

Survival strategies of farm households and multifunctional farms in Greece

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Multifunctional agriculture is favoured by EU rural policy and considered as a tool for integrated and sustainable rural development. Recent approaches to define the multifunctional practices of rural farm households (different from those of 'conventional' agriculture) according to the use of their resources result in three dimensions: deepening, broadening and regrouping. In this paper, the multifunctional practices of farm households in six rural areas of Greece with different characteristics of agricultural production are examined. Data were obtained from interviews with farmers about the practices of their households. The findings indicate that regrouping practices are encountered more often in all areas and are not associated with the degree of the 'professionalisation' of agriculture in each area. Broadening and deepening practices are less common for two reasons: some of these practices take place at a level independent from most Greek farmers, and demand appears to shape some of these practices.

KEY WORDS: Greece, rural development, multifunctionality, survival strategies, farm households, interviews

Introduction: multifunctionality and survival strategies of farm households in the EU rural development context

Multifunctionality was relatively recently introduced as a concept in wider agriculture – rural context of policies, analysis and studies. Agriculture is considered one of the most typical multifunctional activities (Renting *et al.* 2009). Apart from producing food and fibre, providing incomes and employment, agriculture – and in general farming – produces other commodity (including rural tourism and other services) and non-commodity outputs (including 'food security/safety, rural way of living/traditions, soil conservation, rural landscape, biological diversity and health and other non-commodity products', Durand and Van Huylenbroeck 2003, 4).

Multifunctionality of agriculture is used in different contexts: one context is international trade negotiations through the World Trade Organization (WTO) and the debate on policies for agricultural and rural development. In this context multifunctionality addresses positive or negative externalities of agriculture (Losch 2004) that again may refer to all kinds of

market or non-market commodities: the use (or misuse) of natural resources, the effects of agriculture on the quality and quantity of habitats and the preservation of biodiversity, the impacts on landscapes etc. (Renting *et al.* 2009). Within this framework, but in contrast to policy-led treatment of agricultural multifunctionality, Wilson (2008) presents a model of a multifunctionality continuum, which progresses from weak to strong forms. It focuses on outcomes that are observable at farm business level, and employs a normative stance in examining the conditions for transition of agricultural systems toward a strongly multifunctional agriculture. Strong multifunctionality is predicated on 'ensuring the protection of the environment, healthy farming and rural communities' (Wilson 2008, 369). A strong degree of multifunctionality is what might be expected under the sustainable rural development paradigm, given the importance of forms of social, economic, and environmental capital in the characterisation of each concept, while the agro-industrial model may be expected to provide conditions for weak multifunctionality.

In this broad context, multifunctionality in the EU is a central part of the ongoing discussion about a 'European farming model' in which agriculture produces

quality products in viable rural communities that conserve nature and resources (CEC 1999). Here, the discussion focuses on the ways that farming and agriculture can cover the needs of urban societies for 'post-productive' goods and services in rural areas (Wilson 2001; Evans *et al.* 2002) while offering quality products and conserving natural resources and landscapes (Renting *et al.* 2008 2009). The 'European farming model' incorporates the 'rural development' model (van der Ploeg *et al.* 2000; Marsden 2003), which is viewed in Europe as 'the best approach to strengthen the multifunctional role of agriculture' as it allows 'the increase of both public and private goods' (Belletti *et al.* 2003, 57).

Within this farming model, the 'drivers' of the multifunctionality of agriculture are farms, as the practices of farmers at farm level in an area are added up to produce the outputs of agriculture in that area (commodities and non-commodities). Farms can be multifunctional, therefore, and their outputs can be classified into two dimensions: the first separating the outputs according to where they take place (on the farm or external) and the second separating the outputs according to the type of output (commodity or non-commodity). The combinations of these dimensions result in four distinct 'worlds' (Belletti *et al.* 2003, 63):

- 1 on-farm commodity outputs, such as better prices, higher share of added value to farmers, higher incomes, higher on-farm employment and higher stability of incomes;
- 2 external commodity outputs, such as a broader range of goods and services offered, increased quality, higher land prices, and new employment opportunities;
- 3 on-farm non-commodity outputs, such as better quality of work, and valorisation of household labour; and
- 4 external non-commodity outputs, such as landscape conservation, biodiversity conservation, animal welfare, improvement of social capital, exchange and preservation of local culture, and the accumulation of local knowledge.

Multifunctionality of farms refers to households that run these farms and to the ways these households valorise their resources. Van der Ploeg and Renting (2004, 235–6) recognise three 'pathways' that farm households can use to increase the multifunctionality of their farms: broadening, deepening and regrounding of 'conventional' productive activities. Broadening refers to the introduction of new productive activities that are related to the farm household and its management but 'broaden' conventional activities (e.g. agrotourism, nature management, etc.). Deepening refers to differentiations of the conventional activities with practices such as diverse supply networks or niche production (e.g. organic products, specific char-

acter products, short food supply chains). Regrounding refers to the mobilisation of the households' resources off the farm (e.g. pluriactivity, new forms of cost reduction). All of these practices are the household's responses to external challenges and pressures and internal needs. The definition of 'conventional' activities requires the specification of the spatial setting due to the enormous diversity of practices that are considered as 'conventional' or 'new' in different settings. Typical examples in Europe are farmers' markets: in southern Europe they are a 'conventional' practice of short supply chains that continued despite the development of 'modern' agriculture in the past decades, while in northern Europe most of them disappeared and nowadays they are considered as 'new' practices.

Today, the importance of such 'alternative' paths spreads as they are brought from the margins to the centre (Renting *et al.* 2008; Meert *et al.* 2005; Lobley and Potter 2004). 'Taken together, deepening, broadening and regrounding reshape the farm into a multifunctional enterprise delivering a broader range of goods and services' (van der Ploeg and Roep 2003, 44). Within this specific context, multifunctionality 'can be defined as the capacity of farm households and other rural actors involved in agricultural activity to respond adequately to societal and consumers demands through the provisioning of a variety of goods, services and non-market functions' (Renting *et al.* 2005, 11). The nature of such goods, services and functions include private goods for food markets, public goods (biodiversity, landscape, water management, rural amenities etc.), private goods for non-food markets (tourism, care, energy, educational services etc.), food with distinctive product attributes (quality food, local specialties etc.), cultural functions (identity, heritage etc), social functions (food security, social cohesion, disperses settlement patterns, rural employment etc.) and ethical functions (fair trade, animal welfare etc.) (Renting *et al.* 2005, 11). The key development is the re-use of the resources of farms and of the members of farm households that bring forward their new roles in the countryside and society at large.

Many of these practices are labelled under 'pluriactivity', which is commonly defined as the combination of agricultural activity in the family farm with one or more activities in agriculture or off agriculture (Gasson and Errington 1993). The use of this term usually refers to the farmer alone, but it is increasingly being used for all members of the household (Eikeland and Lie 1999). Thus, the emphasis shifts from the farmer to the household and from 'pluriactivity' to 'pluri-income' (Sofer 2001) or 'household survival strategies' (Meert *et al.* 2005). This analysis at the household level allows an in-depth understanding of the processes in the household and in local networks of regard or assistance (Damianakos 2002).

Empirical findings (see, among others, Samaras *et al.* 1995; Djurfeldt and Waldenström 1999; Jervell 1999; Carter 1999; Kinsella *et al.* 2000; Walford 2003) indicate that pluriactivity and in general survival strategies depend on the economic structure of the area where the farm is located (type of economic activities, available jobs, seasonality, etc.), on the type of farm and its production, and on local traditions. Vernimmen *et al.* (2003) classify survival strategies according to:

- 1 their degree of policy orientation – market (when competing in the market), redistribution (for strategies that benefit from income redistribution schemes), or reciprocity (for strategies that benefit from aid schemes);
- 2 their relationship with agricultural activity – strategies within agriculture or outside agriculture; and
- 3 their relationship with the farm – on-farm or off-farm strategies.

The combinations of these classifications result in 12 distinct ‘possibilities’ for farm household survival strategies (p. 210).

Such ‘alternative’ practices of farm households in Greece have until recently been considered as negative, with the national policy pursuing a ‘modern’ agriculture and rural society with farmers as entrepreneurs. Only recently have different voices been heard, bringing forward the emerging multifunctionality paradigm as a vital rural development component and re-evaluating the various forms of practices it embraces (Papadopoulos 2004). A number of regional and local studies have demonstrated the diversity of these strategies, which seems to indicate that farm households are capable of adjusting their practices and their survival strategies according to what the area has to offer, what the markets demand and their members’ needs (Daskalopoulou and Petrou 2002; Kasimis *et al.* 2003; Louloudis *et al.* 2004; Damianakos 2002). Today, ‘regrounding’ practices and especially off-farm employment are a structural feature of Greek farm households and typically involve more members of the household than the farmer. Off-farm employment could refer to work in agro-industry, construction and/or services and is of varying intensity (Kizos [2010] reports some figures). ‘Deepening’ practices involve: short food supply chains, typically direct selling to farmers’ markets, while selling to local stores can also be an option; alternative management practices, such as organic or integrated farming – organic farming became popular for the subsidy payment and because produce can be sold directly to consumers or stores; integrated farming became obligatory in fruit crops for export; and on-farm processing of food products – this is not very popular, but may be an option for some bigger farms.

‘Broadening’ practices typically involve providing agrotourism services. Other types of broadening prac-

tices that are common in Europe, such as on-farm services for health care, education etc. are not popular; the only services that have marginally developed close to urban centres are to provide space for social events (e.g. weddings). Energy production was also marginal at the time of the research, both for biofuel production from energy crops and wind or solar power production, but is rapidly developing, with many farmers offering land for subsidised small-scale solar energy production (predicted to launch in 2011). Agri-environmental payments in Greece are for organic farming mostly, which is covered in ‘deepening’ practices, because the rest of the measures are marginal or very local and the overall concept is underdeveloped in Greek rural policy.

In this paper, six case studies in different areas of Greece examine the practices of farm households, with an emphasis on the ‘deepening, broadening and regrounding’ typology. These case studies are selected to represent different socioeconomic and agricultural production settings, some more intensive and ‘professional’ and some more extensive. Although they are indicative of the diversity of the Greek countryside, they are not representative of all areas and settings.

Methods and data

Official data on the survival strategies of farm households that lead to multifunctional farms are not sufficient for mapping their extent and diversity in the Greek countryside. In order to gain some insight into the occurrence and extent of ‘alternative’ practices of farm households that lead to multifunctional farms and their regional differences in Greece, the research findings of six case studies are presented. The assumptions behind the whole rationale are that the characteristics of farm households, cultivation systems and land uses, and the socioeconomic status of an area affect survival strategies and multifunctionality. The research was carried out in six municipalities in various areas of Greece (Figure 1): Nigrita (Pr. Serron with five settlements), Heronia (Pr. Voiotias with eight settlements), Mandamados (Pr. Lesvos with four settlements), Xirovouni (Pr. Arta with eight settlements), Edessa (Pr. Pellas with 10 settlements) and Gastouni (Pr. Ileias with seven settlements). Most of these municipalities are small (except Edessa, Table 1) and this was a deliberate choice so that the research was on a relatively small scale. The areas were relatively homogenous in terms of the factors that affect survival strategies (e.g. the extent and type of available jobs in non-agricultural sectors, the type of land use, the geographical characteristics of the area, etc.).

There are some similarities in all areas but also important differences. In all areas farming is an important economic (for occupation and income) and social activity. At the same time, population trends are mixed, with a reduction in the population during the decade 1991–2001 in four areas and an increase in

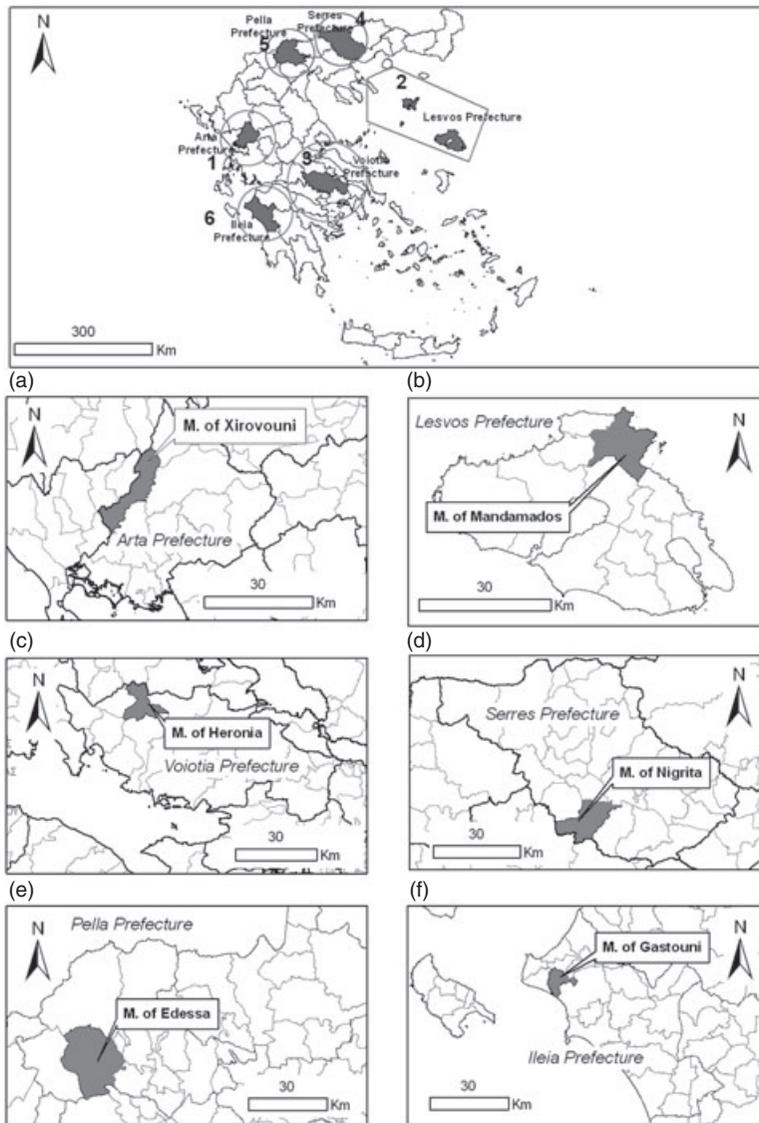


Figure 1 Location of the case study areas. Municipalities of (a) Xirovouni, (b) Mandamados, (c) Heronia, (d) Nigrita, (e) Edessa, (f) Gastouni

Edessa and Gastouni. However, the type and the intensity of land use are different. Some areas are very intensively farmed (e.g. cotton, cherries, dairy farms) and some are fairly extensive (e.g. olives, sheep husbandry) (Table 1).

Differences are evident in the percentages of younger farmers, with those in Nigrita and Edessa being younger on average. Differences are also found in the 'employed in primary sector per farmer' indicator, which can be used to estimate the degree of pluriactivity of farmers. These indicators are higher for Nigrita and Edessa and are lower for the other areas

(Table 1), indicating that the degree of 'professionalism' of farm households differs, with households depending on farm incomes to varying degrees. The tax records show that households in all areas except Heronia have on average lower incomes than the national average, as low as 54% in the case of Mandamados and 64% in the case of Xirovouni (Table 1). Regarding farm incomes, in Heronia they are higher than the national average (at 110%) and in Edessa they are lower but close to the national average (at 95%). Farms in all other areas declare very low farm incomes on average, lower again in Mandamados (at

Table 1 Selected indicators of research areas

	Population 2001	Population change 1991–2001 (%)	Farmers (2001)	Farmers >65 years (%,2001)	Farmers <40 years (%, 2001)	Farmers/100 inhabitants (2001)	Employed in primary sector (2001)
	1	2	3	4	5	6	7
Greece	10 964 020	6.9	816 534	31.0	15.7	7.4	591 666
Nigrita	9 783	–8.3	1 504	18.8	24.8	15.4	1 282
Heronia	2 218	–2.2	545	42.8	13.2	24.6	377
Mandamados	3 210	–0.5	892	38.5	17.7	27.8	565
Xirovouni	4 083	–8.5	973	40.1	10.0	23.8	454
Edessa	25 619	2.4	2 510	15.1	28.2	9.8	2 061
Gastouni	11 523	23.2	1 025	29.3	13.8	8.9	805

	Employed in primary sector/farmers (%, 2001)	Family tax income (€, 2003)	Farm tax income (€, 2003)	Average farm size (ha/farm)	Arable land % UAA	Tree crops % UAA	Grazing lands % UAA
	8	9	10	11	12	13	15
Greece	72.5	12 944	8 546	4.42	52.2	25.2	16.9
Nigrita	85.2	8 634	6 511	4.64	92.3	6.2	0.0
Heronia	69.2	9 763	9 380	6.27	86.9	7.8	4.4
Mandamados	63.3	7 059	5 781	7.69	0.2	32.5	67.1
Xirovouni	46.7	8 354	5 854	1.53	53.5	17.4	24.9
Edessa	82.1	11 278	8 190	2.53	13.8	81.4	0.8
Gastouni	78.5	9 562	8 087	2.53	91.5	5.6	1.9

UAA, utilised agricultural area (ha)

Sources: 1, 2, 6, 7, 8: population censuses 1991–2001; 3, 4, 5, 6, 8, 11, 12, 13, 14: agriculture census 2000; 9, 10: Ministry of Economics and Finance; all processed by the authors

67% of the national average). Although, these incomes may be lower than the actual ones, they indicate, along with the rest of the data, that the economic status of these areas is in general not very high compared with the national average. Also they indicate that there are some areas (Heronia, Edessa and Nigrita) where farming potentially plays an important role in providing incomes. These areas may not represent the diversity of the Greek countryside, but they are indicative of some typical settings.

The data come from the agricultural census of Greece 2000 and the population censuses of 2001 and 1991, and from research, with farmers being interviewed using a semi-structured questionnaire. The number of questionnaires per settlement within each area was proportional to the total number of farms in each settlement according to the agricultural census of 2000. The respondents were selected at random from the farmers who were available at the time of the visits. This ensured that an adequate number of questionnaires per settlement would be completed, and also that absentee farmers (i.e. those that may live perma-

nently or seasonally in another area, typically an urban centre) were not contacted. The respondents were asked about their farms (size, type of cultivation), their management practices, the members of the household and their occupations on and off the farm, and their incomes; they were also asked a number of open-ended questions on farming and the future of their farms. Overall, 335 questionnaires were completed, 55 in Nigrita (2005), 50 in Heronia (2005), 60 in Mandamados (2005), 80 in Xirovouni (2004), 40 in Edessa (2007) and 50 in Gastouni (2008).

Findings

The farms and the farm households in the case study areas

The average farm sizes in the sample are high compared with the national average and the average from the 2000 census (Table 1) and are over 10 ha except in Xirovouni and Edessa (2.4 and 4.0 ha/farm respectively, Table 2). However, large areas of extensive

Table 2 Farm household members, average farm size, households with family incomes from farming only and family income classes by area

Locality	Households members	Average farm size in ha (major land use)	Animal husbandry	Income from agriculture only (%)	Family income				
					<€5000 (%) (N = 37)	€5000–10 000 (%) (N = 81)	€10 000–15 000 (%) (N = 51)	€15 000–20 000 (%) (N = 85)	>€20 000 (%) (N = 81)
Mandamados (N = 59)	3.5	13.9 (olives)	83% with sheep	10.0	5.1	47.5	22.0	25.4	0.0
Nigrita (N = 56)	3.5	12.2 (cotton and fodder)	12.5% sheep, goats and cattle	14.3	0.0	0.0	5.4	50.0	44.6
Heronia (N = 50)	3.8	14.2 (cotton)	28% limited (sheep)	26.0	2.0	8.0	8.0	26.0	56.0
Xirovouni (N = 80)	3.9	2.4 (cereals, olives, orange trees)	Limited (sheep)	41.3	32.5	41.3	15.0	11.3	0.0
Edessa (N = 40)	3.7	4.0 (cherries and peaches)	10% poultry	8.0	0.0	0.0	12.5	17.5	70.0
Gastouni (N = 50)	3.1	15.3 (tomatoes and water melons)	40% cattle and sheep	56.0	14.0	32.0	28.0	26.0	0.0
Total (N = 335)	3.4			25.9	8.9	21.5	15.2	26.0	28.4

rough grazing lands in Gastouni (besides cereals) and mostly in Mandamados raise the average size overall. The farms are very heterogeneous in terms of the composition of crops and livestock (Table 2). Olive trees are present in all areas except in Edessa (where the climate is mostly continental and too cold for olives), but large olive farms are found only in Mandamados (4.9 ha/farm, in other areas from 0.3 to 1.9 ha/farm). Cereals are found in all areas except in Mandamados (the largest in Gastouni of 10.6 ha/farm on average). Fodder crops are not found in Gastouni or Mandamados; the largest is in Nigrita (19.6 ha/farm, others from 0.5 to 4.7 ha/farm). Cotton is found in Heronia and Nigrita (11.1 and 6.2 ha/farm respectively), where tobacco is also grown (1.6 and 1.9 ha/farm respectively; also in Xirovouni, 0.7 ha/farm). Heronia, Nigrita and Gastouni are the areas where vegetables are grown (5.6, 3.3 and 4.3 ha/farm respectively); in Gastouni tomato crops are also found (3.7 ha/farm). Other plantations (apple, peaches, etc.) are present to a limited extent in Heronia, Gastouni and Edessa; in Edessa there are plantations specialising in cherries (4.3 ha/farm, the cherries are very famous in Greece and an important export). Water melons are important in Gastouni and Xirovouni (6.4 and 2.4 ha/farm respectively), while vineyards are found mostly in Gastouni and Nigrita (3.9 and 1.3 ha/farm respectively). Grazing lands are important mostly in Mandamados and Gastouni (12.4 and 7.8 ha/farm respectively).

Livestock farming is diverse in terms of the extent of farms with livestock and the scale of production (animals/farm). Sheep and goat husbandry is widespread, but most important and relatively large scale in Mandamados (for 83% of the farms with 124 sheep and 10 goats/farm, Table 2). In Gastouni mostly sheep

husbandry is found (126 animals/farm for nine farms) and in Heronia (36 animals/farm for 14 farms), while goat husbandry is more common in Nigrita (67 animals/farm for 12 farms). There are relatively large-scale cattle farms in Nigrita and Gastouni (92 animals/farm for seven farms and 84 animals/farm for nine farms respectively) and in Mandamados as well (18 animals/farm). Poultry are kept in limited numbers in all areas but poultry farming is only large scale in Edessa (3278 animals/farm for four farms).

The farm households in the sample are composed of 3.4 members on average (Table 2) with small differences between the case study areas (from 3.1 in Gastouni to 3.9 in Xirovouni). A total of 90.2% of the considered farm households consisted of a married couple, and 80% had at least one child, 61.6% two children, 18.4% three, 4.7% four and 0.8% five. In 16.5% of the farm households at least one parent is included. The average ages of the household members are very similar across the different areas, with the exception of Gastouni, where there are some younger households. This contradicts the census data, which indicate significant differences and younger farming populations for some of the areas.

Heads of farms are typically men (in 96.5% of the farms; this percentage resulted from the spontaneous responses and indicates the still dominant conception that the man of the family is the head of the farm), in their fifties (average age 51.6 years) and nearly all (95%) work in agriculture (Table 3). This average age, however, which is surprisingly similar in all areas, hides important differences, particularly a significant percentage of aged or retired farmers, verified by the high percentage of pensions as off-farm incomes (see next section). Typically heads of farms are active and

Table 3 Farm household members' age structure and on/off-farm occupations

Household member	N	Age	Agriculture (%)	Off-farm (%)	Construction (%)	Public services (%)	Private sector (%)	Self-employed (%)	Pension (%)
Head	255	51.6	94.9	50.2	2.7	7.5	3.9	13.7	23.5
Partner	230	48.0	67.0	36.1		10.4	7.4	8.7	9.6
Child 1	204	22.4	34.3	37.7	1.0	12.7	19.6	5.4	
Child 2	157	20.8	24.2	25.5	0.6	10.2	12.7	1.9	
Child 3	47	20.9	34.0	38.3	4.3	8.5	25.5	0.0	
Child 4	12	26.3	16.7	66.7	0.0	50.0	25.0	0.0	
Child 5	2	23.5	50.0	100.0	0.0	50.0	50.0	0.0	
Children	422	21.8	30.1	34.4	1.2	12.6	18.0	3.3	
Parent 1	42	73	54.8	88.1					88.1
Parent 2	14	60.4	71.4	85.7					85.7
Parents	56	69.9	58.9	87.5					87.5

Data from farm households of Xirovouni are not included in the table

participate in farm work; even in the areas with the lowest percentages the figure is around 90% (in Gastouni and Heronia, the average is 95%, Table 3). Inactive heads are old and rely on other family members and/or hired labour. The partner of the farm head is typically female (in 98% of the farms), a bit younger than 50 (average age 48 years), and a high proportion (67%) engage in farm work. Many of the children in the sample are still students at school or university; the rest are adults and less than a third of the first born (30.1%) engage in farm work. Some of them have their own household but still seem to help with work on the family farm. Parents that live in the farm households are aged (average age 69.9 years) and more than half are still engaged in farm work (58.9%), although the type of work is not specified in all cases and could be just the supervision of hired labour or the general tending of the fields.

Multifunctionality practices

The most important practices found in the farm households in the multifunctionality context are of the 'regrounding' type, namely pluriactivity of the members of the households and pluri-incomes; pensions were very important in income-gaining strategies. Half of the farm heads (50.2%) declared off-farm incomes and pensions were the main source (23.5% of total), with 13.7% declaring self-employment. Income from public and private sectors was reported by 7.5% and 3.9% of respondents respectively. The most important differences are the percentages of farm heads that declared off-farm incomes and their sources (Table 3). When a high percentage of farmers declared at least one such source of income (e.g. in Edessa and Mandamados with 80% and 77% respectively), pensions were important, but self-employment was also significant. Edessa, however, offers more jobs in the public

sector (12.5% of the total). The area and the opportunities offered seem to play a very important role here.

Only 36.1% of partners declared off-farm incomes (including 9.6% from pensions), from public services, self-employment and the private sector (10.4%, 8.7% and 7.4 respectively). Differences in the percentages of partners that declared off-farm incomes and their sources are again evident (Table 3). These differences more or less followed the pattern of farm heads, with more work in the public services and less self-employment. More than a third (34.4%) of children declared off-farm incomes, mostly from the private and public sectors (18.0% and 12.6% respectively) and less from self-employment and construction (3.3% and 1.2% respectively). The changes in occupation patterns again followed the general pattern of farm heads and their partners for the different areas. Off-farm incomes for parents are exclusively from pensions and are declared by 87.5% of the total, contributing to the family income.

A mere 26% of the total households have family incomes only from agriculture (Table 2). There are very important differences across the considered areas (including pensions): very few in Edessa and Mandamados (92% and 90% respectively) declare off-farm incomes whereas the percentage is almost half in Gastouni. The total family incomes declared are also diverse for each area: all farm households in Mandamados, Xirovouni and Gastouni declared incomes below €20 000; in Edessa, Heronia and Nigrita many households declared incomes above €20 000 (70%, 44.6% and 56% respectively). The relation between family income class and the dependence on farm incomes is statistically significant (Pearson chi-square, $p < 0.001$), with higher dependence for lower family incomes (Table 2).

The findings for multifunctionality practices show that 'regrounding' practices (off-farm employment)

Table 4 Percentage of farm households in the different 'pathways' for increasing the multifunctionality, per area and total

Area	Broadening (agrotourism) %	Deepening (%)					Regrounding (pluri-income) (%)
		IF ^a (%)	Organic (%)	SFSC ^b (%)	Quality (%)	Agroindustry (%)	
Mandamados (<i>N</i> = 60)	0.0	0.0	20.0	0.0	1.7	1.7 (1 small cheese-making unit)	90.0
Nigrita (<i>N</i> = 55)	0.0	0.0	23.6	52.7	0.0	3.6 (1 small cheese-making unit)	76.4
Heronia (<i>N</i> = 50)	0.0	0.0	0.0	6.0	0.0	4.0 (2 small wineries)	72.0
Edessa (<i>N</i> = 40)	0.0	30.0	0.0	15.0	0.0	0.0	95.0
Gastouni (<i>N</i> = 50)	0.0	0.0	0.0	100.0	0.0	0.0	48.0
Total (<i>N</i> = 255)	0.0	4.7	9.8	38.0	0.4	1.6	76.1

^aIntegrated farming

^bShort food supply chains that include farmers' markets (and/or local stores in the case of Nigrita) pluri-income plus incomes from pensions

Data from farm households of Xirovouni are not included in the table

are by far the most important (Table 4). 'Deepening' practices come second: short food supply chains are the most common practice for 38% of farm households, including direct selling to farmers' markets in most cases and in one area (Nigrita) selling to local stores as well. The next most frequent practice is organic farming, declared by almost 10% of the farmers, but really important in two areas (Nigrita and Mandamados, Table 4) and non-existent in the other areas. The integrated farming management of peaches in Edessa (30% of the farms there) raises the overall occurrence of the practice. On-farm processing of food products is reported for four farms – two cheese-making units and two wineries. The differences between localities are significant, indicating the diversity of the areas and the importance of local particularities, and will be discussed in more detail in the following sections. Finally, no farm households declared any 'broadening' practices.

Opinions of farmers

In general, farmers were not found to be very satisfied with farming as an economic activity. Sixty percent of respondents said that they are dissatisfied, only a quarter are satisfied and the remaining 15% said they are only a little satisfied. Farmers who declared being satisfied said that they get satisfaction from farming: 'I love my job', or 'it is my choice, it could be better, but I like it', or 'my parents help me and I get along well', or 'it is a good job, despite having to be in the stable every day'. Another line of reasoning related to satisfactory incomes: 'I make enough for my needs', or 'I sell them [the products] myself and make good money'. The majority who declared being not satisfied blamed the income and the hardship of farming: 'it is tough work', or 'we don't make enough money, thank God I have my shop and we get by'.

The future is not very bright for most of the respondents. Only 9% believe that their situation will improve in the future, 65% that it will get worse and the rest are also pessimistic but declared that it depends, typically, on 'the state, they should help us farmers' or in other words, 'the policies should change', or the 'subsidies are not enough and they will be cut off in the future'. Others are even more pessimistic: 'nothing can be done to help us', or 'the area will be deserted, farmers will leave'. It is no surprise, then, that most of the respondents would not advise their children to become farmers and keep the family farm. Some who are positive note that farming should 'only be complimentary to something else, the job is very tiring', or place certain preconditions that are related to policies and subsidies: 'yes, if the subsidies we have today are retained and change and give us more money'. Others comment positively on the close relationship with nature, or the fact that their farm is 'a set business, there is no need for investments and it runs well now', advice that is provided by a farmer with a cheese-making unit to his son as well. The negative opinions are very similar and revolve around the low profitability, the hard work (especially for animal husbandry): 'it is too hard work, with no future' is a typical answer repeated by many farmers. One characteristic opinion depicts clearly the unattractiveness of farming: 'no, because they will not be able to find brides easily'. There are no statistically significant relationships of these opinions with the dependence on off-farm incomes, although farmers who are dependent entirely on farm incomes seem to be more pessimistic than part-time farmers. Some of the most positive opinions are from those who declared high farm incomes and had also adopted some form of 'deepening' activity (short food supply chains or agro-industry), but their occurrence in the sample is too insignificant to generalise these findings.

Discussion

In this study, we examined the survival strategies of rural households in six regions of the Greek countryside using the typology of farm household multifunctionality practices developed by Van der Ploeg and Renting (2004). The farms and the case study areas are very diverse: some appear to be much more 'professional' in terms of the scale of production of crops and livestock (Heronia, Nigrita and Gastouni). The households appear to be similar in terms of their average size and age, revealing a possible underlying unity of the diverse Greek countryside. However, these figures appear to contradict official data and the analysis and findings of Samaras *et al.* (1995) and Moisides (2001), among others, and further investigation is required. All farm households in all areas are actively farming, with the farm head and the partner typically involved in the farm work and other members of the household or the family participating as well.

The question that arises in the light of the theoretical discussion and the goals of this paper is whether these differences correspond to diverging survival strategies of the farm households. The findings seem to indicate that farm households base their practice on what is available in the region – the availability of different sources of income – rather than the type of crops and livestock. These findings seem to agree with those from other empirical work in Greece (Samaras *et al.* 1995; Safiliou and Papadopoulos 2004; Louloudis *et al.* 2004; Kizos and Spilanis 2004). This reveals the flexibility of farm households to respond and adapt to what their area offers and to external demand for products and services (see Damianakos 2002 for a thorough analysis). So, if there are off-farm opportunities most households seek to obtain income from them. In areas such as Edessa (a middle size town) where there are increased employment opportunities in public services, more farm households take these opportunities. In other areas (such as Heronia and Gastouni) where there are not so many opportunities in public services, farm households seem to rely on either self-employment or the private sector.

Another very significant finding is the importance of pensions. Apart from highlighting the age of farm heads and their partners, it also reveals the additional income that older members of the household provide. Pensions may be low (especially if they come from the Agricultural Insurance Fund when they are typically less than €500/month), but they may represent a vital part of the total household income, especially if the household consists of an aged couple living in a rural settlement (typically in their own house) who have limited spending needs.

The cases of Edessa and Mandamados are revealing. These areas reported the highest percentages of off-farm incomes, but in two very different contexts. In Edessa, the area with the highest family income (no

incomes reported below €10 000), off-farm incomes (in the public sector and in services in general) seem to 'enrich' the household incomes in the sense that in many cases these complementary incomes are not 'necessary' for their survival. However, in Mandamados, where more than half of the farm households (52.6%) declare family incomes below €10 000, off-farm incomes (mostly from pensions and constructions) really seem to mean 'survival strategy'.

The fact that no 'broadening' practices were found is not completely unexpected considering the characteristics of agrotourism development in Greece. As previous studies have pointed out (Kizos and Iosifides 2007; Kizos 2010), agrotourism has developed either parallel to 'conventional' coastal tourism that is more 'tourism' than 'agro', or in selected mountain settlements, mostly for rural tourism services. None of the case study areas are coastal areas or mountain destinations. For the other 'broadening' practices, the actual demand for rural services is absent and therefore the non-occurrence of such practices is not surprising. It seems that energy production will be more important in the future; many thousands of farmers have applied for solar power production during 2010 but it was not an option at the time of the research. Agri-environmental payments are not considered a vital part of current Greek rural policy – with the exception of organic farming – which is different than other countries in Europe. The options, therefore, are limited for farmers in Greece.

Kizos (2010) investigated the extent of multifunctionality practices in Greece at the level of Prefectures. He found that some of the most important practices are developed at an upstream level where most farm households cannot participate, either because they are not big enough or because some 'deepening' and 'broadening' practices appear to be 'linked to demand of goods and services by residents from urban centres of large magnitude' (p. 113). Therefore, it is not surprising that the most popular 'deepening' practice is short food supply chains, which can be easily practiced by most households. Alternative management schemes are also popular, but there is a difference: organic farming is related to the incentive of the 5-year payment and to the fact that some crops are already very extensive and so their conversion to organic is easy (especially olives). Integrated farming, however, is obligatory for the export of fruits and the participation of cherry farmers in Edessa is unsurprising.

The opinions of the farmers in this study and other studies (Gidarakou 1999; Kizos *et al.* 2010; Safiliou and Papadopoulos 2004) reveal the unattractiveness of agricultural occupations in Greece today. It is not surprising, therefore, that the first and most important choice of farm households in the selected areas is to find incomes and occupations off-farm and in sectors other than agriculture. An overall classification according to the typology of Vernimmen *et al.* (2003)

indicates that these survival strategies are mostly of the redistribution (that benefit from income redistribution schemes) and reciprocity (that benefit from aid schemes) in the first axis; these strategies are usually located outside agriculture in the second axis and off their farm in the third axis. Strategies that compete in the market, within agriculture and on their farm, are far less common.

Conclusions

In conclusion, this analysis has highlighted some important points. First, the 'regrounding–broadening–deepening' typology covers the diversity of the practices used by farm households and offers a useful and powerful analytical tool that moves away from the study of 'official statistics' (categories such as 'primarily occupied in agriculture') to the actual issues and inputs to which households in the countryside respond to and shape their practices. It also facilitates the study of households that run farms as sociological and economic units instead of the farmer or the farm. This shift in emphasis and focus is necessary in our opinion and is highlighted by the research findings. Different types of official statistics could be useful in this type of research.

Second, the flexibility of the farm household to respond to external inputs by reallocating the use of its resources. These inputs could be the economic structure of the area, the availability of off-farm occupations, the accessibility of policy support and an increase in the demand for particular products and services (organic products and integrated management illustrate this point). At the same time, households seem to respond to internal changes in their structure and life-cycle stages (children growing up, ageing of the heads of household and their partners, parents living in household etc.) by adjusting their practices. The important regional differences in these case studies show the difficulty in developing a European-wide typology that could explain and predict the occurrence and the extent of multifunctional practices in a given locality. Scale also seems to be of great importance. The areas examined are all relatively small (municipalities) and (with one exception) rural. This demonstrates the level of complexity, even at this scale, of relatively homogenous areas in terms of the factors that affect survival strategies. For regional and national scales, this homogeneity cannot be taken for granted and represents a very important factor that needs to be taken into account in policy formulation and application.

In current EU rural policy practice (after the 2000s), geography is again considered important, with national and regional rural development plans that can be adjusted according to which of the available measures should be prioritised in each country and/or region, in place of the uniform policies of the past. The findings of this research seem to indicate that even at

this level of spatial planning it may not be sufficient to address the heterogeneity of the factors that drive farm households to take up practices that are today considered positive and contribute to a 'European farming model'. But it seems clear that the emphasis of the EU and national policies should be to help farm households to use their flexibility in favour of 'deepening' and 'broadening' practices that strengthen the local farming economy. Some regional characteristics seem to be of great importance for the uptake of such practices, and therefore, they should not be taken for granted but actively covered by policies to facilitate this flexibility. For example, institutions and structures should be promoted to help farms process products and market them, which would help many of the farm households we interviewed.

Furthermore, strategies should be aimed at real households that run farms and not abstract 'farmers' or 'people primarily occupied in agriculture'. In this wider 'European farming model', farmers have to be agronomists to grow their crops and raise their animals, chemical engineers to process their products at the required hygiene standards and to ensure quality, hoteliers to provide quality services, marketing experts, and willing to take risks. Since this is clearly not possible, at least for most farm households, such assistance and the alteration of negative regional or local characteristics could prove vital for the successful development of 'deepening' and 'broadening' practices. By contrast, 'regrounding' practices seem to represent a much more convenient choice, in part because of some national peculiarities for some of the 'deepening' and 'broadening' practices, as the wider analysis of Kizos (2010) illustrates, but also because most of the other practices require a different type of knowledge and mindset that many farm households seem to lack today.

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