on personal networks for market access (as discussed in the previous section). As a result, these conditions “sharpened their response to market forces” (Lerman et al. 2004 p. 147).

Valentin, the chief agronomist of a formal association in the Central Romanian Plain claimed that they “made great efforts to adapt to the new economic conditions.” The main difficulty, he argued, “was the uncertainty created by not knowing where to sell the production.” “You had to be quick and very responsive to what was happening around you...no one told us what to do...it was us and the people. Those of us who made it succeeded because we learned to be more flexible, to adapt...like fish in the water. But, the future is uncertain for all of us.”

¹⁹⁶ It is true, however, that associations did receive financial support following de-collectivization (e.g. tax exemption for five years) along with other incentives, but it was by far smaller than prior to the 1990s.

One aspect for justifying that formal associations are different from the old collectives relates to market access for agricultural products. In the socialist system of production, the state, using organized collection centers (i.e. ROMCEREAL), secured the market for the agricultural production at the end of the harvest. But, in the mid-1990s, the capacity of these collection centers was significantly reduced (and later they were dismantled). As a result, the associations were left in need to find for themselves marketing strategies (markets where quality became more important than quantity). The association leaders had to pursue much more active productive and marketing strategies in order to survive the new economic environment.

Of course, it is to be expected that the association managers capitalized on networks and social capital inherited from the previous regime. However, it does not suggest that they were perpetuating the practices from the old collectives. Nelu, an association leader in Arad, former employee of a state farm, relied heavily on the mechanical services provided through this agency, but also on individual networks for finding information related to distribution, prices, and access to inputs. These assets proved to be crucial for emerging in the new environment. Moreover, the association in Curtici, discussed in Section 9.2, is a clear example for how networks inherited from the collective farm structure were so critical for surviving and growing in the new conditions imposed by the transition context.

Lastly, but very important, following land restitution the association members were not simply workers on the farm but they became *landowners*, they are the owners of land, the critical resource that the association needed. There are indeed power differentials¹⁹⁷ between managers and landowners (mainly due to disproportional ownership of capital). But, despite this imbalance, managers are compelled to win the trust of the landowners and also take into account their needs. Given that not everyone decided to leave their land in associations following de-collectivization, association managers found themselves in need to attract members in order to consolidate their plots and gain from economies of scale. This process of persuasion (“munca de lamurire”) has been quite active in some villages where I conducted interviews, process through which the associations were trying to establish a good reputation in the local community. They were compelled to pay the returns to the members on time, to provide the necessary mechanical assistance, and to perform good quality work on the land. As one association manager mentioned, if a landowner that has a plot in the middle of the association decides to withdraw his land, it would create major disruptions for the well functioning of the association. Therefore, developing a strong social capital in the community, around land relations, can be viewed as a pre-requisite for the persistence of farming associations. Social capital, as Narayan and Pritchett (2000 p. 285) mention, is a “many splendored word

¹⁹⁷ It is also important to note that the issue of power differentials in rural areas might be overstated. As Ortiz (1980 p.177) argues, access to power and resources will certainly improve the position of small farmers. However, small farmers still have to face “the difficult task of planning an enterprise in the face of uncertain weather, demand, and market conditions”.

which means different things to different people.” Here, social capital should be viewed as features of social organization, such as networks, norms, and trust, that facilitate cooperation and coordination for mutual benefit (Putnam 1993). Hence, social capital, by analogy with notions of physical capital and human capital, enhances the benefits of investment in physical and human capital, and therefore, induces households, as a collectivity, to advance the role of associations.

The concern of associations for the satisfaction of the members was more pronounced as land markets became more active and landowners had access to other farming alternatives. Slowly associations were competing for land with tenants. Having compact land plots was critical for being able to farm the land efficiently. Nevertheless, as Floresu, a local agronomist in the Western Plain, argued, it was quite challenging to reach consolidation not only because of transaction costs, but mainly because it was a matter of gaining the trust of the landowners. To gain trust and credibility, one had to offer better risk protection and show higher reliability in land rental payments. Avram, an association member in the West claimed that the association gave him (and others in the village) a higher share from the harvest because there were talks about landowners wanting to withdraw land and give it to a local farmer who started leasing-in land from the landowners in the nearby villages. Ion, the manager of the association in Curtici also argued that it was critical for them to offer high returns to the landowners in order to build confidence that “it is a secure investment” and that they are “prosperous.” Nevertheless, a stronger competitive environment for the associations intensified mostly after the mid 1990s. Therefore, one could argue that the increase in land market participation has been a catalyst for improving competitiveness for the associations with potential for growth.

Collective action problems in practice

Interviews with farmers suggest that the legacies of old collective farms in terms of collective action problems affected the way formal associations were perceived in the local communities. Collective farms were never highly supported by the state prior to 1990s (as compared to the state farms, as I discussed in Chapter 4), leading to shortages and inefficiencies. Nevertheless, they operated in close interdependence with the “petty commodity production of individual farm members” (Swain 1985 p. 3). Free riding and shirking were widespread for members that would disproportionately expand labor effort on their private plots, while drawing on resources (e.g. seeds, fertilizer) from the collective farms. Such behavior was common among all the hierarchical layers of the collective farms. Hence, due to this “complex symbiosis” (Verdery 2003) between different organizational levels, there was a general sense of mistrust in the ability of association leadership to distribute returns in an efficient and equitable manner and to dissociate farm operations from the private interests of the association leaders.

It is well-known that, during socialist collective farming, the returns to working in collective farms were not very rewarding, nor were the profits of the farm managers. Collective farms played a social rather than economic role, providing resources for social projects in the community (i.e. schools, health clinics), and acting as informal redistributors of resources from the state to individuals. Since access to farming inputs (seeds, fertilizers, pesticides) was very limited for private farmers, oftentimes in exchange of favors, farm workers would draw on resources from the collective farms to enhance their production on private individual garden plots. This practice was widely known and practiced at all levels, but never explicitly dealt with by the socialist cadres. In a way this is not surprising, since the whole socialist system was based on scarcity of resources, resulting in wide channels of informality. Hence, following the dissolution of socialist regimes, expectations that these practices would persist (and they did although at a smaller scale), led to mistrust not only in association leaders (former leaders of collective farms), but also in private entrepreneurs (the new tenants).

However, only farmers who had a larger set of choices for institutional arrangements vocalized more intensely these concerns. Those who were more regularly “cheated” by the associations were the absentee landowners who were not in the village regularly, and as a result were not able to exert social pressure on these “entrepreneurs.” One farmer in the South, Petre, who was working in a nearby town and had land in the local association, claimed that he knew he was receiving a lower payment on his land plots, but he was still pleased that his land is not staying fallow and he has enough harvest to feed his animals.

The most common critique to cooperative or associative forms of production relates to imperfect monitoring and uncertainty. Putterman (1989 p. 327) claims that “uncertainty regarding other members’ labor and the distribution rule, add to production uncertainty which [...] would make co-operative production relatively less attractive to risk-averse farmers.”

In addition, oftentimes landowners were benefiting from lack of accountability, and informal arrangements being perpetuated as legacies from the old collectives. Farmers were often drawing on resources from the association (such as seeds or fertilizer) for use on their individually farmed plots, and through a system of informal favors and commitments they were using additional mechanical services from the associations.¹⁹⁸

Nevertheless, since private property was reinforced, I argue that the interest of the association members in adequately assessing the costs and benefits of the association was more pronounced and called for higher accountability. Moreover, the level of social embeddedness of these institutions (the old collectives and the newly formed associations) in the local community played a major role in achieving

¹⁹⁸ Verdery (2004) also shows how, in Vlaicu village, these types of informal activities were actually stretching the resources available to the associations, often affecting their performance.

monitoring through peer-enforced mechanisms. This process contributed to reducing collective action problems and making the option more attractive for risk-averse farmers.

Costel, a farmer from the Western Plain claimed that after so many years in the collective farms, he knew how the association functioned, who was “pulling the strings and how strong they were pulling them.” He also knew that without his land (and that of the villagers) the managers of the collective farms would not be able to continue their position in the new associations. Hence, he left his land in the association but he “watched closely every step they made.” “I was a thorn in their back, and they knew it,” he said. “I knew they would take a little more than they should, but as long as they would not take advantage of us (atata vreme cat nu isi bat joc de noi), it was fine by me. We are farmers as well, we know what it takes to farm a piece of land, and we know even better how much corn grows on that land. They can fool us a little but they can not fool us entirely.... These are different times, and this is *my own* land. No one tells me what I can and what I cannot do anymore.... If I could farm it myself I would do it.”

The interlinked relations between the landowners and the association leaders contributed to solving not only issues of trust, but also collective action problems. Having full ownership rights over the land farmed in associations, landowners showed more interest in how their plots were farmed, what type of seeds the association used, how much fertilizer it received, how well the land was ploughed. They also knew exactly how large the harvest was. Therefore, accountability was quite high for the association leaders and for those who contributed with labor in the association. Some farmers mentioned that if they found their plots poorly farmed and harvested, they would complain to the farm managers, discuss it with their neighbors, stirring up the local community. This, in turn, would affect the credibility of the association leaders.

The fluidity of formal associations

In Chapter 7 I showed that even if associations are still important in the Romanian economy, their number has declined since the beginning of transition. This decline suggests that two processes might be at play: going out of business or reorganization (consolidation). Verdery (2003) documents that some formal associations went bankrupt as a result of inability to stay competitive during the economically unpredictable transition period. Nevertheless, a more interesting process that associations went through, especially in the beginning of the 2000s, surfaced from interviews with corporate farms and formal associations in 2006. In several cases I found that in a hostile economic environment, formal associations reorganized to resemble private corporate farms, in order to secure an easier access to finances and investment, and therefore a better position in the market. This more recent process adds to the previous discussion on how different associations are from the old collective farms.

One example from the Central Romanian Plain, illustrates how an association changed its status due to external circumstances. In July 2006 I interviewed a large private farm in Calarasi County, which claimed that in the past five years, under pressures for upgrading their farm operations, they changed their status from association to private farm enterprise, purchasing some land from former members and shifting the rest to leasing contracts. The rationale for such a decision was based on the fact that under the associational status it was too difficult to carry out investment projects due to the need for a majority (or unanimity) vote and lack of collateral.¹⁹⁹ Without alternative options, the farmers agreed to release some of their rights in exchange for still having someone work their land, and hoping for higher returns following larger investments. The farm manager argued that for households the implications were minimal as “nothing changed for them.” However, from a legal point of view, the status for the farmers did change, contracts being made for five years and the control of the farm management on cultivation decisions being formalized. This new contractual arrangement also meant that at the end of the term the association had the right to stop farming the land for certain households since there was no legal binding to do so. Essentially, the farmers lost part of their rights from their “bundle of property rights,” their use rights. In some cases the rents actually increased.

Similar cases were also recorded in the Western Plain, reflecting the fluidity of property rights arrangements in the face of external conditions shaped by transition. Verdery (2003 p. 241) also points that throughout the decade the extent of associations’ control of use-rights has changed. She argues that the associations needed more control over the use-rights, more stability and leverage over the production process, which could be achieved through longer-term contracts. Earlier on, however, the degree of control exerted by the associations was lower, as they had to submit more to “the desires of owners for what they were to plant and for where to plant.”

Market pressures and the need for profit generation, slowly changed the associations’ production strategy. Additional factors that led to these adjustments were the increased competitive pressures on associations as different alternatives for farmers were transpiring, such as renting or selling land. Verdery (2003) also found that locals made constant comparisons with other villagers, other associations in the area, and with other options for land use, increasing the pressures not only for better performance, but also for higher returns and flexibility. Yet, market limitations in credit access and product distribution made it almost impossible for formal associations to improve performance as such.

¹⁹⁹ The associations do not own the land that they are farming. They only own part of the machineries and buildings with which they operate. Nevertheless, the physical capital is in a fairly advanced state of degradation, which reduces the amount of collateral that associations can use when applying for bank loans. In the case of leasing transactions, however, the tenant has a written contract for the use rights of land over a period of time, which provides better collateral when applying for loans.

As reflected in interviews, this process of increased pressure on associations in the past five years was more pronounced in the Western Plain than in the Central Romanian Plain. In the South alternative property rights arrangements (i.e. different associations, leasing opportunities, or a more developed market for land sales) were more limited than in the West, mainly due to differences in the size of collective farms, the process of de-collectivization, and different levels of regional economic development as illustrated in Chapter 6. Specifically, in the South, even if collective farms were larger, the number of claimants was smaller relative to the available land because no landowner could recover more than 10 hectares of land initially. As a result, large plots of land were left at the disposal of the authorities and there were few entrepreneurs able to compete with the large associations, deeply rooted in the former channels of procurement and distribution.

Nevertheless, the fact that associations were large did not create an immediate competitive advantage as compared to other farming arrangements. An interview with an association in Calarasi County revealed that searching for distribution channels for agricultural products posed great difficulties. This association, SC Mecanica, had only one client for their products (corn and wheat), Nutricom Oltenita. SC Mecanica had signed a contract for five years with this firm, to deliver the harvest at contractual prices, in fixed quantities. The association viewed this arrangement positively because the client was paying for all the inputs. It was beneficial for the association because it did not have to go through the difficulties of getting a loan since they were afflicted by lack of liquidity. The fact that they had only one customer for the entire production surprised me and suggested that their situation was actually quite precarious. However, when asked how they perceive this arrangement, the association manager argued that they were quite content with it since they were among the “lucky ones” to have a relatively stable market for their products.

Hence, we see that associations are in a constant state of flux, trying to adjust to new market conditions imposed by the transition to a market economy and to the standards of competitiveness imposed by the EU. Nevertheless, these changes, while beneficial for the associations (in terms of lower risks and higher potential for investment), often result in landowners having less control over their land, and essentially weaker property rights. Slowly the associations began to resemble more private entrepreneurs that operate through land market transactions, which almost defies the purpose for which they existed in the first place (i.e. risk sharing arrangements for households that intended to remain active farmers and maintain a higher level of control over the land in ownership). From a policy point of view this is important because it suggests that measures to support small farmers should aim to support farming associations, rather than encouraging land market transactions and the emergence of large private farms to the detriment of these institutional arrangements.

To summarize, in this section I examined alternative explanations for why farming arrangements persisted throughout the transition process. I specifically analyzed how closely associations resemble the old collective farms in response to criticism from earlier studies. I showed that in the new economic environment formal associations have adapted their production and management practices to respond both to market incentives (and hard budget constraints) as well as to members' needs. Their embeddedness in the local communities triggers a system of peer pressure monitoring through which collective action problems can be addressed.

9.4 Summary of findings

There is little ambiguity that post-socialist land reform resulted in one of the most complex agricultural transformations in Romania's history. The extent of social, economic, institutional, and physical reorganization has been unprecedented. Land restitution, privatization, and de-collectivization, created conditions for land reallocation into different institutional arrangements. Later on, the formalization of land market transactions extended the options for farming institutional arrangements.

The broader goal of this dissertation is to explain the persistence of agricultural associations throughout the transition period, despite perceived collective action problems and the availability of alternative farming arrangements such as land leasing. This chapter illustrated that even if structural factors (e.g. access to capital, human capital) are important for decisions related to land reallocation (as discussed in Chapter 8), other dynamics reflected in the social environment, historical legacies, and institutional conditions, are equally, if not more important.

Among these factors, farmers have consistently pointed to the experience of collectivization and the historical circumstances that played a role in that process. Through this lens, regional differences between the West and the South come to light in a more forceful and unambiguous form. This perspective sets the scene for a deeper understanding of the social dynamics around land and private property in the rural areas. Moreover, different actors (i.e. former collective farm managers, small farmers, emerging entrepreneurs as tenants) played different roles in shaping the outcomes of land reform. All these factors created push and pull forces in what seemed to be a "third-way" for Romania's agriculture – a move away from collective and state farms to a mix of private and associational farming arrangements.

Former collective farm managers and engineers emphasized the importance of economies of scale and retaining the networks for access to markets and mechanical implements. In the initial stages of land reform, oftentimes facing opposition from small farmers, they pushed for maintaining the structure of the old collective farms under the new institutional configuration of formal associations. Especially in the

West, such an allegiance created wide disagreement in the local community, because of a much stronger awareness of private property and the memory of forced collectivization. As a result, landowners were less inclined to join associations, and the prospect of individual farming and land market participation was more appealing.

Another interesting finding relates to the role of social networks in the rural communities and the way in which the dynamics they generate affect the decisions landowners make on land reallocation. The experience of collectivization had a very disruptive effect on the social fabric of the rural communities (from interpersonal relations and networks to social institutions and structures). In the West, these outcomes contributed to a gradual breakdown in the community life, and a stronger emphasis on individualism and self-help behavior. When collaboration took place it was generally centered along close kinship. The case of Floresu, a tenant who had difficulties finding landowners to lease land and workers to farm his land because of his lower position in the community is illustrative of this circumstance.

These aspects, however, explain mostly why associations were established in some regions and not in others. In Section 9.3 I examined why associations persisted throughout the transition process despite perceived collective actions problems and the opening of land markets. I showed that formal associations, created on the structures of the former collective farms, are quite differently from their predecessors. First, these new farming arrangements operate in a different environment shaped by profit maximizing rather than production maximizing goals, supported by hard rather than soft budget constraints. These market conditions require them to respond differently to market incentives, and to be more flexible to changes in the larger economy. Second, association members are the owners of the key asset they depend on, land. Therefore, the managers had to incorporate the needs of the landowners in the decisions about production and the disbursement of payments (rent). Moreover, because of the collective farm legacy, associations are highly embedded in the social relations at the local level. Hence, collective action problems are often solved through a system of peer enforced monitoring of the production process.

Ultimately, this chapter completed the analysis of why farming associations persisted throughout the transition period and why regional differences prevailed in land reallocation choices during transition.

Chapter 10 : Conclusions - Land Reallocation During Transition

This dissertation examined why associations persisted throughout the post-socialist transition period despite concerns for collective action problems and despite the availability of leasing as a close substitute. Contrary to initial expectations, various forms of associations were created in the former communist countries. The reallocation of land in associations occurred while this institutional arrangement has been widely criticized in the literature and individual farming was portrayed as the panacea for the agricultural sector in the Central and Eastern European (CEE) countries. Following the formalization of land markets, small farmers were expected to resort to land transactions for consolidating fragmented plots and for shifting out of the “inefficient associations.” In addition, wide regional differences shaped the outcomes of land reform both in terms of economic performance, as well as in terms of institutional patterns for land reallocation.

That new landowners were slow to embrace the market mechanism for reallocating land assets came as a surprise to most neo-liberal policy reformers. As Roland (2000) argues, the results from policy advice given to transition countries “have been particularly humbling for Neoliberal economists, to say the least, and remain a subject of controversy.” The slow market development has been one of the many “transition surprises,” along with increase in poverty, fall in production, a process which Meurs and Ranasinghe (2003) label “de-development.”

Hence, this dissertation examined the outcomes of post-socialist transformation in the context of land reform, the most controversial policy following the fall of the communist regime. The economic and social consequences, as well as its ideological connotation, placed land reform on the top of policy priorities in all former communist countries in Europe and East Asia. However, the reform strategies and the specific outcomes in terms of institutional structures, economic performance, and social processes, varied widely. Moreover, despite far-reaching commonalities imposed by the communist policy agenda on the CEE countries, and on agriculture in particular, deep cultural, social and economic differences remained. Explanations for these unexpected outcomes call for more in-depth country specific analysis of land reform in order to understand the historical and institutional context that led to certain outcomes.

Romania is an interesting case to examine the outcomes of land reform for several reasons: 1) in the 1990s Romania engaged in one of the most complex reforms in the region, pursuing both land restitution based on the 1940s land records, as well as de-collectivization and privatization of state farms; 2) during the communist regime the level of private property (and hence familiarity with markets) was the lowest among the Soviet block countries; and 3) Romania emerged out of communism with the lowest

level of economic development and standard of living for the population. Hence, the shock of transition was felt much stronger and the challenges for institutional change were in many ways convoluted.

Most explanations put forth for the persistence of farming associations and the limited participation in land market transactions stressed the irrational, ideologically motivated behavior of the rural population. In addition, from a political economy perspective, small farmers were viewed as powerless in the face of capital rich former socialist elite dominating the former collective farms and influencing the outcomes of de-collectivization. This unbalance of power was thought to result in the preservation of inefficient practices from the former collective farms, preventing markets to unfold naturally. Theories of institutional change, in the new institutional economics (NIE) tradition, emphasize the role of transaction costs in the limited market development. However, they do not explain well the outcomes of land reallocation during transition. Economic rationality, power structures, and transaction costs depict a rather static view of institutional change and post-socialist transformation, assuming that if one or the other constraint is removed, farmers will undoubtedly shift to private individual farming or would engage in land market transactions. In addition, these explanations cannot fully explain the wide regional differences in land reallocation that transpired soon after land reform was implemented.

This dissertation research found that there are some missing explanatory variables that account for the persistence of associations during transition, and for regional differences in land reallocation, which cannot be accounted for by mainstream theories of institutional change. Aside from resource (mostly capital) constraints, the choices landowners make are embedded in past institutional legacies, the experience of collectivization, and the interaction of different actors in affecting change. These factors help to explain why, in some regions, the old collective farms were transformed in farming associations while in other regions they were rejected in favor of private individual farming. In addition, in this explanation landowners are given more agency in the decisions they made in terms of land reallocation. Former managers on the collective farms were not always overpowering the small landowners. The outcome resulted from the constant interaction between the interests of the main protagonists in land reallocation.

The role of institutional legacies and the relevance of past experiences are important to developing the story in this dissertation, but they should not be viewed as binding. It is possible that the role of history diminishes over time, but at least for the transition countries in Eastern Europe, this process still has relevance. Hence, a complete analysis of land reallocation needs to account for how aspects from the past affect landowners' choices between farming arrangements within the constraints and incentives offered by new market conditions during transition. To this end, the first part of the dissertation discussed the chronology of land reforms in Romania since the beginning of the 1900s, with emphasis on regional differences as well as on the similarities that could be drawn in terms of policies and outcomes. In

addition, I discussed the current economic conditions for the agricultural sector in Romania with reference to the larger European context and the national economy. The social environment during transition was also analyzed in order to provide the context in which farmers operate.

At the heart of this analysis is the household, as a decision-making unit, making choices on land reallocation based on exogenous factors (such as market conditions), capital endowment, household characteristics, social considerations, and historical legacies. In order to disentangle the many inter-related factors hypothesized to affect the choice of farming arrangements for land reallocation, I used a mixed methods approach. Statistical analysis on household survey data was used in combination with findings from qualitative fieldwork (i.e. interviews and participatory observations). This research design allowed me to capture a wider range of motivations for landowners, which would not have been possible otherwise. Through interviews with different actors in the rural areas (i.e. landowners, association managers, and tenants) I traced back the early sentiments to de-collectivization, how decisions to form associations were taken, and what were the factors that shaped those decisions for different actors.

Considerable time was spent in two regions in Romania, the Western Plain and Central Romanian Plain, in discussions with small farmers (the new landowners), agronomists (association managers), tenants, and policy-makers. I aimed to understand what land meant for different actors, how they viewed differently the changing economic and institutional environment, and what factors they were drawing on from past experiences in their current decisions on land management.

Household level data is very scarce in the rural sector in Romania, although they provide the most reliable source of information to capture the variety of institutional arrangements and the extent to which they exist. In addition, available data is lacking consistency for tracing long-term trends and outcomes of institutional change at household level. Hence, in the summer of 2006 I conducted a household survey in the two main agro-regions, as a follow-up on the first survey applied in 1996 by the Ministry of Agriculture, European Commission, and the World Bank. These two surveys resulted in a unique quasi-panel across villages in Romania, for a period in which major institutional changes took place (i.e. formalizing land sales, major changes in land leasing regulations, elimination of state subsidies for agricultural producers, and major steps in institutional convergence on the eve of EU enlargement²⁰⁰).

Hence, this research bridges the literature focused on ethnographic research on the outcomes of post-socialist transformation in CEE countries (Verdery 2004; Hann 1998; Creed 1999) with the literature drawing more on the political economy of transition (Swinnen 1999) and the efficiency outcomes of reform (Sabates-Wheeler 2005; Rizov et al. 2001; Mathij and Swinnen 2001).

²⁰⁰ Romania became a member of the European Union on the 1st of January in 2007.

10.1 Choosing between institutional arrangements for farming: a review of findings

The study of land reallocation into different institutional arrangements for farming during transition generated conclusions on the factors that affect the choice of farming arrangements and the persistence of farming associations during transition. These findings shed more light on our understanding of institutional change during transition.

The most important finding from the empirical work is that choices of farming arrangements were influenced by both economic factors (i.e. capital constraints, human capital, transaction costs) as well as by social and historical factors. Current literature on post-socialist transition, especially on land reform, places limited emphasis on a larger theoretical framework that includes institutional and social legacies from past reforms to explain current patterns of institutional arrangements. The revival of institutionalist theories and their recent focus on explaining the outcomes of post-socialist transformation, overemphasize the role of private property rights for successful reforms. In addition, high transaction costs, characteristic to the transition period, are used to explain any unexpected outcomes. I also found that transaction costs are important for the choices landowners make in respect to land reallocation. However, other factors explain equally, if not even more, the pattern of land reallocation and the persistence of farming associations.

In Chapter 8 I showed that the following factors explain the persistence of farming associations throughout the transition: 1) the degree of land fragmentation; 2) age and household productivity; 3) capital and land endowment.

Land fragmentation poses, currently, one of the most serious challenges for both the owners of the land, as well as for policy reformers. Land restitution, based on the 1940s land records, resulted in property being divided in multiple scattered plots. The degree to which this breakup occurred was the highest among the CEE countries. Hence, the recent integration in the EU structures generated intense debates on the appropriate strategies for achieving land consolidation. The main concern on land fragmentation relates to high transaction costs incurred in land transfers. In addition landowners bare higher production costs from the inability to use mechanical implements in land preparation and harvesting, as well as higher transportation costs. All these factors are considered to contribute to inefficiency in farming. Therefore, with the advent of markets, the solution, sought by policy advisors, is to increase the activity on land markets through leases and sales. Land markets are viewed as the primary channel through which the agricultural sector in Romania can shift out of subsistence into commercial farming practices.

However, my findings show that households with more fragmented landholdings are actually more likely to join associations than to lease out land. When the land in ownership is broken into more than three separate plots of land, associations provide a better option for land consolidation. The

explanation for this finding relates to the high transaction costs that leasing necessitates, due to registration and notary fees. The benefits from leasing (in the form of rent) are low, and certainly not much higher than from joining associations. At the same time, the cost of joining associations is minimal, and full title for the land is not required.

Associations are also able to offer a higher risk-sharing option as opposed to leasing. Once landowners become members in associations, they can exit only with their own consent. Hence, formal associations offer longer-term commitments for farming the land. By contrast, leasing arrangements are based on short-term contracts, from year to year, or on unspecified periods of time. As a result, the tenants have a lot of leverage in deciding for how long they are willing to farm the plots of land. By using short-term leases, the tenants can respond easier to changes in market conditions. However, the landowners are facing higher uncertainty because of short-term contracts.

I also found that age plays a role in landowners' decision to join associations. The role of age has been previously researched but only with respect to land individualization (the shift to private individual farming). Policies that aim to encourage participation in land markets are often devised around the age of the landowners. However, there is no study, to my knowledge, that specifically analyzed how age would play a role in this outcome and who exactly would benefit from the formalization of land markets when other alternatives are available (i.e. farming associations). I found that households with a higher ability level and experience, as reflected by age, are more likely to join associations. However, beyond 70 years of age, landowners are more likely to lease out. Moreover, younger households (where the household head is younger than 50 years) with higher opportunities to derive non-farming sources of income, have a higher probability of leasing-out land. Given that associations require a certain level of engagement in the production process, either with labor or monitoring, those who are part time farmers are benefiting more from leasing out. These findings suggest that leasing transactions are a viable option for only a small share of the rural population, those older than 70 years and those with alternative sources of income. However, as qualitative research shows, even within this population group, the choices are not entirely clear-cut.

Lastly, the statistical analysis confirmed what earlier research found, that availability of capital is critical for the choices landowners make in terms of land reallocation. Specifically, I found that households with a higher endowment of capital are more likely to farm the land individually rather than to seek alternative farming arrangements. This is hardly surprising but the wide lack of capital reinforces the fact that agriculture in Romania, and in other transitional countries, requires significant levels of investment in modernization. The level of private individual farming has been relatively high following land restitution in Romania (approximately 65% of the agricultural land). At the same time, capital endowment, as reflected by the two surveys one decade apart, has not improved significantly. Hence,

explaining land reallocation only through the lens of resource endowment (i.e. human and physical capital) cannot fully explain why in some regions the choice of farming arrangements varied.

Hence, in Chapter 9 I asked the question of why in some regions associations were formed while in others they were not, given that at the time of de-collectivization everyone was emerging from the socialist agriculture with similar capital endowment. I found that institutional legacies, drawing on past property rights arrangements and collectivization experiences, as well as social relations, limit the choices available for land reallocation to those that are acceptable in the historical and social context. Through this lens, regional differences come to light in a more forceful and unambiguous way. This perspective allows for a deeper understanding of the social dynamics around land and private property in the rural areas.

Hence, in the West, a longer experience with private property, as well as a more forceful and violent collectivization process, created resistance to any remnant institutional structures from the social regime, resulting in higher private individual farming during the post-socialist transition. By contrast, in the South, the sense of private property was eroded by the predominance of large hacienda type of farms prior to collectivization. Hence, after the reform in the 1990s, landowners were less eager to engage in individual farming. In addition, I showed that land restitution led to the re-creation of class differences between “rich and poor” based on the pre-collectivization social structure, where land became a symbol of status and identity. These social relations ultimately constrained the choices considered by landowners.

Aside from the institutional aspect, the fieldwork revealed that different actors (i.e. landowners, association managers, tenants) played different roles in shaping the pattern of land reallocation. Former collective farm managers and engineers emphasized the importance of economies of scale and retaining the networks for access to markets (inherited from the socialist collective farms). Their push for the formation of associations on the structure of the old collective farms, had, however, generated different reactions in the two regions. In the Western Plain this proposal generated wide disagreement in the local communities. Nevertheless, in the South, where the memory of private property faded over the years, and the economic conditions discouraged the development of individual farming, the agronomists were more successful in pushing forward the creation of formal associations.

One of the main critiques of farming associations is that they are plagued by collective action problems. The literature argues that free-riding and principal-agent problems, inherited from the old collective farms, contribute to making these institutional arrangements inefficient and short-lived. However, in Chapter 9 I challenged this view and, based on interviews with landowners and association managers, I showed that there are some important differences between these two farming arrangements. Because associations are deeply embedded in the social structure of the local communities, they are able to overcome collective action problems mainly through peer-pressure monitoring. Landowners, in their

new status as association members, are closely monitoring the production process (i.e. land preparation and harvesting) making sure that their land gets farmed well and that they receive the proper amount of rent.

Formal associations are different from the old collective farms also because, in the new economic and institutional environment, associations adapted their production and management practices to respond both to market incentives (and hard budget constraints) as well as to members' needs. A key argument is that association members are not simple workers (as was the case in the socialist collective farms) but they are owners of land, the critical assets that associations depend on. Hence, striking a balance between their needs and those of the landowners was critical for their survival.

10.2 Lessons for policy making

This framework for understanding the outcomes of transition with respect to land reallocation in different farming arrangements is not meant to dismiss earlier findings on the factors that affect individual choice within the constraints and incentives created by the post-socialist transformation. Rather, the goal is to integrate these findings in a larger context for evaluating institutional change during transition.

When I started my qualitative fieldwork in the summer of 2006, the agricultural sector was under high scrutiny and monitoring since in a few months, in January 2007, Romania was becoming a member of the EU. Speculations about how the Common Agricultural Policy (CAP) will affect the Romanian producers and what course agricultural policy will take were made on the daily basis. However, interviews with small farmers, with associations, and larger tenants, pointed not only to the lack of information on the implications of EU enlargement, but also to the strong sense of uncertainty, worry, and at times even despair on the part of farmers. Small farmers were concerned that an increase in prices for inputs would make it even harder to cultivate the land, and that new European standards would make it difficult for them to sell any of their products on the local market. The associations and the larger tenants were concerned that even after sizable efforts to upgrade their farms prior to accession, they might still not be able to survive the new competitive pressures. In effect, everyone was waiting to see how domestic policy-making in the larger EU context will affect each of them individually.

Hence, the economic and institutional environment is quite volatile for all types of farms, requiring careful planning and, as my research shows, increased understanding of the historical and social conditions in which decisions are grounded.

The findings from this research suggest that despite wide critiques in the literature and policy circles, formal association do offer important benefits to the member landowners. The first such advantage is the ability to consolidate land plots, at a time when land fragmentation poses one of the most

stringent challenges for agricultural development. Currently, associations are not considered at all a long-term solution to the problem of high land fragmentation in the CEE countries. Rather, the emphasis is on devising measures to encourage leasing and sales, supporting landowners who wish to shift out of agriculture.²⁰¹

However, there is little emphasis on the fact that, because economic diversification is lacking, few of the landowners are willing, or able, to shift out of agriculture. Under these conditions, land provides the main source of income for most rural households. I showed that the rents from leasing transactions are not higher than those from associations. Therefore, given the higher transactions costs with land registration and notary fees required for leasing contracts, there are little incentives for landowners to lease out land. Moreover, short contractual terms practiced by tenants to alleviate long-term uncertainty, deter landowners from using leasing alternatives.

Hence, policies for land consolidation should turn to associations as one alternative for reaching this goal. One way associations could be supported is to facilitate their access to financial services (i.e. bank credit). From interviews with association managers, I learned that this arrangement has gradually shifted over the years to leasing contracts. One reason for this outcome was the difficulty of making large investments. Not having formal contracts with the association members, the amount of collateral that the association could show when applying for loans was minimal. Devising channels through which associations could get easier access to credit would help these farming arrangements to stay competitive and to secure land consolidation.

An interesting policy discussion arises if we question whether associations are sustainable in the future in the CEE context. More recent developments following EU enlargement call into question the persistence of alternative farming institutions. Latruffe and Davidova (2007) argue that CAP payments might induce small farmers to withdraw land from associations or leasing arrangements because they could cash the payments themselves, provided that they keep the land in good condition. Nevertheless, research in Czech Republic and Slovakia showed that increase in private individual farming did not take place. Instead, one could expect to see a renegotiation of rents, but not necessarily withdrawal. What matters a lot in this renegotiation process is the relation between the association manager and the farmers, as a form of social capital. I expect that such an outcome would also result in the Romanian context, once direct payments will be disbursed to farmers, in the beginning of 2008. Hence, to use Granovetter's (1985) concept, economic transactions, like contracting, can be more efficient when they are embedded in social

²⁰¹ In the most recent report on the agricultural sector in Romania prior to EU enlargement, it was argued that the three market mechanisms that may effectively act to achieve land consolidation are: a) development of markets for land transactions; b) provision of adequate pensions for elderly rural landowners; c) development of non-agricultural employment opportunities in rural areas. However, these measures would address only a small share of the population: "the very old" who cannot engage in farming anymore, and "the very young" who are able to seek alternative income opportunities.

networks. Wolf (2001 p. 167) also argues that informal social relations (kinship, friendship, or patron-client relations) are responsible for the metabolic processes required to keep the formal institutional operating. From this point of view, associations are likely to persist because of their embeddedness in the social relations at the level of local communities. Consequently, re-negotiation of rents is more likely to occur within the framework of associations rather than in leasing arrangements.

Another view argues that associations are a temporary arrangement until market imperfections, specific to transition, will be alleviated, or removed (Mathijs and Swinnen 2001). Given that the share of land farmed in associations declined since the beginning of land reform, this could well be a valid argument for the Romanian case as well. Nevertheless, as long as the rural economy is not diversified enough to offer non-farming opportunities, landowners are less likely to lease-out land. It is possible that, as Verdery (2003) also claimed, farmers are more likely to shift to leasing transactions if the rent from leasing is significantly higher than from associations. In addition, if the benefits from leasing exceed the social cost of experimenting with new institutions (Mearns 2001) and if the transaction costs incurred by contractual fees decrease, leasing should become a more appealing alternative. Nevertheless, enforceable contract mechanisms are also required, as well as less complex administrative procedures for land registration.

But, as other studies showed, institutions are slow to change and to adapt to new market conditions. Devising tools and mechanisms for what individuals might do if certain institutions would be in place in the future, and dismissing the motives for the choices they make today, does not represent sound and sustainable policy-making. Understanding the complexity around the motives for farmers choosing associations, should instill a certain degree of flexibility in policy design to allow landowners a range of options for land reallocation, sensible to their economic and social needs.

In Chapter 7 I discussed that formal associations are not the only form of associations that sprang following land restitution. Informal associations, or family associations, are a type of farming arrangements that were endogenously formed mainly among members of the same family or neighbors with the sole purpose of pooling resources together and consolidating land plots. However, because informal associations were not recognized by law, members were not able to take loans as an organization. Informal associations declined significantly during transition and official statistics even stopped recording them since 2001. However, if policies would have encouraged these arrangements, they might have provided a closer alternative to formal associations. Research in the southern region of Romania showed that informal associations are, potentially, the most efficient arrangement for small farmers (Sabates-Wheeler 2002).²⁰² Hence, financing through micro-credit programs for the farmers

²⁰² A similar conclusion was made for “partnerships” (small groups of farmers that pooled their effort in certain production and marketing tasks) in East Germany (Mathijs and Swinnen 2001).

engaged in informal associations could have helped these institutions to increase their capital endowment, a major barrier to their performance, as landowners mentioned. Policy-makers argue that large-farm bias has persisted in agricultural policy in Romania (World Bank 2005 p. 80). As a result, subsidies were often given based on size rather than on the type of activities farmers were pursuing. Hence, the report argues that successful development of the agricultural sector requires the abolishment of preferential treatment to large farms and the establishment of a level playing field for farms of all organizational forms and sizes. I can only agree with this conclusion as it would enlarge the opportunity set for most farmers, and hence their choices for land reallocation.²⁰³

Improvement in private sector financial intermediation in the rural areas is critical to agricultural development. A recent World Bank report (2005 p. 104) claims that, since 1998, some progress has been made on the development of financial services that reach out to rural households and enterprises as short-term credits. However, most of these credit services were made for suppliers and traders, and less for agricultural producers. In order to expand rural finance, a larger variety of credit institutions need to be created to respond to the needs of small as well as larger farmers, such as: banks, leasing companies, credit cooperatives, and micro-finance institutions. In addition, access to rural finance can be improved only if procedures are streamlined for both the lenders and the borrowers. Investment in agriculture is risky, requiring mechanisms for a better assessment and hedge against risks.

In general, however, agricultural policies should be devised such that farmers are able to shift freely between different institutional arrangements. Currently, availability of labor does not pose as many constraints²⁰⁴ as does the availability of physical capital and financial resources. Access to credit is a problem for individual farmers as much as for associations. Facilitating access to credit and subsidizing machinery acquisitions or rentals would create conditions for improving agricultural performance in all farming arrangements.

Lack of participation in land markets does not only mean that farmers are reluctant to lease-out land because of high transaction costs. The other side of the transaction matters as well. It could also suggest that the demand for land leasing is weak. Potential tenants do not find agriculture a profitable activity, being subjected not only to the economic risks but also to the vagaries of weather without having a solid insurance mechanism. Hence, land markets will not become more dynamic unless measures are taken to promote agriculture as a viable sector to invest in for the young and entrepreneurial farmers.

²⁰³ I became more aware of the bias towards large farms when I started my research on small household farms in the summer of 2006. All policy-makers that I discussed with in the Ministry of Agriculture told me that “I am targeting the wrong group.” If I was interested in the performance of the agricultural sector, large commercial farms would be the ones to deliver these outcomes. Small farmers were the “ailment,” the segment that required major cut-backs.

²⁰⁴ However, more recent studies on the patterns of rural migration show that in certain areas there is a sizable flow of young migrants seeking income opportunities abroad. This outcome suggests that agricultural labor might become a problem in the near future.

In addition, regional differences in land reallocation during transition suggest that there is scope for regional policy. I showed that different historical legacies of private property rights and different experiences with collectivization contributed to landowners engaging in different farming arrangements. These outcomes were catalyzed by disparities in economic and social conditions, which determined how likely it was that a household would derive most of the income from agriculture.

10.3 Areas for future research

The research in this dissertation is by far exhaustive. Several aspects remain to be examined as topics for future research. One main constraint in most such studies is the lack of complete data. To fully understand the outcomes of transition, data extending over long periods of time, and/or long-term ethnographic studies²⁰⁵ ensure more complexity in evaluating the post-socialist transformation and the outcomes of institutional change. Moreover, there are hardly any studies that use mixed methods to capture the complexities of transition. Examining land reallocation patterns is a topic that would benefit greatly from such endeavor.

My research represents one step in this direction, by building longer data series to trace the patterns of land reallocation across regions and time. However, the results from this study could be sharpened if time-series, rather than a panel across villages, would become available. Multiple cross sections, generally used for the post-socialist countries, can only capture a snapshot in time, and cannot account for outcomes that result from specific policy-changes.

A fruitful area for future research is to examine whether and how land reallocation will change in response to EU enlargement. Will associations be able to survive the pressures from higher competition and more stringent regulations? Are regional differences going to be widened by these new circumstances? Moreover, in order for the direct payments to be disbursed to the landowners, the system of land registration and cadastral measures needs to be finalized by the end of 2007. Recent developments show how problematic this process is. However, once land registration is achieved, transaction costs for land transactions should decline. Hence, researching whether land markets develop further, will allow us to determine a closer causal relation between transaction costs and land markets.

Moreover, despite strong attachment to land beyond its economic value, manifested by landowners, as documented by ethnographic studies, it is unclear whether older landowners would pursue farming if pensions and social security would be increased to support the precarious standard of living for most pensioners in the rural areas. More research is required to examine how these factors would play out in improved social conditions for farmers.

²⁰⁵ Verdery's (2003) research is among the very few studies that extends in both pre and post-communist times.

Another area for further studies relates to the effect of land fragmentation on the performance of the agricultural sector. Even if land fragmentation is considered one of the main concerns for the agricultural sector, no studies have been conducted to assess how problematic fragmentation is for achieving higher performance in the Romanian context.²⁰⁶ Examining household incomes and production levels for different farm sizes would offer a crude measure for the scale of the problem.

Lastly, future research should focus on the productivity of formal associations during the transition. Are associations becoming more productive or not, during transition? What are the factors that affect their performance over time? How do they compare with other institutional arrangements? A more in-depth evaluation of their performance would strengthen the argument made above, that they operate differently from the collective farms and are able to respond to market stimuli.

Hence, this topic provides a fertile ground for future research on transitional economies, with relevance to other developing countries as well. There is an abundance of literature confirming that institutions matter for developing as well as developed countries. Nevertheless, an area that remains unexplored is evaluating of process of institutional change in a broader framework shaped by historical, social, and economic factors. This research is one step in elucidating this process, calling for future research to expand out theoretical and empirical knowledge and understanding.

²⁰⁶ Lerman (2002) conducted a similar study for Poland.

Bibliography

- AgriNews (2007). APIA: Agriculturii Vor Primi Subventiile din Fonduri UE cu o Intarziere de Doua Luni. AgriNews. Bucharest. **Year II, Nr. 27, September-October**.
- Akram-Lodhi, H. A., S. J. Borras and C. Kay (2007a). Land, Poverty and Livelihoods in an Era of Globalization. Perspectives from Developing and Transition Countries. London and New York, Routledge.
- Akram-Lodhi, H. A., S. J. Borras, C. Kay and T. McKinley (2007b). Neoliberal Globalization, Land and Poverty. Land, Poverty and Livelihoods in an Era of Globalization. Perspectives from Developing and Transition Countries. H. A. Akram-Lodhi, S. J. Borras and C. Kay. London and New York, Routledge: 383-398.
- Aldea, A. and G. Vidican (2007). "Productivity Growth in Agriculture: Regional Evidence from Romania." Journal of Computation and Economic Cybernetics Studies and Research **3-4**(41).
- Alexandri, C., I. Davidovici, D. Gavrilesco, L. Luca and C. Serbanescu (2005). Sectoral Analysis of the Agricultural Production, Institute for Agricultural Economics.
- Aligica, P. D. and A. Dabu (2003). "Land Reform and Agricultural Reform Policies in Romania's Transition to the Market Economy." Eastern European Economies **41**(5): 49-69.
- Allina-Pisano (2004a). "Sub Rosa Resistance and the Politics of Economic Reform." World Politics **56**(July): 554-81.
- Allina-Pisano, J. (2004b). "Land Reform and the Social Origins of Private Farmers in Russia and Ukraine." The Journal of Peasant Studies **31**(3-4): 489-514.
- Allina-Pisano, J. (2007a). "Agricultural Privatization in Central and Eastern Europe and the CIS." Development and Transition: Private Sector and Development **07/2007**.
- Allina-Pisano, J. (2007b). The Post-Soviet Potemkin Village: Politics and Property Rights in the Black Earth. Cambridge, Cambridge University Press.
- Alston, G. D. L., R. Schneider (1996). The Determinants and Impact of Property Rights: Land Titles on the Brazilian Frontier. Working Paper Series No. 5405. National Bureau of Economic Research Inc. Cambridge MA.
- Amblard, L. and J.-P. Colin (2005). The Issue of Contractual Choice in a Transition Economy: Reverse Tenancy in Romania. ISNIE Conference "The Institutions of Market Exchange". Barcelona, September 22-24.
- Amsden, A. H. (1993). "Beyond Shock Therapy: Why Eastern Europe's Recovery Starts in Washington." The American Prospect **Spring**.
- Amsden, A. H., J. Kochanowicz and L. Taylor (1998). The Market Meets its Match. Restructuring the Economies of Eastern Europe. Cambridge, Harvard University Press.
- Anh, D. N., H. X. Thanh and C. Tacoli (2004). 'Stay on the Farm, Weave in the Village, Leave the Home': Livelihood Diversification and Rural-Urban Linkages in Vietnam's Red River Delta, and their Policy Implications. London, IIED.
- Axenciuc, V. (2000). Introducere in Istoria Economica a Romaniei. Bucuresti.
- Banerjee, A. (1999). Land Reforms: Prospects and Strategies. Working Paper Series, No. 99-24. Cambridge MA, Massachusetts Institute of Technology, Department of Economics.
- Bangasser, P. (2000). "The ILO and the Informal Sector: An Institutional History." Employment Paper **9**.
- BBC (2007). EU Threatens Romania on Farm Aid. BBC News. **10 October**.
- Beckmann, V. and K. Hagedorn (1997). Decollectivisation and Privatisation Policies and Resulting Structural Changes of Agriculture in Eastern Europe. Agricultural Privatisation, Land Reform and Farm Restructuring in Central and Eastern Europe. A. B. Johan F.M. Swinnen, Erik Mathijs, Ashgate.
- Bellemare, M. F. (2006). Testing Between Competing Theories of Reverse Share Tenancy, Terry Sanford Institute of Public Policy, Duke University.

- Bellemare, M. F. and C. B. Barrett (2003). "An Asset Risk Theory of Share Tenancy." Working Paper, Department of Applied Economics and Management, Cornell University **WP 2003-13**.
- Ben-Akiva, M. and S. R. Lerman (2000). Discrete Choice Analysis: Theory and Application to Travel Demand. Cambridge MA, MIT Press.
- Berger, S. (2005). How We Compete: What Companies Around the World are Doing to Make it in Today's Global Economy. New York, Doubleday.
- Binswanger, H., K. Deiniger and G. Feder (1995). Power, Distortions, Revolt, and Reform in Agricultural Land Relations. Handbook of Development Economics Vol. III. J. Behrman and T. N. Srinivasan. New York, Elsevier.
- Borras, S. J., C. Kay and H. A. Akram-Lodhi (2007). Agrarian Reform and Rural Development: Historical Overview and Current Issues. Land, Poverty and Livelihoods in an Era of Globalization. Perspectives from Developing and Transition Countries. H. A. Akram-Lodhi, S. M. Borras and C. Kay. London and New York, Routledge: 1-40.
- Bouchard, T. (1976). Field Research Methods: Interviewing, Questionnaires, Participant Observations, Systematic Observations, Unobtrusive Measures. Handbook of Industrial and Organizational Psychology. M. Dunnette. Chicago, Rand McNally.
- Boucher, S. R., B. L. Barham and M. R. Carter (2005). "The Impact of "Market-Friendly" Reforms on Credit and Land Markets in Honduras and Nicaragua." World Development **33**(1): 107-128.
- Boyd, M. L. (1987). "The Performance of Private and Cooperative Socialist Organization: Postwar Yugoslav Agriculture." The Review of Economics and Statistics: 205-213.
- Brada, J. C. and A. E. King (1993). "Is Private Farming More Efficient than Socialized Agriculture?" Economica **60**: 41-56.
- Brezis, E. and A. Schnytzer (2003). "Why are the Transition Paths in China and Eastern Europe Different?" Economics of Transition **11**(1): 3-23.
- Brooks, K. and M. Meurs (1994). "Romanian Land Reform: 1991-1993." Comparative Economic Studies **36**(2): 17-32.
- Buchanan, J. M. (1965). "An Economic Theory of Clubs." Economica.
- Burawoy, M. (1998). "The Extended Case Method." Sociological Theory **16**(1): 4-33.
- Busuioc, A. (2007). Farmers only on Paper. Evenimentul Zilei. Bucharest. **3 September 2007**.
- Cain, M. (1981). "Risk and Insurance: Perspectives on Fertility and Agrarian Change in India and Bangladesh." Population and Development Review **7**: 435-474.
- Carter, M. (1987). "Risk-sharing and Incentives in the Decollectivization of Agriculture." Oxford Economic Papers **39**: 577-95.
- Carter, M. and B. L. Barham (1996). "Level Playing Fields and Laissez Faire: Postliberal Development Strategy in Inegalitarian Agrarian Economies." World Development **24**(7): 1133-1149.
- Carter, M. and D. Mesbah (1993). "Can Land Market Reform Mitigate the Exclusionary Aspects of Rapid Agro-Export Growth?" World Development **21**: 1085-1100.
- Cartwright, A. (1994). Avoiding Collectivization: Land Reform in Romania 1990-92. Rural Transition Series. Liverpool, Centre for Central and Eastern European Studies.
- Cartwright, A. (2000). Reconstructing the Past in the Village: Land Reforms in Transylvania 1990-1991. Romanian and British Historians on the Contemporary History of Romania. G. Cipaianu and V. Tarau. Cluj-Napoca, Cluj University Press: 167-183.
- Cartwright, A. L. (2001). The Return of the Peasant. Land Reform in the Post-Communist Romania, Ashgate Dartmouth.
- CASE (2004). Operationalizing Pro-Poor Growth. Case of Romania. Poland, Center for Social and Economic Research.
- CASPIS (2002). Harta Saraciei: Metodologia Utilizata si Prezentarea Rezultatelor. Raport elaborat la cererea Comisiei Nationale Anti-Saracie si Promovare a Incluziunii Sociale de catre Universitatea Bucurest si Institutul National de Statistica. Bucharest, Comisia Anti-Saracie si Promovare a Incluziunii Sociale (CASPIS).
- Chayanov, A. V. (1966). The Theory of Peasant Economy. Madison WI, University of Wisconsin Press.

- Chelcea, L. (2005). "Aici in Reviga, Nu a Avut Cine sa Faca Lupta de Clasa": Colectivizarea Intr-o Comuna din Baragan. Taranimea si Puterea: Procesul de Colectivizare a Agriculturii in Romania (1949-1962). D. Dobrinu and C. Iordachi. Bucharest, Polirom: 426-444.
- Cheung, S. N. S. (1968). "Private Property Rights and Sharecropping." Journal of Political Economy **76**: 107-122.
- Chirca, C. and E. D. Tesliuc (1999). From Rural Poverty to Rural Development. Washington D.C., The World Bank.
- Ciaian, P. and J. Swinnen (2006). "Land Market Imperfections and Agricultural Policy Impacts in the New EU Member States: A Partial Equilibrium Analysis." American Journal of Agricultural Economics **88**(4): 799-815.
- Connell, J. and M. Lipton (1977). Assessing Village Labor Situations in Developing Countries. Delhi, Oxford University Press.
- Conquest, R. (1986). The Harvest of Sorrow: Soviet Collectivization and the Terror-Famine. New York, Oxford University Press.
- Cornateanu, N. D. (1930). Reforma Agrara si Gospodaria Noastra Agricola. Bucuresti.
- Covaci, C. (2007). Micile Ferme din Romania, Aproape Falimentate de Indolenta Functionarilor. EuroJurnal, HotNews. **17 September 2007**.
- Creed, G. W. (1995). An Old Song in a New Voice: Decollectivization in Bulgaria. East European Communities: The Struggle for Balance in Turbulent Times. D. Kideckel. Boulder, Westview: 25-46.
- Creed, G. W. (1999). Deconstructing Socialism in Bulgaria. Uncertain Transition: Ethnographies of Change in the Postsocialist World. M. Burawoy and K. Verdery. Lanham, Rowman & Littlefield Publishers Inc.: 223-244.
- Csaki, C. and Y. Kislev (1993). Agricultural Cooperatives in Transition, Westview Press.
- Cungu, A. and J. F. M. Swinnen (1999). Albania's Radical Agrarian Reform, The University of Chicago.
- Currie, J. M. (1981). The Economic Theory of Agricultural Land Tenure. Cambridge UK, Cambridge University Press.
- Dale, P. and R. Baldwin (2000). Emerging Land Markets in Central and Eastern Europe. Structural Change in the Farming Sectors in Central and Easter Europe: Lessons for the EU Accession: Second World Bank/FAO Workshop, June 27-29, 1999. C. Csaki and Z. Lerman. Washington D.C., World Bank: 81-109.
- Dalrymple, D. G. (1964). "The American Tractor Comes to Soviet Agriculture: The Transfer of a Technology." Technology and Culture **5**(2): 191-214.
- Daniciuc, R. (2007). Renta Viagera - O Transa Anuala. Romania Libera. Bucharest. **14 May 2007**.
- Daniciun, R. (2007). Micii Agricultori Pot Dispara Din Cauza Taxelor. Romania Libera. **10 March**.
- David, P. A. (1994). "Why are Institutions the 'Carriers of History'? Path Dependence and the Evolution of Conventions, Organizations and Institutions." Structural Change and Economic Dynamics **5**(2): 205-220.
- Davidovici, I. (2002). Managementul Cresterii Agricole. Bucharest, Editura Expert.
- de Janvry, A. (1981). "The Role of Land Reform in Economic Development: Policies and Politics." American Agricultural Economics Association **May**: 384-392.
- de Janvry, A., J. P. Platteau, G. Gordillo and E. Sadoulet (2001). Access to Land and Land Policy Reforms. Access to Land, Rural Poverty, and Public Action. A. de Janvry, J. P. Platteau, G. Gordillo and E. Sadoulet. Oxford, Oxford University Press.
- De Melo, M. (1997). Circumstances and Choice: The Role of Initial Conditions and Policies in Transition Economies. Washington D.C., World Bank, Development Research Group.
- Deininger, K. (1995). "Collective Agricultural Production: A Solution for Transition Economies?" World Development **23**(8): 1317-1334.
- Deininger, K. (2003a). "Land Markets in Developing and Transition Economies: Impact of Liberalization and Implications for Future Reform." American Journal of Agricultural Economics **85**(5): 1217-1222.

- Deininger, K. (2003b). Land Policies for Growth and Poverty Reduction. Washington DC, World Bank.
- Deininger, K. (2003c). Land Policies for Growth and Poverty Reduction. A World Bank Research Report. Washington D.C., The World Bank
- Deininger, K. W. (1993). "Cooperatives and the Breakup of Large Mechanized Farms. Theoretical perspectives and Empirical Evidence." World Bank Discussion Papers **218**.
- Demsetz, H. (1967). "Toward a Theory of Property Rights." American Economic Review **62**: 347-359.
- Diminescu, D. (1996). "Deplasările Osenilor în Străinătate: Un Nou Model de Migrație." Revista de Cercetări Sociale **2**: 16-33.
- Dobrescu, D. (1999). The Land Market and Other Related Issues Regarding Land Privatization in Romania. World Bank Consultant Report. Bucharest, The World Bank.
- Dobrințu, D. and C. Iordachi (2005a). Introducere. Tărâna și Puterea: Procesul de Colectivizare a Agriculturii în România (1949-1962). D. Dobrințu and C. Iordachi. Bucharest, Polirom: 21-41.
- Dobrințu, D. and C. Iordachi, Eds. (2005b). Tărâna și Puterea: Procesul de Colectivizare a Agriculturii în România (1949-1962). Bucharest, Polirom.
- Douglass, M. (2001). Urban and Regional Policy After the Era of Naive Globalism. Globalization and the New Regional Development. A. Kumssa and T. G. McGee. Westport, CT, Greenwood Press.
- Duke, J. M., E. Marisova, A. Bandlerova and J. Slovinska (2004). "Price Repression in the Slovak Agricultural Land Market." Land Use Policy **21**: 59-69.
- Dumitru, M. (2002). Country Case Studies on Integrating Land Issues into the Broader Development Agenda. Romania. Bucharest, The World Bank.
- Dumitru, M., D. Diminescu and V. Lazea (2004). Rural Development and the Reform of Romanian Agriculture. Bucharest, Romanian Center for Economic Policies.
- Duncan, J. and R. L. Prosterman (2000). Land Market Development in Rural Romania. RDI Reports on Foreign Aid and Development #107. Settle, Rural Development Institute.
- Ellickson, R. C. (1993). "Property in Land." The Yale Law Journal **102**: 1315-1400.
- Eswaran, M. and K. Ashok (1989). "Credit as Insurance in Agrarian Economies." Journal of Development Economics **31**(1): 37-53.
- European Commission (2006a). Directorate for Agriculture, http://ec.europa.eu/agriculture/agrista/2006/table_en/338.pdf
- European Commission (2006b). Rural Development in the European Union - Statistical and Economic Information, European Commission. Agriculture and Rural Development Statistics.
- Eurostat (2007). Basic Data: Key Agricultural Statistics. F. a. U. European Commission (Eurostat and Agriculture and Rural Development DG).
- Evans, I. L. (1924). The Agrarian Revolution in Romania. Cambridge UK, Cambridge University Press.
- Eyal, G., I. Szelenyi and E. Townsley (1998). Introduction. Making Capitalism Without Capitalists. Class Formation and Elite Struggles in Post-Communist Central Europe. London, Verso: 1-16.
- FAO (2002). Land Fragmentation and Land Consolidation in the Agricultural Sector. Paper presented at the International Symposium on "Land Fragmentation and Land Consolidation in CEEC: A Gate Towards Sustainable Rural Development in the New Millennium". Munich, Germany, Food and Agricultural Organization of the United Nations.
- FAO (2005). Development of Land Markets and Related Institutions in Central and Eastern European Countries. Workshop organized by the FAO Sub-Regional Office for Central and Eastern Europe and hosted by Slovak University of Agriculture, May 6-7, Nitra, Slovakia.
- Fitzgerald, D. K. (2003). Every Farm a Factory: The Industrial Ideal in American Agriculture. New Haven, Yale University Press.
- Foster, A. and M. Rosenzweig (1994). "A Test for Moral Hazard in the Labor Market: Contractual Arrangements, Effort, and Health." Review of Economics and Statistics **76**: 213-227.
- Gandul (2007). Târâniile Săptămânii Drumul la Bani cu Sacosa cu Carduri și PIN-uri Pentru tot Satul. Gandul. **19 March 2007**.
- Garofid, C. (1923). Un Program Agrar. București.

- Gavrilescu, D., M. Dumitru, V. Florian and C. Serbanescu (1999). "Agricultural Reform, Markets and Prices in Romania." Options Mediterraneennes Serie B(22).
- Gavrilescu, D. and C. Gavrilescu (2007). From Subsistence to Efficiency in the Romanian Agriculture during Transition. Paper presented at the 104th EAAE-IAAE Seminar Agricultural Economics and Transition: "What was expected, what we observed, the lessons learned". Corvinus University of Budapest, Budapest, Hungary.
- Geertz, C. (1963). Agricultural Involution. Berkeley CA, University of California Press.
- Geertz, C. (1968). Peddlers and Princes: Social Development and Economic Change in Two Indonesian Towns. Chicago, University of Chicago.
- Geertz, C. (1973). The Interpretation of Cultures. New York, Basic Books.
- Geertz, C. (1983). Local Knowledge. New York, Basic Books.
- Georgescu, M. (1943). Reforme Agrare, Principii si Metode in Legiurile Romane si Straine. Bucuresti.
- Giurca, D., G. Hurduzeu, M. Rusu and C. Salasan (2004). Sectorul Agricol in Perspectiva Aderarii Romaniei la Uniunea Europeana. Studiul Nr. 6. Bucuresti.
- Giurca, D., G. Hurduzeu, M. Rusu and C. Salasan (2006). The Agricultural Sector in the Perspective of Romania's Accession to the European Union: Implications upon the System of Payments. Study Nr. 6. Bucharest, European Institute of Romania. Pre-Accession Impact Studies III.
- Goina, C. (2005). "Ce Poti Face Azi Nu Lasa Pe Maine": Cazul Colhozului Model "Viata Noua", Santana. Taranimea si Puterea: Procesul de Colectivizare a Agriculturii in Romania (1949-1962). D. Dobrinu and C. Iordachi. Bucharest, Polirom: 368-392.
- Groza, P. (1946). Reconstructia Romaniei. Discursuri Politice, Conferinte, Interviuuri 1944-1946. Bucharest, Tipografia Viata Literara.
- Gwynne, R. and C. Kay (2004). Latin America Transformed: Globalization and Modernity. London, Arnold.
- Halbwachs, M. (1992). On Collective Memory. Chicago, The University of Chicago Press.
- Hann, C. M. (1993). "From Production to Property: Decollectivization and the Family-Land Relationship in Contemporary Hungary." Man, New Series **28**(2): 299-320.
- Heiss, F. (2002). "Structural Choice Analysis with Nested Logit Models." The Stata Journal **2**(3): 227-252.
- Hensher, D. A., J. M. Rose and W. H. Greene (2005). Applied Choice Analysis: A Primer. Cambridge, Cambridge University Press.
- Herring, R. (2003). Beyond Political Impossibility Theorem of Agrarian Reform. Changing Paths: International Development and the New Politics of Inclusion. P. Houtzager and M. Moore. Ann Arbor, University of Michigan Press: 58-87.
- Hirschman, A. O. (1981). Essays in Trespassing. Economics to Politics and Beyond. Cambridge, Cambridge University Press.
- Ho, P. and M. Spoor (2006). "Whose Land? The Political Economy of Land Titling in Transitional Economies." Land Use Policy **23**(3).
- Hulme, D. (2007). Integrating Quantitative and Qualitative Research for Country Case Studies of Development. Global Poverty Research Group, GPRG-WPS-063. Manchester, UK, Economic and Social Research Council.
- IAMO (2004). The Future of Rural Areas in the CEE New Member States. Germany, Network of Independent Agricultural Experts in the CEE Candidate Countries, Institute fur Agrarentwicklung in Mittel-Und Osteruropa.
- Iancu, G. (2001). Aspecte din Procesul Colectivizarii Agriculturii in Romania (1949-1960). Institutul de Istorie "George Barit". Cluj-Napoca.
- Iancu, G. and V. Tarau (2000). The Peasants' Uprisings in the Counties of Arad and Bihor in 1949. Romanian and British Historians on the Contemporary History of Romania. G. Cipaianu and V. Tarau. Cluj-Napoca, Cluj University Press: 155-166.
- INS (2006). Romanian Statistical Yearbook I. N. d. Statistica, INS.
- Ionescu-Sisesti, G. (1925). Reforma Agrara si Productiunea cu un Program pentru Ridicarea Agriculturii. Bucuresti.

- Ionescu-Sisesti, G. and N. D. Cornateanu (1937). La reforme agraire en Roumanie et ses consequences. Bucharest.
- Jick, T. D. (1979). "Mixing Qualitative and Quantitative Methods: Triangulation in Action." Administrative Science Quarterly **24**(4): 602-611.
- Johnson, D. G. (1983). Policies and Performance in Soviet Agriculture. Prospects for Soviet Agriculture in the 1980s. D. G. Johnson and K. M. Brooks. Bloomington, Indiana University Press.
- Johnson, S., D. Kaufmann and A. Shleifer (1997). "The Unofficial Economy in Transition." Brookings Papers on Economic Activity **2**: 159-239.
- Kabeer, N. (2004). Sankes, Ladders and Traps: Changing Lives and Livelihoods in Rural Bangladesh (1994-2001). CPRC Working Paper 50, Institute for Development Policy and Management, University of Manchester, UK.
- Kanbur, R. and P. Shaffer (2007). "Epistemology, Normative Theory and Poverty Analysis: Implications for Q-Squared in Practice " World Development **35**(2): 183-196.
- Kideckel, D. (1993). The Solitude of Collectivism: Romanian Villagers to the Revolution and Beyond. Ithaca NY, Cornell University Press.
- Kideckel, D. (1995). Two Incidents on the Plains on Southers Transylvania: Pitfalls of Privatisation in a Romanian Community. East European Communities: The Struggle for Balance in Turbulent Times. Boulder, Co, Westview Press, 1995.
- Kim, B. Y. (2005). "Poverty and Informal Economy Participation. Evidence from Romania." Economics of Transition **13**(1): 163-185.
- King, G., M. Tomz and J. Wittenberg (2000). "Making the Most of Statistical Analyses: Improving Interpretation and Presentation." American Journal of Political Science **44**(2): 341-355.
- Kochin, M. S. (1996). "Decollectivization of Agriculture and the Planned Economy." American Journal of Political Science **40**(3): 717-739.
- Kornai, J. (1990). The Road to a Free Economy. New York, Norton.
- Kornai, J. (1992). The Socialist System: The Political Economy of Communism. Princeton N.J., Princeton University Press.
- Kranton, R. E. and A. V. Swamy (1999). "The Hazards of Piecemeal Reform: British Civil Courts and the Credit Market in Colonial India." Journal of Development Economics **58**: 1-24.
- Lacko, M. (2000). "Hidden Economy - An Unknown Quantity?" Economics of Transition **8**(1): 117-149.
- Lane, D., F. Malerba, R. Maxfield and L. Orsenigo (1996). "Choice and Action." Journal of Evolutionary Economics **6**.
- Larson, B. A. and D. W. Bromley (1990). "Property Rights, Externalities, and Resource Degradation: Locating the Tragedy." Journal of Development Economics **33**: 235-262.
- Legatum (2007). The 2007 Legatum Prosperity Index. A Global Assessment of Wealth and Wellbeing. Dubai, Legatum Institute for Global Development.
- Leonte, J. and C. Alexandri (2001). Farmers' Self Organization in Provision of Services in Dorna, Iasi and Ilfov Regions of Romania.
- Lerman, Z. (2000). "Agriculture in Transition Economies: From Common Heritage to Divergence." Agricultural Economics **1481**: 1-20.
- Lerman, Z. (2002). Productivity and Efficiency of Individual Farms in Poland: A Case for Land Consolidation. Annual Meeting of the American Agricultural Economics Association. Long Beach, CA, July 28-31.
- Lerman, Z., C. Csaki and G. Feder (2004). Agriculture in Transition: Land Policies and Evolving Farm Structures in Post-Soviet Countries. Oxford, Lexington Books.
- Lerman, Z. and N. Shagaida (2007). "Land Policies and Agricultural Land Markets in Russia." Land Use Policy **24**: 14-23.
- Lewis, A. W. (1963). Economic Development with Unlimited Supply of Labor. The Economics of Underdevelopment. A. N. A. a. S. P. Singh. New York, Oxford University Press.
- Lin, J. Y. (1990). "Collectivization and China's Agricultural Crisis in 1959-1961." Journal of Political Economy **98**(6): 1228-1252.

- Lipton, M. (1968). "The Theory of the Optimising Peasant." The Journal of Development Studies **4**(3): 327-351.
- Liu, Z. and J. Zhuang (2000). "Determinants of Technical Efficiency in Post-Collective Chinese Agriculture: Evidence from Farm-Level Data." Journal of Comparative Economics **28**: 545-564.
- Long, S. J. and J. Freese (2003). Regression Models for Categorical Dependent Variables Using Stata. College Station, Texas, Stata Corporation.
- Luca, L. (2007). Romania: Large Semi-subsistence Farms Sector, Result of Wrong Strategic Approach? Paper presented at the 104th EAAE-IAAE Seminar Agricultural Economics and Transition: "What was expected, what we observed, the lessons learned". Corvinus University of Budapest, Budapest, Hungary.
- MAA EC and WB (1997). Agricultura Privata in Romania. Sondaj in Gospodarii. Bucharest, Ministerul Agriculturii si Alimentatiei, Comisia Europeana, Banca Mondiala.
- MAD (1938). Atlas Statistic 'Agricultura in Romania (1938)'. Bucuresti, Ministerul Agriculturii si Dimeniilor.
- MADR (2007). National Strategic Plan for Agricultural Development. Bucharest, Romanian Ministry of Agriculture and Rural Development (MADR).
- Manski, C. (1973). The Analysis of Qualitative Choice. Department of Economics. Cambridge MA, Massachusetts Institute of Technology. **Doctoral Dissertation**.
- Manski, C. (1977). "The Structure of Random Utility Models." Theory and Decision **8**: 229-254.
- Mantzavinos, C. (2001). Individuals, Institutions, and Markets. Cambridge UK, Cambridge University Press.
- Mantzavinos, C., D. C. North and S. Shariq (2004). "Learning, Institutions, and Economic Performance." Perspectives on Politics **2**(1): 75-84.
- MAPDR (2007). National Strategic Plan for Agricultural Development. Bucharest, Romanian Ministry of Agriculture and Rural Development (MADR).
- Mathijs, E., A. Maertens and L. Vranken (1997). "Technical Efficiency and Farm Organization in Czech and Slovak Agriculture." Katholieke Universiteit Leuven.
- Mathijs, E. and J. F. M. Swinnen (2001a). "Production Organization and Efficiency During Transition: An Empirical Analysis of East German Agriculture." Review of Economics and Statistics **83**(1): 100-107.
- Mathijs, E. and J. F. M. Swinnen (2001b). "Production organization and efficiency during transition: an empirical analysis of East Germany Agriculture." The Review of Economics and Statistics **83**(1): 100-107.
- Mathijs, E. and J. F. M. Swinnen (1998). "The Economics of Agricultural Decollectivization in East Central Europe and the Former Soviet Union." Economic Development and Cultural Change **47**(1): 1-26.
- Meurs, M. (2001). The Evolution of Agrarian Institutions: A Comparative Study of Post-Socialist Hungary and Bulgaria, University of Michigan Press.
- Meurs, M. and R. Ranasinghe (2003). "De-Development in Post-Socialism: Conceptual and Measurement Issues." Politics and Society **31**(1): 31-53.
- Miceli, T. J., C. F. Sirmans and G. K. Turnbull (2000). "The Dinamic Effects of Land Title Systems." Journal of Urban Economics **47**(3): 370-389.
- Mitrany, D. (1930). The Land and the Peasant in Rumania. The War and Agrarian Reform (1917-21). London, Oxford University Press.
- Morovan, I. (2007). Activarea Clauzei de Salvagardare in Agricultura va Costa Romania 100 de milioane de Euro. Revista Presei. **10 October**.
- Morris, A. (1997). Market Behavior and Market Systems in the State of Mexico. Small Towns and Beyond: Rural Transformation and Small Urban Centers in Latin America. P. van Lindert and O. Verkoren. Amsterdam, Thela Publishers: 123-132.
- Mullainathan, S. and R. Thaler (2001). Behavioral Economics. International Encyclopedia of Social Sciences. N. Smelser and P. B. Baltes, Pergamon Press: 1094-1100.

- Negruci, E. (2005). Rolul Literaturii in Campania de Colectivizare. Taranimea si Puterea: Procesul de Colectivizare a Agriculturii in Romania (1949-1962). D. Dobrinicu and C. Iordachi. Bucharest, Polirom: 154-176.
- Nelson, D. N. (1981). Romania in the 1980s. Boulder, Colorado, Westview Press.
- Newbery, D. M. G. and J. Stiglitz (1979). Sharecropping, Risk-sharing, and the Importance of Imperfect Information. Risk, Uncertainty, and Agricultural Development. J. A. Roumasset, J. M. Boussard and I. Singh. New York, Agricultural Development Council: Ch. 17.
- NIS (2002). Regional Agricultural Census. Bucharest, National Institute of Statistics.
- NIS (2005). Romanian Annual Statistical Report. Bucharest, National Institute of Statistics.
- North, D. C. (2005). Understanding the Process of Economic Change. Princeton NJ, Princeton University Press.
- Nugent, J. E. (1986). Applications of the Theory of Transaction Costs and Collective Action to Development Problems and Policy. The Role of Institutions in Economic Development. Ithaca, Cornell University Press.
- OECD (1996). Agricultural Policies, Markets and Trade in the Economies in Transition: Monitoring and Evaluation 1996. Paris, OECD.
- OECD (2000). Review of Agricultural Policies, Bulgaria. Paris.
- Olson, M. (1995). The Logic of Collective Action. Public Goods and the Theory of Groups. Cambridge, Harvard University Press.
- Oprea, M. (2005). Transformarea Socialista a Agriculturii. Asaltul Final 1953-1962. Taranimea si Puterea. Procesul de Colectivizare a Agriculturii in Romania (1949-1962). D. Dobrinicu and C. Iordachi. Bucuresti, Polirom.
- Ostrom, E. (1990). Governing the Commons. The Evolution of Institutions for Collective Action. Cambridge, Cambridge University Press.
- Ostrom, E. (2000). Social Capital: A Fad or a Fundamental Concept. Social Capital: A Multifaceted Perspective. P. Dasgupta and I. Serageldin. Washington D.C., The World Bank: 172-214.
- Otiman, P. I. (2002). "Agricultura Romaniei. La cumpuna dintre secolul XX un secol al deznadejdii si secolul XXI un secol al sperantei." Colectia agricultura secolului XXI.
- Patrascanu, L. (1978). Studii Economice si Social-Politice 1925-1945. Reforma Agrara in Romania Mare si Urmarile Ei. Bucuresti, Editura Politica.
- Pitulice, V. and O. Caloian (2007). Unstable Farm Land Prices Due to Drought. Business Standard. Bucharest. **31 July 2007**.
- Popescu, G. (2007). "Rolul si Importanta Arendarii in Vederea Cresterii Dimensiunii Exploatațiilor Agricole." Economie Teoretica si Aplicata **1**(506).
- Popescu, G. and F. Constantin (2007). "Arguments for the Growth Sale-Purchase Actions on the Land Market." Theoretical and Applied Economics **2**(509): 43-46.
- Popkin, S. L. (1979). The Rational Peasant: The Political Economy of Rural Society in Vietnam. Berkeley CA, University of California Press.
- Prosterman, R. L. and L. Rolfes (2000). Review of Legal Basis for Agricultural Land Markets in Lithuania, Poland, and Romania. Structural Change in the Farming Sectors in Central and Eastern Europe: Lessons for the EU Accession: Second World Bank/FAO Workshop, June 27-29, 1999. C. Csaki and Z. Lerman. Washington D.C., World Bank: 110-139.
- Putterman, L. (1985). "Extrinsic Versus Intrinsic Problems of Agricultural Cooperation: Anti-incentivism in Tanzania and China." Journal of Development Studies **21**: 175-204.
- PWC (2002). Regions and Development: The Regional Attractiveness Index. Bucharest, Price Waterhouse Coopers.
- Rabin, M. (1998). "Psychology and Economics." Journal of Economic Literature **XXXVI**(March): 11-46.
- Ramboll Consultancy (1996). Regional Disparities in Romania 1990-1994. Bucharest, PHARE Program for Regional Policy.

- Ramniceanu, I. (2004). Probleme Structurale ale Agriculturii Romanesti in Perspetiva Aderarii la Uniunea Europeana. Colectia Studii IER, Nr. 4. Bucuresti.
- Ranis, G. (2004). Arthur Lewis' Contribution to Development Thinking and Policy. Center Discussion Paper No. 891. New Haven, Economic Growth Center, Yale University.
- Rawski, T. (1996). "Implications of China's Reform Experience." The China Quarterly **144**: 1150-1173.
- Razzaz, O. (1995). "To Buy or Lease? Farm Revival in Eastern and Central Europe." Viewpoint **52**(September).
- Rizov, M. (2003). Human Capital and the Agrarian Structure in Transition: Micro Evidence from Romania. 25th International Conference of Agricultural Economics, Durban, South Africa.
- Rizov, M., D. Gavrilesu, H. Gow, E. Mathijs and J. F. M. Swinnen (2001). "Transition and Enterprise Restructuring: The Development of Individual Farming in Romania." World Development **29**(7): 1257-1274.
- Roland, G. (2000). Transition Economics: Politics, Markets, and Firms. Cambridge, MIT Press.
- Rorty, R. (1979). Philosophy and the Mirror of Nature. Princeton NJ, Princeton University Press.
- Rozelle, S. D. and J. F. Swinnen (2000). "Transition and Agriculture." Department of Agricultural and Resource Economics, ARE Working Papers 00'021.
- Rozelle, S. D. and J. F. M. Swinnen (2004). "Success and Failure of Reform: Insights from the Transition of Agriculture." Journal of Economic Literature **42**(2): 404.
- Sabates-Wheeler, R. (2002). "Farm Strategy, Self-Selection and Productivity: Can Small Farming Groups Offer Production Benefits to Farmers in Post-Socialist Romania?" World Development **30**(10): 1737-1753.
- Sabates-Wheeler, R. (2005). Cooperation in the Romanian Countryside. An Insight into Post-Soviet Agriculture. Colorado, Lexington Books.
- Sahn, D. E. and H. Alderman (1988). "The Effects of Human Capital on Wages, and the Determinants of Labor Supply in a Developing Country." Journal of Development Economics **29**(2).
- Sampson, S. (1995). All is Possible, Nothing is Certain: The Horizons of Transition in a Romanian Village. East European Communities - The Struggle for Balance in Turbulent Times. D. Kideckel. Boulder, Westview Press.
- Sandru, D. (2005). Colectivizarea Agriculturii si Problema Agrara: Repere Social-Politice. Taranimea si Puterea: Procesul de Colectivizare a Agriculturii in Romania (1949-1962). D. Dobrinu and C. Iordachi. Bucharest, Polirom: 45-65.
- Sandu, D. (1999). Spatiul Social al Tranzitiei. Iasi, Polirom.
- Sandu, D., C. Radu, M. Constantinescu and O. Ciobanu (2004). A Country Report on Romanian Migration Abroad: Stocks and Flows After 1989. Study for Multicultural Center Prague.
- Sarris, A. H. and D. Gavrilesu (1997). Restructuring of farms and agricultural systems in Romania. Agricultural Privatisation, Land Reform, and Farm Restructuring in Central and Eastern Europe. A. B. Johan F.M. Swinnen, Erik Mathijs, Ashgate.
- Schlager, E. and E. Ostrom (1992). "Property Rights Regimes and Natural Resources: A Conceptual Analysis." Land Economics **68**(3): 249-262.
- Schultz, T. W. (1964). Transforming Traditional Agriculture. New Haven, Yale University Press.
- Scott, J. (1976). The Moral Economy of the Peasant: Rebellion and Subsistence in Southeast Asia. New Haven and London, Yale University Press.
- Scott, J. (1998). Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed. New Haven, Yale University Press.
- Sen, A. K. (1966). "Peasants and Dualism with or without Surplus Labor." Journal of Political Economy **LXXIV**(5): 425-450.
- Serbanescu, I. (2005). Impozitul Agricol - Un Rau Necesar. Jurnalul. Bucharest. **26 July 2006**.
- Shen, R. (1997). The Restructuring of Romania's Economy: A Paradigm of Flexibility and Adaptability. Westport CT, Praeger.
- Sieber, S. (1973). "The Integration of Fieldwork and Survey Methods." American Journal of Sociology **78**(6): 1335-1359.

- Sikor, T. (2002). *The Commons in Transition*. CEESA Discussion Paper No. 10, Sustainable Agriculture in Central and Eastern European Countries.
- Singh, N. (1989). *Theories of Sharecropping*. The Economic Theory of Agrarian Institutions. P. Bardhan. New York, Oxford University Press: 33-72.
- Slangen, L. H. G., C. G. van Kooten and P. Suchanek (2004). "Institutions, Social Capital and Agricultural Change in Central and Eastern Europe." Journal of Rural Studies **20**: 245-256.
- Smyth, R. (1998). "New Institutional Economics in the Post-Socialist Transformation." Journal of Economic Surveys **12**(4).
- Spoor, M. (2003). Transition, Institutions, and the Rural Sector. Lanham and Oxford, Lexington Books, Rowman and Littlefield Publishers.
- Spoor, M. (2007). *Land Reform, Rural Poverty and Inequality in Armenia*. Land, Poverty and Livelihoods in an Era of Globalization. Perspectives from Developing and Transition Countries. H. A. Akram-Lodhi, S. J. Borras and C. Kay. London and New York, Routledge: 188-220.
- Stark, D. (1996). "Recombinant Property in East European Capitalism." American Journal of Sociology **101**: 993-1027.
- Stark, D. and L. Bruszt (1998). Postsocialist Pathways: Transforming Politics and Property in East Central Europe, Cambridge University Press.
- Stewart, F. (1996). "Groups for Good or Ill." Oxford Development Studies **24**(1): 9-25.
- Stigler, G. (1971). "The Theory of Economic Regulation." Bell Journal of Economics and Management Science **2**(1): 3-21.
- Stiglitz, J. (1989). "Markets, Market Failures, and Development." American Economic Review **79**(2): 197-203.
- Suri, T. (2007). *Selection and Comparative Advantage in Technology Adoption*, MIT Sloan School of Management.
- Swain, N. (1985). Collective Farms Which Work? Cambridge, UK, Cambridge University Press.
- Swain, N. (1998). "A Framework for Comparing Social Change in the Post-Socialist Countryside." Eastern European Countryside **4**: 5-18.
- Swain, N. (1999). "Agricultural Restitution and Co-operative Transformation in the Czech Republic, Hungary and Slovakia." Europe-Asia Studies **51**(7): 1199-1219.
- Swinnen, J. F. (2002). "Political Reforms, Rural Crises, and Land Tenure in Western Europe." Food Policy **27**(4): 371-394.
- Swinnen, J. F. and L. Vranken (2007). *Patterns of Land Market Development in Transition*. LICOS Discussion Papers, Number 179/2007. Leuven, Belgium, LICOS Centre for Institutions and Economic Performance, Katholieke Universiteit Leuven.
- Swinnen, J. F. M. (1999). "The Political Economy of Land Reform Choices in Central and Eastern Europe." The Economics of Transition **7**(3): 637-664.
- Swinnen, J. F. M., A. Buckwell and E. Mathijs (1997). Agricultural Privatisation, Land Reform, and Farm Restructuring in Central and Eastern Europe.
- Tacoli, C. (2003). *The Urban Part of Rural Development*. Rural-Urban Working Paper 9. London, IIED.
- Tacoli, C. (2004). *Rural-Urban Linkages and Pro-Poor Agricultural Growth: An Overview*. Prepared for OECD DAC POVNET Agriculture and Pro-Poor Growth Yask Team. Hensinki.
- Tapalaga, D. (2007). Barroso Descriprat: Cat Ne Costa 25%. HotNews, euROfonduri. **10 September**.
- Tesliuc, E. D. (2000). *Agricultural Policies: Achievements and Challenges*. Washington, D.C., The World Bank, Poverty Reduction and Economic Management.
- Thorpe, N. (2007). EU Clash with Romanian Tradition. BBC News. **27 January**.
- Timmer, C. P. (2005). *Agriculture and Pro-Poor Growth: An Asian Perspective*. Working Paper Number 62, Center for Global Development.
- Todaro, M. and S. Smith (2003). *Agricultural Transformation and Rural Development*. Economic Development, Addison Wesley.

- Tsantis, A. C. and R. Pepper (1979). *The Industrialization of an Agrarian Economy Under Socialist Planning. Report of a mission sent to Romania by the World Bank.* Washington D.C., The World Bank.
- Turnock, D. (1998). *Romania. Privatization in Rural Eastern Europe. The Process of Restitution and Restructuring.* D. Turnock, Edward Elgar.
- Udry, C. (2003). "Fieldwork, Economic Theory, and Research on Institutions in Developing Countries." *The American Economic Review* **93**(2): 107-111.
- UNDP (2000). *Rural-Urban Linkages: An Emerging Policy Priority. Bureau of Development Policy.* New York, UNDP.
- van Meurs, W. (1999). "Land Reform in Romania - A Never-Ending Story." *South-East Europe Review* **2**(2).
- Verdery, K. (1983). *Transylvanian Villagers: Three Centuries of Political, Economic, and Ethnic Change.* Berkeley CA, University of California Press.
- Verdery, K. (1997). "Political Identities and Property Restitution in Transylvania, Romania." *Political and Legal Anthropology Review* **20**(1): 120-141.
- Verdery, K. (1999). Fuzzy Property Rights, Power and Identity in Transylvania's Decollectivization. *Uncertain Transition. Ethnographies of Change in the Postsocialist World.* M. Burawoy and K. Verdery. Lanham MD, Rowman and Littlefield.
- Verdery, K. (2003). *The Vanishing Hectare: Property and Value in Postsocialist Transylvania.* Ithaca NY, Cornell University Press.
- Verdery, K. (2004a). Dialogic Collectivization: "Rich Peasants" and Unreliable Cadres in the Romanian Countryside, 1948-1959. *Colloquium at the Russian and East European Research Center.* Harvard University, Cambridge MA.
- Verdery, K. (2004b). The Obligations of Ownership: Restoring Rights to Land in Postsocialist Transylvania. *Property in Question. Value Transformation in the Global Economy.* K. Verdery and C. Humphrey. Oxford, New York, Berg: 139-159.
- Vranken, L. and J. Swinnen (2006). "Land Rental Markets in Transition: Theory and Evidence from Hungary." *World Development* **34**(3): 481-500.
- Welch, F. (1970). "Education in Production." *Journal of Political Economy* **78**(1): 35-59.
- Winters, D. L. (1978). *Farmers Without Farms: Agricultural Tenancy in Nineteenth-Century Iowa.* Westport CT, Greenwood Press.
- World Bank (1998). *Romania - Social Development Fund Project, Volume 1. World Bank Reports on Poverty Reduction.* Washington D.C., The World Bank.
- World Bank (2001a). *Poland, the Functioning of Labor, Land, and Financial Markets: Opportunities and Constraints for Farming Sector Restructuring. World Bank Report.* Washington D.C., The World Bank.
- World Bank (2001b). *The World Bank Group's Country Assistance Strategy for Romania. Executive Summary.* Washington D.C., The World Bank.
- World Bank (2005). *Romanian Food and Agriculture in a European Perspective.* Bucharest, The World Bank.
- World Bank (2007a). *Farm Restructuring Project. Project Information Document. Appraisal Stage.* Washington D.C., The World Bank.
- World Bank (2007b). *World Development Report 2008: Agriculture for Development.* Washington, D.C., The World Bank.
- Zbierski-Salameh, S. (1999). Polish Peasants in the 'Valley of Transition': Responses to Postsocialist Reforms. *Uncertain Transition. Ethnographies of Change in the Postsocialist World.* M. Burawoy and K. Verdery. Lanham, Rowman & Littlefield Publishers Inc.: 189-222.