

*Policy Issues in Europe and Central Asia Region*  
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## Land Reform, Agricultural Performance, and Rural Family Incomes in CIS

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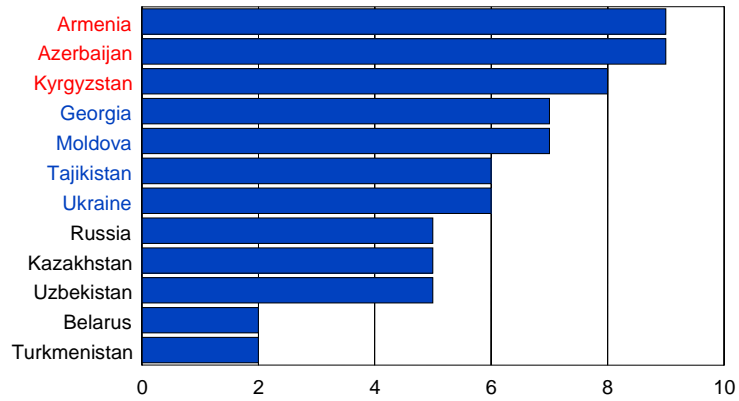
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### A roadmap to our presentation

- Patterns of output and resources: 1980-2004
- Productivity of land and labor
- Relationship with agricultural policy reform
- Land and rural incomes
- *Conclusions and policy recommendations*

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## World Bank Land Reform Index (2004)



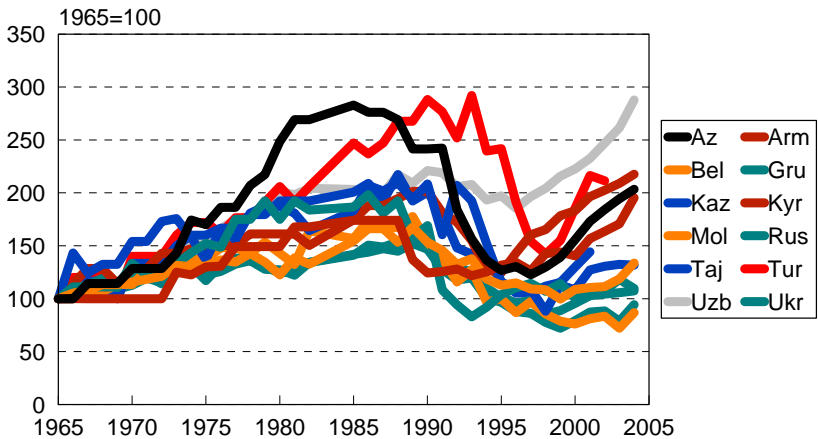
Source: Csaki and Kray (2005)

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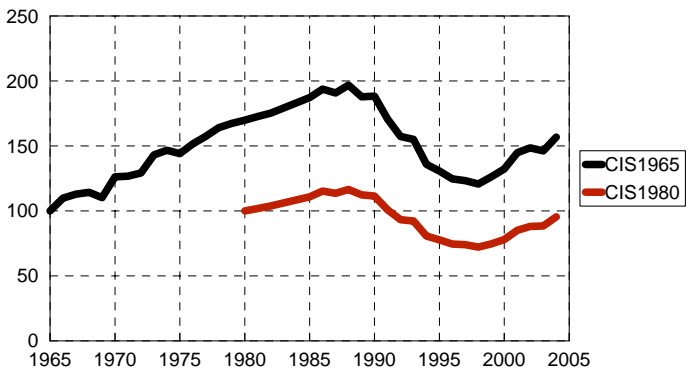
## Output and Resources

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# Production changes for all 12 CIS: a very messy picture

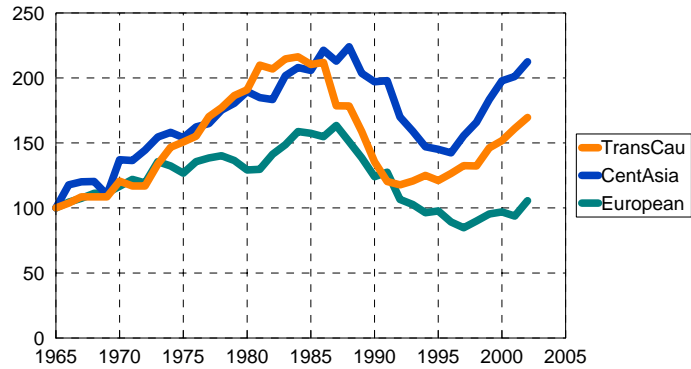


# Changes in growth pattern driven by policy



Four distinct phases: 1965-1985 – rapid growth; 1985-1990 – stagnation;  
1990-1997 – rapid decline; 1998-2004 recovery

## Recovery linked to reforms



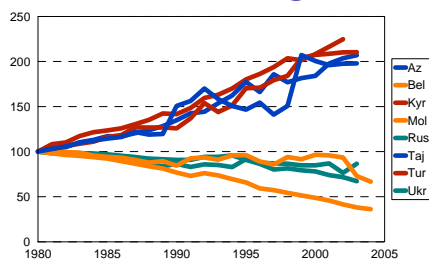
Recovery in TC starts earlier (1992) due to reforms in Arm and Gru, accelerates in 1998 when Az kicks in

Recovery in the European zone associated with 1998 reforms in Ukr and Mol

Recovery in Central Asia linked to land reform in Kaz, Kyr and introduction of family leaseholds in Tur and Uzb

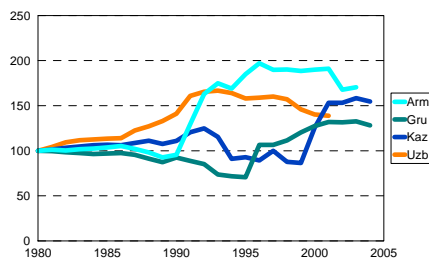
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## Three patterns of change in agricultural labor



Group 1: up

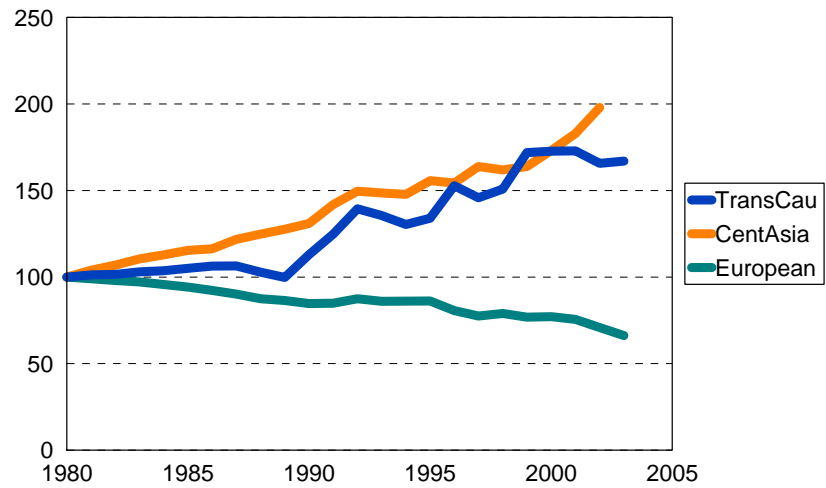
Group 2: down



Group 3: chaotic, but generally up in recent years

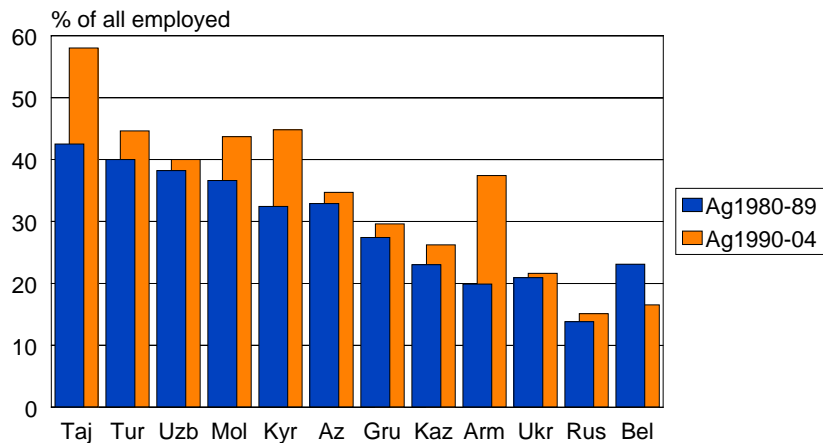
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## Smoothed patterns of change in agricultural labor



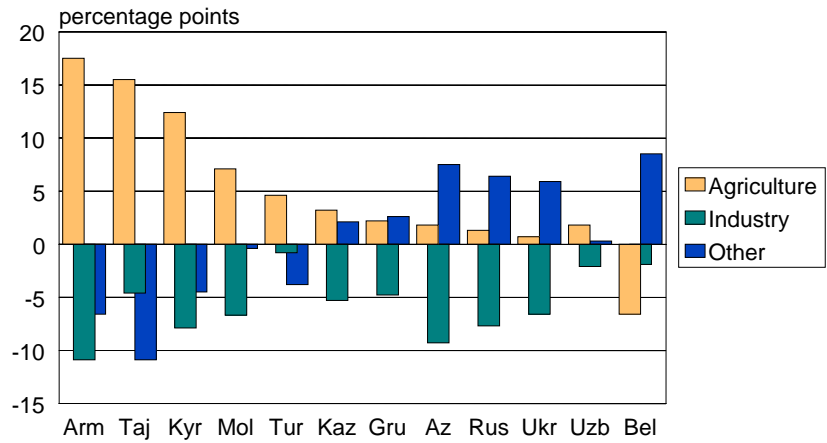
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## Share of agricultural employment generally increases



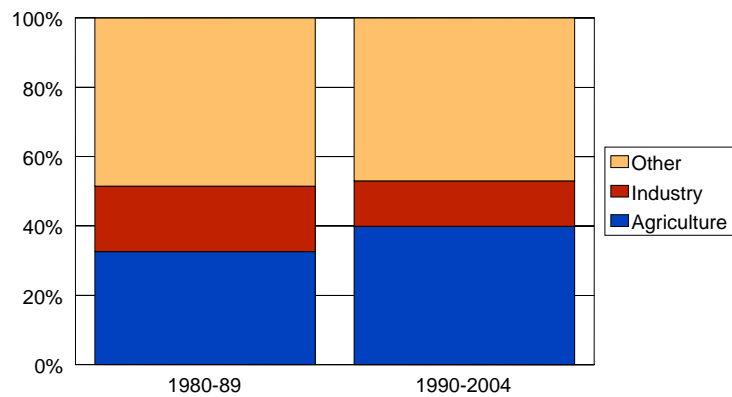
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...due to layoffs in industry and also other sectors



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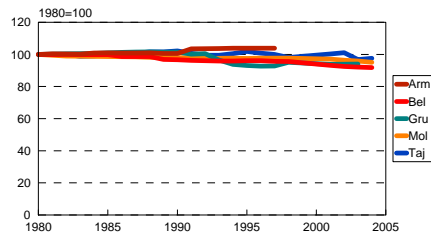
### Sectoral structure of employment 1980-89 and 1990-2004\*



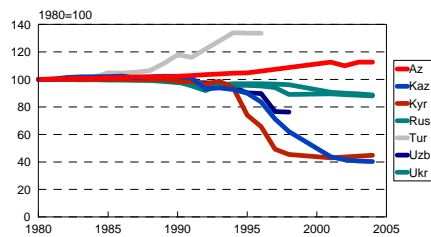
\*Excluding Russia, Ukraine, and Belarus

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## Ag land follows two patterns



No change

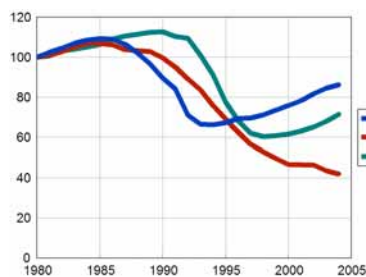


Significant variability

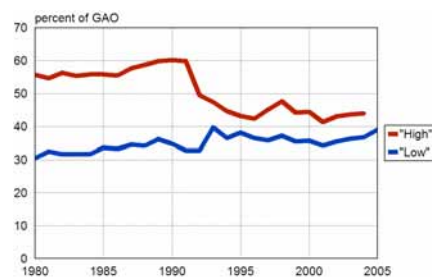
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## A forgotten resource: livestock

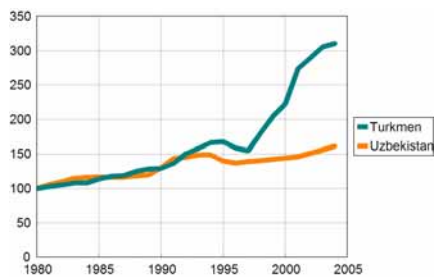
Herd (1980=100)



Livestock production shares



**High:** Rus, Ukr, Bel, Kaz, Kyr, Arm  
**Low:** Az, Gru, Taj, Tur, Uzb, Mol

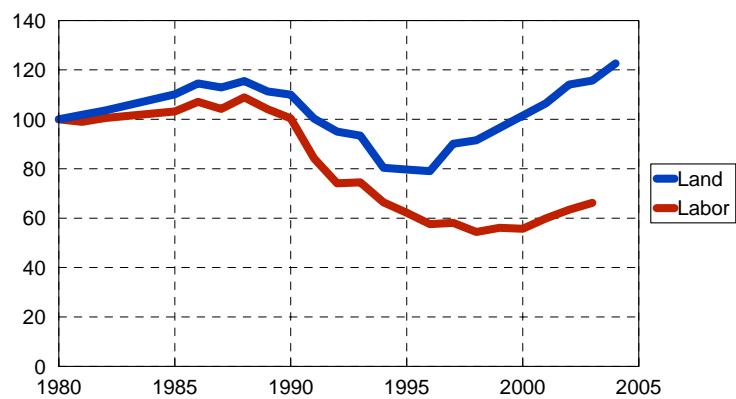


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# Productivity Patterns

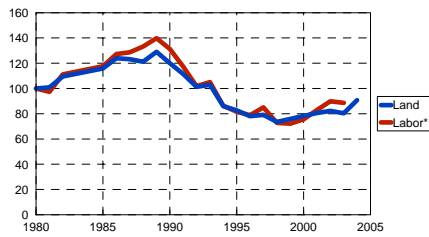
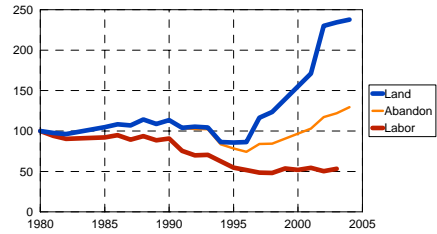
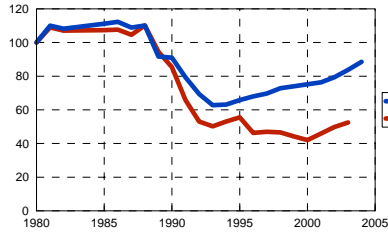
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## Land and Labor Productivity in CIS 1980-2004



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## Land and labor productivity by regions 1980-2004



Transcaucasia

Central Asia

European CIS

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## Performance and Policy Reform

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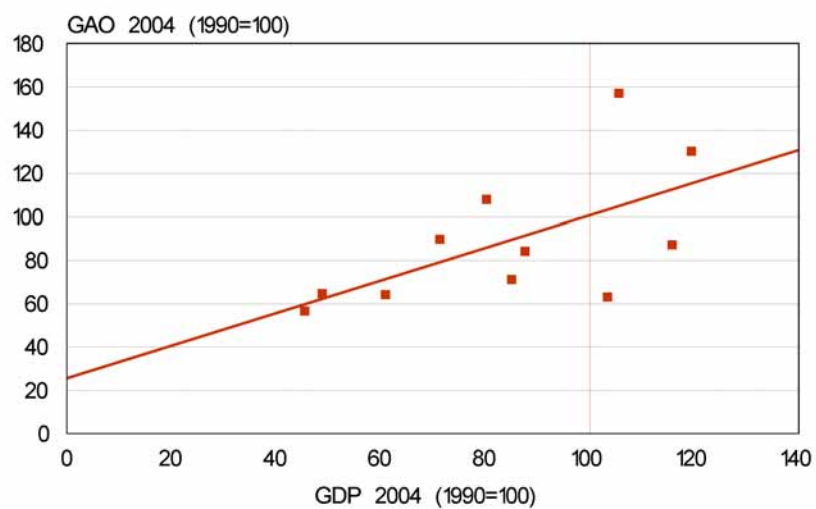
## Russocentrists claim:

*“Recovery in all CIS countries is entirely driven by the recovery in Russia after the 1998 financial crisis.”*

No statistical support for this claim,  
but ...

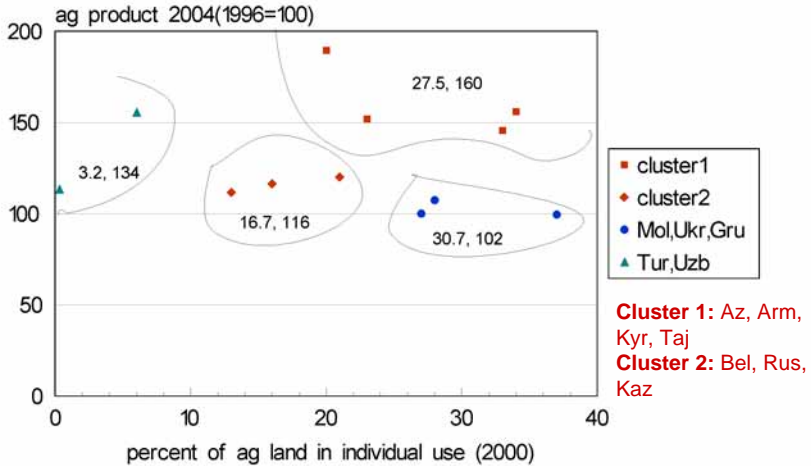
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## GAO growth vs GDP growth 1990-2004

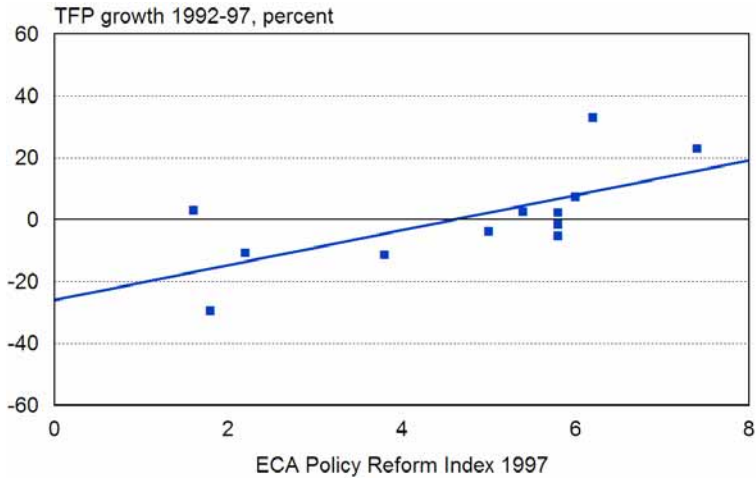


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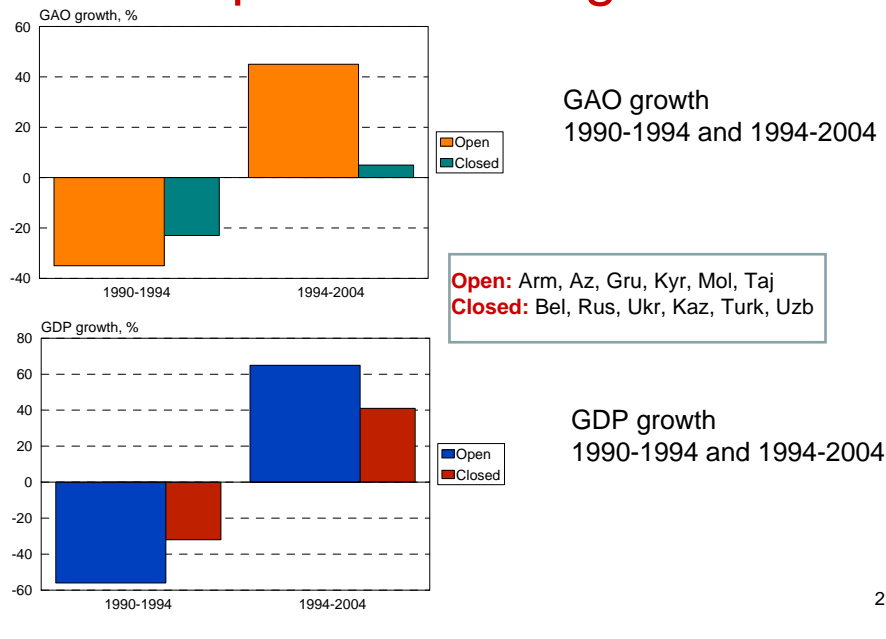
GAO2004 vs. land in individual use (2000)



TFP growth is positively correlated with ECA Policy Reform Index



# Openness and growth

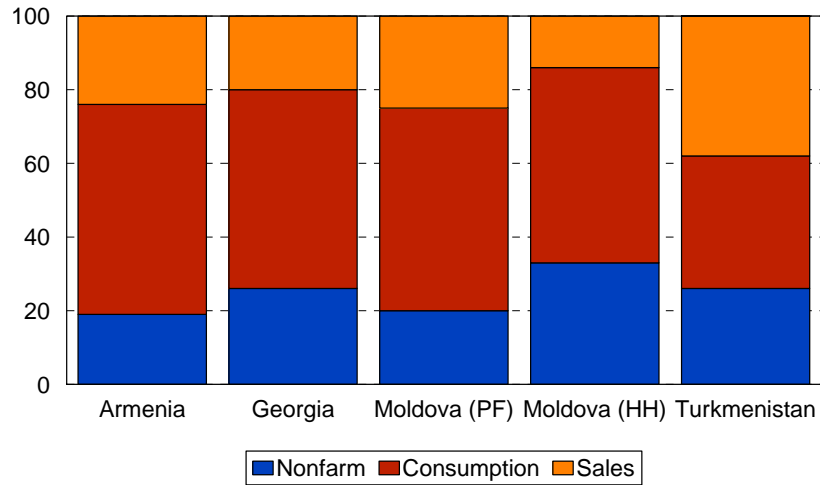


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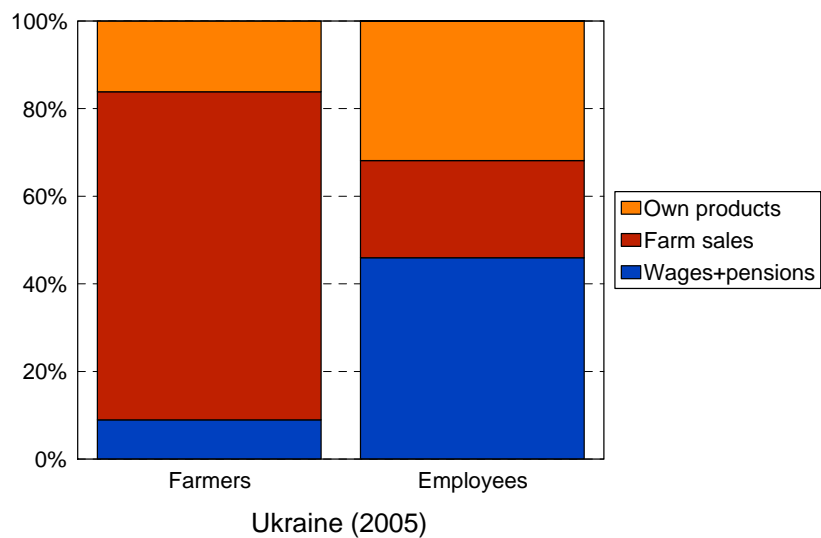
# Land and Rural Incomes

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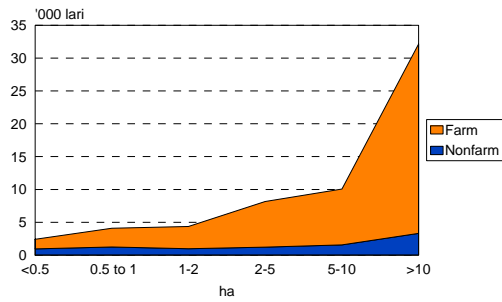
## Rural families still highly dependent on farm income



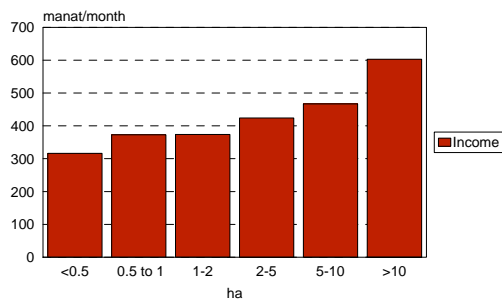
## ... and even wages derive mainly from other farms



Family income increases with farm size

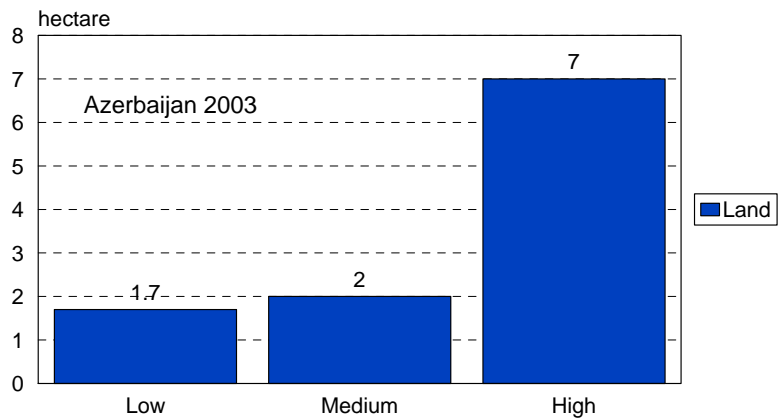


Georgia 2003

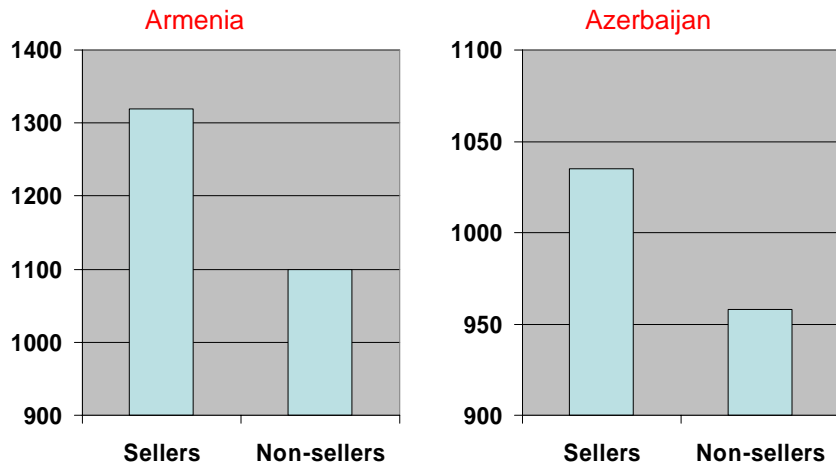


Azerbaijan 2003

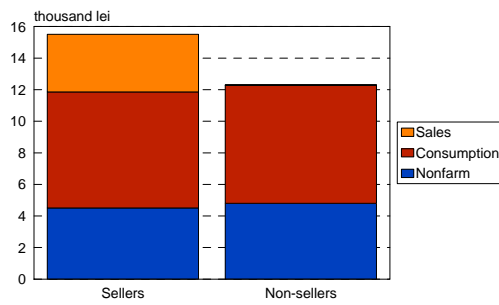
More land leads to higher family well-being



## Commercialization increases household income (\$/year)

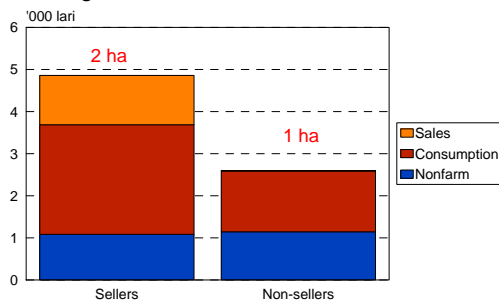


Moldova 2000

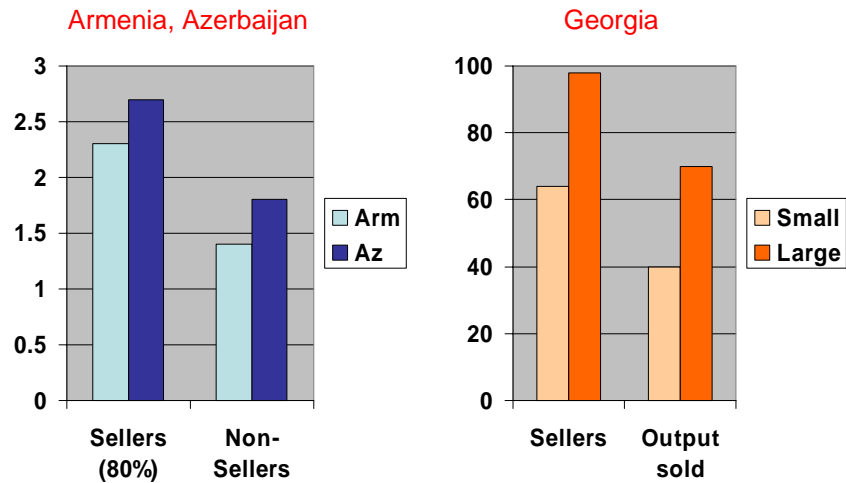


Family income higher for sellers than non-sellers

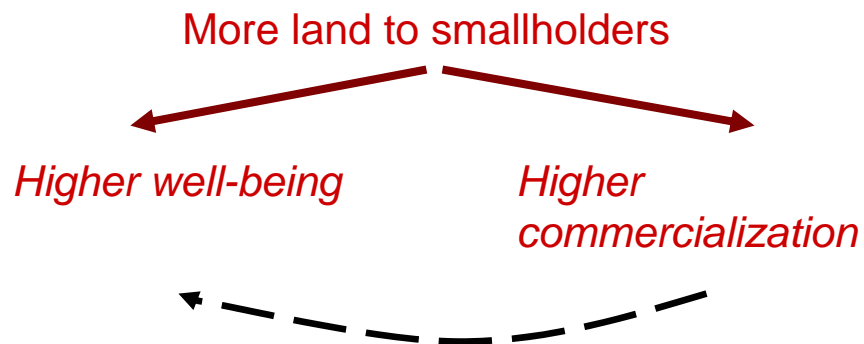
Georgia 2003



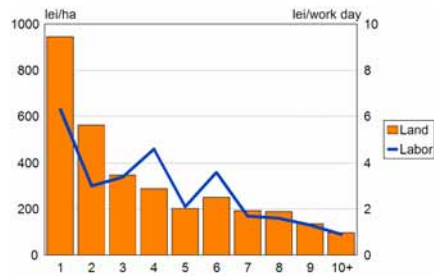
## Land is the main determinant of commercialization



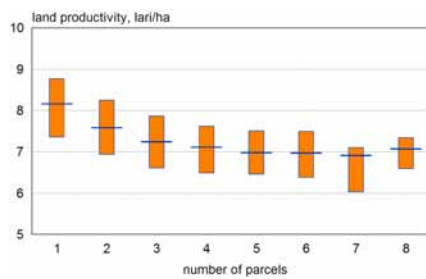
## The benefits of land reform for the rural population



## Fragmentation reduces productivity



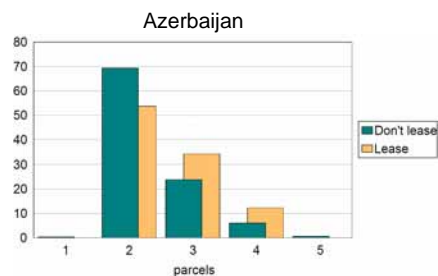
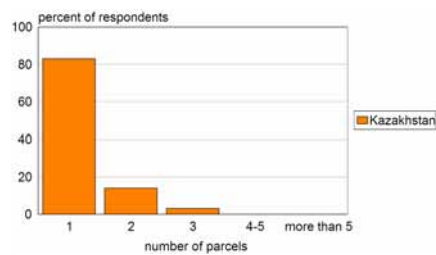
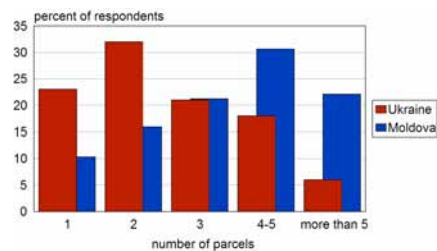
Moldova 2003



Georgia 2003

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## But fragmentation is not a serious problem *everywhere*



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## Lease markets work to adjust farm sizes

	Own land	Own+lease	% lease
Azerbaijan	1.8	15.7	7
Kazakhstan	160	272	11
Moldova			
1997	2.8	16.9	6
2003	3.8	11.6	21
2005	3.7	9.5	28
Ukraine	53	227	53

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## Conclusions

- *Policies* (and politics) have driven the patterns of growth in agricultural output and productivity
- *Rural labor* is partly responsive to policy change
- *Productivity and output growth* show positive association with policy reforms
- *Rural development*: accumulation from agriculture and income diversification
- *Rural crisis in Central Asia?*

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## What institutions are needed?

- Emphasize land distribution to individuals
- Land markets for buying and leasing – allow size adjustment
- “Law and order”: contract enforcement for security of tenure (leasing mechanisms)
- Market channels for products and inputs (including service cooperatives)

## What to do?

- Structure of land tenure: ***strengthen mid-size farms***
- Land markets: ***eliminate constraints, simplify administrative procedures***
- Level playing field: ***abandon large farm bias***
- Institutions supporting commercialization of family farms: ***focus on infrastructure, not intervention in production***