

Multifunctionality in Agriculture: a New Entrepreneurial Model to Improve and to Promote.

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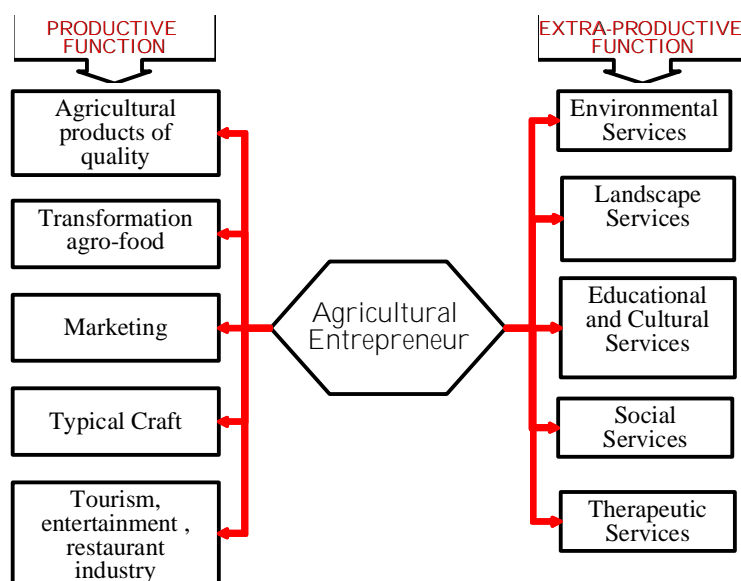
Abstract: The multifunctionality represents a strategic key of enhance and development of the rural sector and it conjugates the sustainable agriculture, the multifunctionality of the resources, the food safety, the multiactivities of the agricultural household, the territorial equilibrium and the maintenance of the landscape. To measure the functional diversification in agriculture, we will use the results of the Italian Farm Structure Survey (FSS) conducted by Istat. In this paper some indicators on the multifunctionality will be presented and discussed using some results of the European Farm Structure Survey (FSS) 2007. The universe of farms is the European Universe (EU)¹.

Keywords: Multifunctionality, Indicators, Collecting data on multifunctionality.

1. Production sectors

The agriculture as primary function of production of products of first necessity has today new functions as that environmental, cultural, landscape, also sustained by the community politics. This new functions are known as the multifunctionality of agricultural holdings.

Figure 1: *Products and services of the multifunctional farmer*



¹ The Universe of farms is that set of farms in the European Union of at least 1 hectare and those of less than 1 hectare provided the latter market a certain proportion of their output or produce more than a specified amount of output.

The multifunctional role of farmers is promote of the Common Agricultural Policy and the current CAP conditions the agricultural sector that is evolved to economically be sustained by the Institutions and, above all, to be competitive on the market. The new farm is able to satisfy diversified needs and contribute to the development of a sustainable economy and to the creation of jobs in rural areas.

2. Multifunctional holdings structure

The FSS gives some important information on connected activity to the agriculture such as: agritourism, handicrafts, processing of farm vegetable and animal products, renewable energy production, rural employment, recreational activities, and other gainful activities.

Table 1: *Holdings with connected activity to the agriculture (M.H.), Utilised Agricultural Area (UAA), Woods, Total Area of multifunctional holdings (TA), and Indicators for Region. Year 2007 – EU*

REGION	Multifunctionally holdings(M.H.)			UAA ha	Woods ha	TA ha	Indicators			
	Year 2007		Variation 2007/2005				M. H./ All farms	UAA/ TA	Woods/ TA	UAA/ M. H.
	n.	%	%							
Piemonte	13.359	11,1	30,3	219.079	60.662	294.181	17,7	74,5	20,6	1639,9
Valle d'Aosta	855	0,7	-47,1	29.709	5.690	74.415	22,2	39,9	7,6	3474,7
Lombardia	7.974	6,6	18,5	167.004	24.877	202.557	13,9	82,4	12,3	2094,4
Trentino-Alto Adige	6.182	5,1	27,8	75.111	77.814	167.967	14,9	44,7	46,3	1215,0
<i>Bolzano-Bozen</i>	<i>4.361</i>	<i>3,6</i>	<i>30,2</i>	<i>61.398</i>	<i>62.372</i>	<i>138.280</i>	<i>20,9</i>	<i>44,4</i>	<i>45,1</i>	<i>1407,9</i>
<i>Trento</i>	<i>1.821</i>	<i>1,5</i>	<i>22,5</i>	<i>13.713</i>	<i>15.441</i>	<i>29.687</i>	<i>8,8</i>	<i>46,2</i>	<i>52,0</i>	<i>753,0</i>
Veneto	8.774	7,3	35,2	129.623	63.072	237.874	6,1	54,5	26,5	1477,4
Friuli-Venezia Giulia	3.291	2,7	39,0	52.241	12.213	70.527	13,6	74,1	17,3	1587,4
Liguria	396	0,3	253,6	2.979	792	4.423	1,9	67,4	17,9	752,3
Emilia-Romagna	6.386	5,3	-9,9	190.814	23.573	236.559	7,8	80,7	10,0	2988,0
Toscana	16.084	13,3	17,0	284.334	249.302	573.264	20,4	49,6	43,5	1767,8
Umbria	4.835	4,0	-6,0	59.504	45.776	110.347	12,7	53,9	41,5	1230,7
Marche	4.403	3,6	27,6	107.427	10.794	129.817	9,0	82,8	8,3	2439,9
Lazio	1.102	0,9	90,3	28.638	10.274	40.802	1,1	70,2	25,2	2598,7
Abruzzo	1.493	1,2	69,3	34.144	13.287	49.909	2,5	68,4	26,6	2287,0
Molise	685	0,6	-3,2	9.565	629	10.819	2,9	88,4	5,8	1396,4
Campania	14.917	12,4	30,5	61.606	10.800	78.043	9,8	78,9	13,8	413,0
Puglia	1.712	1,4	107,0	58.036	19.897	80.265	0,7	72,3	24,8	3389,9
Basilicata	2.502	2,1	4,9	45.228	20.580	68.485	4,4	66,0	30,1	1807,7
Calabria	9.459	7,8	106,3	71.772	14.202	90.741	7,9	79,1	15,7	758,8
Sicilia	1.328	1,1	-23,3	54.821	13.407	69.471	0,6	78,9	19,3	4128,1
Sardegna	15.039	12,5	-26,4	234.710	67.662	330.166	22,7	71,1	20,5	1560,7
Italy	120.775	100	14,6	1.916.345	745.303	2.920.630	7,0	65,6	25,5	1586,7
Northern Italy	47.217	39,1	19,6	866.560	268.692	1.288.502	10,5	67,3	20,9	1835,3
Central Italy	26.424	21,9	15,3	479.903	316.147	854.230	9,8	56,2	37,0	1816,2
Southern Italy*	47.135	39,0	9,7	569.882	160.464	777.899	4,9	73,3	20,6	1209,0

Source: data processing ISTAT

* +Sicily and Sardinia Islands

The Multifunctional holdings (M.H.) recorded in Italy in the 2007 Farm Structure Survey were 120.775 units (Table 1) with growth of 14.6% more than the 2005 FSS. This increase is due largely to the Liguria (+253.6%) with more 284 units, Puglia (+107.0%), and Calabria (+106.3%).

The reduction of the multifunctional holdings is had in Valle d'Aosta (- 47.1%), in Sardegna (-26.4%) and in Sicilia (-23.3%).

Opposite trend has occurred for all Italian farms that have decreased of 2.8% compared with 2005. The multifunctional holdings in Northern and Southern Italy were with the same value 39%, with a increase than 2005 of 19.6% for Italian northern holdings. So these holdings has reached those of Southern Italy 2005 (40.8%).

The increase of the multifunctional holdings in 2007 confirm the trend of agricultural holding and its abilities of development in particular territorial areas, where the permanence of the farms on the territory is encouraged by new sources of income encouraging the Rural development towards the multifunctionality.

The market of agricultural products and rural services affects entrepreneurial choices, indeed, in 2007 the increase of the multifunctional holdings was determined in large part of agritourism and in different measure of other connected activity to the agriculture.

Table 2: *Holdings with connected activity to the agriculture by size of farms in Agricultural Area. Year 2007 – EU*

Agricultural area (ha)	Number of connected activities to the agriculture				Number of connected activities to the agriculture			
	All multifunctional holdings	One activity	Tow activities	Three activities	All multifunctional holdings	One activity	Tow activities	Three activities
	NUMBER HOLDINGS				VARIATION PERCENTAGES 2007/2005			
without UAA	224	210	9	5	-67,4	-69,5	-	-
< 1	23.321	23.033	288	-	2,2	1,7	54,8	-
1 - 2	17.671	16.651	882	139	6,3	4,0	54,5	167,3
2 - 3	11.228	10.887	289	53	19,1	25,1	-51,4	-57,6
3 - 5	14.137	12.185	1.569	383	11,2	6,6	33,4	271,8
5 - 10	19.550	16.915	1.880	755	26,1	18,1	105,7	178,6
10 - 20	13.690	11.859	1.577	254	16,2	14,0	36,5	12,9
20 - 30	6.279	5.210	1.007	62	31,3	25,6	83,8	-27,1
30 - 50	6.882	5.369	1.372	142	44,9	30,9	137,8	100,0
50 - 100	4.881	3.850	948	84	23,3	19,4	51,7	-24,3
100 and more	2.910	2.239	462	210	24,2	13,1	63,3	159,3
Totale	120.775	108.406	10.282	2.087	14,6	11,0	55,1	85,8

Source: data processing ISTAT

"-" data is not available in 2005

Although most multifunctional holdings have an UAA < 20 ha in particular with size < 2 ha (Table 2). In 2007 there was a significant increase in 30-50 ha (44.9%) and positive also for all farm size in UAA. Whereas, a negative sign has been recorded for multifunctional holdings without UAA (-67.4%). These holdings have a more specialization of the connected activity to the agriculture, indeed, they have only one connected activity (-69.5%).

The increased presence of UAA (Table 1) in the multifunctional holdings has been recorded in Northern Italy (45.2%), while increased in Southern Italy the wooded area (42.4%). As we can see of the Table 1 the first indicator (M.H./All farms) shows that the multifunctional holdings were 7.0% than all Italian farms, with increase of 0.9 than 2005. The Northern and Central Italy holdings have more diversified (10.5 and 9.8). Mainly in Sardegna, in Valle d'Aosta, at Bolzano and in Toscana the multifunctional holdings were more than 20% compared with all farms present in own region.

The second indicator (UAA/TA), concerning the use of soil, shows (Table 1) that in Southern and Northern Italy, 73.3% and 67.3% respectively, were multifunctional holdings with more UAA. This indicator is above 80% in Molise (88.4%), Marche (82.8%), Lombardia (82.4%) and Emilia-Romagna (80.7%), these holdings had large part of TA (Total area of multifunctional holdings) covered in UAA.

The third indicator (Woods/TA) show that the multifunctional holdings of the Central Italy has been with more wooded area (37.0%). This indicator had > 40% in Trentino-Alto Adige (46.3%), in Toscana (+43.5%) and in Umbria (41.5%). This mean that holdings were in mountain areas.

The fourth indicator (UAA/M.H.) was greater for the northern and central Italy (1.835,3 and 1.816,2 respectively).

3. Economic size of the Multifunctional holdings

The analysis of the economic size of the multifunctional holdings determined in terms of SGM (see footnotes next page) shows (Table 3), at Italian level, a modest share than the whole agricultural sector (14,1%).

Table 3: *The economic size in ESU (European Size Units) of the multifunctional holdings for Regions . Year 2007 - EU*

REGION	SGM		Average SGM of M. H.		Indicators (%)		
	ESU	%	2007	Variation % 2007/2005	SGM/ UAA	SGM M.H./ SGM All farms	Average SGM M. H./Average SGM all farms
Piemonte	290.941,3	8,2	21,8	1,8	132,80	17,1	1,0
Valle d'Aosta	8.816,3	0,2	10,3	139,8	29,68	35,9	1,6
Lombardia	468.831,5	13,3	58,8	41,3	280,73	15,3	1,1
Trentino-Alto Adige	156.411,6	4,4	25,3	39,0	208,24	17,5	1,2
<i>Bolzano-Bozen</i>	<i>84.496,0</i>	<i>2,4</i>	<i>19,4</i>	<i>-8,6</i>	<i>137,62</i>	<i>17,1</i>	<i>0,8</i>
<i>Trento</i>	<i>71.915,5</i>	<i>2,0</i>	<i>39,5</i>	<i>243,4</i>	<i>524,44</i>	<i>18,0</i>	<i>2,1</i>
Veneto	351.557,3	10,0	40,1	35,4	271,21	15,6	2,6
Friuli-Venezia Giulia	95.755,8	2,7	29,1	47,0	183,30	23,1	1,7
Liguria	6.105,9	0,2	15,4	-22,5	204,94	2,5	1,3
Emilia-Romagna	508.399,0	14,4	79,6	67,6	266,44	17,4	2,2
Toscana	422.000,2	11,9	26,2	2,9	148,42	35,2	1,7
Umbria	65.465,5	1,9	13,5	32,7	110,02	17,4	1,4
Marche	151.194,3	4,3	34,3	51,9	140,74	24,7	2,8
Lazio	55.282,6	1,6	50,2	-9,9	193,04	4,2	3,9
Abruzzo	43.038,8	1,2	28,8	13,5	126,05	7,0	2,8
Molise	12.683,0	0,4	18,5	43,5	132,59	5,6	1,9
Campania	184.776,9	5,2	12,4	-13,4	299,93	10,7	1,1
Puglia	79.111,1	2,2	46,2	-14,4	136,31	3,4	4,9
Basilicata	58.720,8	1,7	23,5	-12,4	129,83	13,0	3,0
Calabria	175.921,2	5,0	18,6	-11,9	245,11	14,9	1,9
Sicilia	88.978,8	2,5	67,0	196,5	162,31	4,0	7,1
Sardegna	308.024,5	8,7	20,5	98,9	131,24	25,7	1,1
Italy	3.532.016,2	100	29,2	31,7	184,31	14,1	2,0
Northern Italy	1.886.818,6	53,4	40,0	34,5	217,74	16,4	1,6
Central Italy	693.942,5	19,6	26,3	17,2	144,60	19,8	2,0
Southern Italy*	951.255,1	26,9	20,2	33,7	166,92	9,5	1,9

Source: data processing ISTAT

*"+Sicily and Sardinia Islands

The increased concentration of the profitability of the multifunctional holdings was registered in regions of Northern Italy (53,4% compared with Italy): in Emilia-Romagna was 14.4%, in Lombardia 13.3%, in Toscana 11.9 and in Veneto 10.0%. The analysis of the average economic size of the multifunctional holdings expressed in terms of European Size Units (ESU) emphasize the best performance of multifunctional holdings than traditional farms of Central and Southern Italy, in particular in Sicilia (7.1) and Puglia (4,9). The average SGM² of multifunctional holdings in 2007 was 31.7% more than 2005.

Surely a sign encouraging in terms of answer to the changes and at the management capacity of farmers towards new form of diversification of productive activities in a difficult period in which the agricultural sector is confronted with the global market.

4. The young people in the Multifunctional holdings

The Italian farms have holders over 55 years, due to slow generational exchange in the management of the agricultural holdings, for a combination of political causes, social, cultural and economic. for politic, social and economic. The young people that want to enter in the management of the agricultural holding find different obstacles (eg. cost of purchase and rent of land, low levels of profitability and etc.) if they not have a farm of own family.

The ability to diversify of the farms, that in the time are transformed by productive sector to sector multifunctional, it promotes on one side the permanence of the farms on the territory and from the other a propensity, even if strongly contained, of the enter of the young people in the management of farm. All this sustained and encouraged by the European agricultural Politics. As we can see from the Table 4, if the all Italian farms in 2007 were the 60% (67.7%) with holder over 55, those multifunctional are maintained under 60% (59.5%).

The 9.5% of multifunctional holdings were < 40 years compared with 6.9% of all Italian farms. The indicator "Holder <40 years of the M.H./holders <40 years All farms" shows that the 9.9% of holder young³ is in the multifunctional holdings.

But, in the Central and Northern Italy the holders young manage 17.3% and 15.7% respectively of all farms managed from holder young. In the Marche this value was 31.8% and was over 25% in Valle D'Aosta (26.4%), Bolzano (25.6%) and Toscana (25.6%). This tendency of holders young to manage the multifunctional holdings is a positive answer to the crisis of the market of the agriculture and to contribution to the development of the rural areas.

² SGM*= the Standard Gross Margin is used to determine the economic size of farms, which is expressed in terms of ESU. The value of one ESU is defined as a fixed number of EUR/ECU of Farm Gross Margin. The value of 1 ESU is 1200 ECU (Commission Decision 85/377/EEC of 7 June 1985)

³ Young holder is for the EU a farmer with < 40 years and under this age can access at the European Agriculture and Rural Policies.

Table 4: *Distribution by age of holders of the multifunctional holdings. Year 2007 - EU*

REGION	Distribution by age of holders				Indicator
	< 40	40-54	55-64	>=65	holders <40 years of the M.H./ holders <40 years All farms
	%	%	%	%	
Piemonte	11,8	28,1	19,9	40,2	19,9
Valle d'Aosta	14,5	29,7	24,1	31,7	26,4
Lombardia	15,8	35,7	30,0	18,5	20,4
Trentino-Alto Adige	15,5	36,6	19,5	28,5	22,0
<i>Bolzano/Bozen</i>	<i>14,2</i>	<i>40,6</i>	<i>18,0</i>	<i>27,3</i>	25,6
<i>Trento</i>	<i>18,5</i>	<i>27,1</i>	<i>23,1</i>	<i>31,3</i>	17,5
Veneto	14,3	40,8	15,1	29,7	14,1
Friuli-Venezia Giulia	8,4	31,8	18,0	41,7	22,5
Liguria	16,9	64,4	11,1	7,6	4,0
Emilia-Romagna	4,5	37,6	28,9	29,1	4,5
Toscana	10,3	27,0	20,1	42,6	25,6
Umbria	9,6	26,7	17,7	46,0	15,9
Marche	16,6	21,9	25,6	35,8	31,8
Lazio	19,8	39,5	16,2	24,6	3,6
Abruzzo	6,5	51,4	11,7	30,5	1,9
Molise	9,9	28,6	24,2	37,2	3,2
Campania	3,8	30,8	25,9	39,5	5,9
Puglia	6,7	31,7	34,6	27,1	0,9
Basilicata	8,9	26,1	25,6	39,4	4,5
Calabria	3,4	36,4	14,5	45,8	6,1
Sicilia	2,2	26,1	37,3	34,4	0,2
Sardegna	8,3	22,4	26,8	42,5	18,0
Italy	9,5	30,9	22,4	37,2	9,9
Northern Italy	12,3	34,7	21,7	31,2	15,7
Central Italy	11,7	26,6	20,4	41,3	17,3
Southern Italy*	5,6	29,5	24,0	40,8	4,3

Source: data processing ISTAT

* +Sicily and Sardinia Islands

5. Specialization of the multifunctional holdings

In the Table 5 are introduced the results of the “Index of Specialization of the functional activities – (ISP)”, obtained by the index of Balassa-Hover, that allows to describe the characteristics of the specialization of the regional structure of multisectorial farms.

The coefficient compares the regional or territorial quota of the functional activity of the holdings with that national and it assumes minimum value equal to zero in the case of absence of specialization, whereas for above values to the unity, it is positively correlated to the regional or territorial specialization of the activity of reference.

At territorial level, the Northern Italy present a vocation to the activities of processing of farm products animals with a value equal to 1,3 promoted, to a large part, from the dynamism of the holdings of the Lombardia specialized in this sector.

In the central regions the marked vocation to the agritourism activity is confirmed by an index equal to 1.7.

In the Southern Italy the prevailing activity of the multifunctional holdings is in the processing of farm animal products (1.2) connected to the elevated specialization and

concentration of the present holdings in the territory of the Puglia (2,0), Sicilia and Abruzzo (1,8).

Table 5: *Index of Specialization of the functional activities – (ISP)**. Year 2007 – EU*

REGION	Agritourism	Processing of farm vegetable products	Processing of farm animal products	And other gainful activities
Piemonte	0,4	1,3	1,1	0,6
Valle d'Aosta	0,3	0,9	3,4	0,1
Lombardia	0,9	0,5	2,9	1,4
Trentino-Alto Adige	3,5	0,3	1,0	1,2
<i>Bolzano</i>	<i>4,5</i>	<i>0,2</i>	<i>1,1</i>	<i>0,8</i>
<i>Trento</i>	<i>1,0</i>	<i>0,8</i>	<i>0,7</i>	<i>2,2</i>
Veneto	0,9	1,0	0,5	1,3
Friuli-Venezia Giulia	0,9	1,1	0,8	1,7
Liguria	4,3	0,4	0,8	0,3
Emilia-Romagna	0,9	1,0	0,4	1,4
Toscana	1,7	1,2	0,5	0,5
Umbria	1,7	1,1	0,2	0,5
Marche	1,5	1,0	0,5	0,7
Lazio	2,9	0,7	1,0	0,9
Abruzzo	2,1	0,7	1,8	0,4
Molise	0,5	0,9	1,1	1,3
Campania	0,4	1,3	1,3	0,4
Puglia	0,8	0,8	2,0	0,6
Basilicata	0,7	1,0	1,1	2,4
Calabria	0,4	0,3	0,2	3,5
Sicilia	2,2	0,6	1,8	0,8
Sardegna	0,3	1,3	1,1	0,2
Italy	1,0	1,0	1,0	1,0
Northern Italy	1,1	0,9	1,3	1,1
Central Italy	1,7	1,1	0,5	0,6
Southern Italy*	0,5	1,0	1,2	1,1

Source: data processing ISTAT

* +Sicily and Sardinia Islands

$$** \text{ISP}_{pa} = \frac{X_{pa} / X_p}{X_{.a} / X_{..}}$$

p= region; a= functional activity; X_{.a}= all holdings in Italy that activity a; X_{..}= all multifunctional holdings in Italy.

6. Performance of the multifunctional holdings

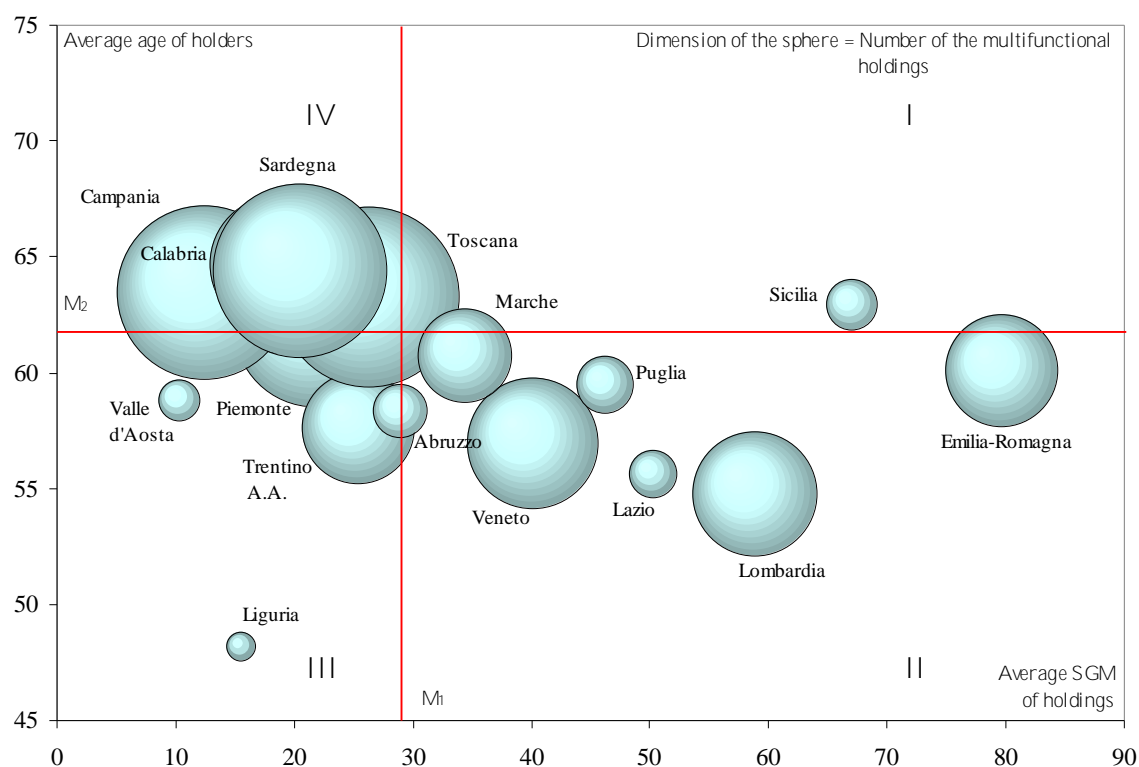
On the base of the data punctually analyzed of the phenomenon of the diversification of the holdings, has been put in comparison three principal indicators of the performances of multifunctional holdings: the average size economic in terms of Standard Gross Margin, the average age of holder and the number of the holdings to the purpose to locate the weight of the farm structure in the territory and of the generational exchange.

The quadrant “I” of the graph 2 include the regions with holdings that introduce levels of seniority of the holder and performance in terms of SGM above to the national average while the number of the holdings is visualized from the size area of the sphere. In this area of the graph there is the Sicilia with few holdings but very profitable that produce average SGM next to 70, with a discrete propensity to the activities of transformation or connected to the agriculture, but the average age of the holder is 63 year with low generational exchange.

The quadrant “II” is characterized by regions with the most efficient and more "young" compared to the national average with increased propulsive capacity of the phenomenon in constant evolution.

In this area the Emilia-Romagna and Lombardia have more multifunctional holdings (6-8 mila) and an average economic size between 60 and 80 ESU. The average age of holders of this regions is below the national average, with levels between 55 and 60 years.

Figure 2 – Performance of multifunctional holdings in terms of average SGM, average age of holders and number of multifunctional holdings – Year 2007



6. Conclusion

The exploratory analysis of this paper has proposed an interpretative key of the emergent strategies of the agricultural holdings underlining the complexity and the difference of their relationships of it in the territory. The empirical results gotten by the last data of the Italian Farm Structure Survey show some important specific aspects of a composite productive network. The choice of some indicative ones, according to

criteria of simplicity of calculation, availability and homogeneity of the data, allows to measure the phenomenon of the multifunctionality towards a comparative analysis of the different territorial realities.

The gotten results allows some general consideration that want to encourage future studies on the agricultural holdings and on their destiny.

Empirical analysis puts in evidence the abilities of the holdings of the Northern and Central Italy that seem more competitive. The Italian holdings try to give an answer to the slow generational exchange and the new strategies of market. In this context the European agricultural politics have an important role to promote the development of the multifunctional holdings. The multifunctionality is a big opportunity for the agricultural and rural development.

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