



# CAP-IRE

Assessing the multiple Impacts of the Common Agricultural Policies (CAP) on Rural Economies  
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## *Determinants of farm exit: a comparison between Europe and the United States*

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# Outline

- Objective
- Background
- Methodology
- Description of cases studies/Results
- Comparison EU-US/Discussion

# Objective

To discuss the determinants of farm exits through a comparative analysis in EU and US

- logit model to estimate the influence of structural, operator, family, and farm characteristics on decision to exit farming
- two different data sets from EU and US

# Background

Relevance of the problem:

- Eurostat: 7,7 million farm holding in 1995  
5,7 million in 2007 (EU15)
- Hoppe and Korb (2006): exit rates of 9-10%  
per year in US

Exit behavior affects:

- future farm structure, management of abandoned land, depopulation of rural areas, agricultural policy, changes in land property pattern, role of renting, re-location of farm production, cropping pattern,...

# Methodology (1)

“Raw” classification of previous studies:

- Data level
  - Micro: farm level
  - Macro: area/region as a unit
- Data typology
  - Ex-post decision (exit rate)
  - Intention to exit farming

# Methodology (2)

Two different theoretical approaches:

- based on an utility rationale, in which the choice between the two alternatives (exit/no exit) is made seeking the higher utility for the decision maker
- based on a profit maximizing rationale, in which the choice of exiting the farming sector is the effect of a lower profit compared with staying in farming

# Methodology (3)

Lesson learned from previous studies:

- Different determinants: location, income, specialisation, subsidy payments,...
- Connection to farm dimension (not always proportional)
- Household/individual characteristics: education, age, ...
- Off-farm income: opposite effects

# Methodology (4)

Our approach:

- utility maximization
- stated intention to exit farming (in a 5 years in EU and in 10 years in US)
- dependent variable  $W=1$  if intention to exit,  $W=0$  otherwise
- estimate the marginal effect of each variables on the dependent



# Surveys characteristics

	EU	US
Source	Stratified random sample (collected in 2009, CAP-IRE project)	Agricultural Resource Management Survey (ARMS) (collected in 2001)
Size	2363	About 22000
Location	11 case studies area in 9 countries	US
Variables	Household characteristics, farm characteristics, stated future intentions in policy scenarios,...	Household characteristics, farm characteristics, farm economic data, characteristics of farm businesses,...
Way of data collection	Postal, face to face, telephone	Face to face

# Results in EU

Variables with positive effect	Variables with negative effect	Variables not significant
land_rent_out age	intercept, hh_male, hh_female, hh_partime, live_onfarm, land_owned_ha worker_ftm, private, advisory_service	income_from_farm, hh_fulltime, hh_young, internet_to_sell, internet_to_buy, cooperative, direct_to_final_consumer, another_farm , contract_to_sell, edu, processor, land_rentin, organic_prod, oth_activity, agri_env_schemes

Percent predicted correctly 84.2%

# Results in US

Variables with positive effect		Variables with negative effect	Variables not significant	
op_age,	op_educ,	intercept,	f_farmin,	f_efficiency,
f_raised,	s_raised,	p_success,	f_contract,	f_netincme,
f_hobby,	f_indivd,	f_large,	f_partner,	r_heart, r_northc,
sp_offowrk,		m_govtpmt,	r_fruitrim,	r_basinrng,
l_govtpmt,	m_debt,	r_eupland,	ft_cashgrn,	ft_ofieldcr,
l_debt,	r_northgp,	r_seaboard,	ft_cotton,	ft_highval, ft_hogs,
r_prgate,	ft_beef		ft_poultry,	

Percent predicted correctly 72.6%

# Comparison EU vs US

Variables	EU	US
intercept	-	-
raised on farm		+
rent_out	+	
age	+	+
decrease participation in farm programs, debt, spouse working off, sole proprietorship		+
location		+/-
specialisation		+/-
education, successor		-
the number of male and females in the household, the fact of living on farm, having full time employees, selling to private traders, suing advisory services	-	
the fact of being part time working on farm	-	+
size	-	-

# Discussion

- Results are mostly consistent with previous studies
- Key message: larger, more structured farms and younger farmers are generally less inclined to exit
- Analysis in the two areas show a number of different and sometimes contrasting features

# Discussion

- need of a more standardized information
- need to go beyond a generic use of the household utility framework as a generic cover for simple statistical analysis of the determinants of farm exit.