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# ECONOMIC PROFITABILITY AND LONG-TERM VIABILITY IN ITALIAN AGRICULTURE

JEL classification: Q18, Q12

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**Abstract.** *The EU direct payments system is about to change and Italian agriculture will face a scenario of decreasing aid. The present work is an attempt to estimate the types of farm at risk in such a scenario by analyzing Italian FADN data. We have estimated a profitability index relating real net income to a reference revenue that takes into account the opportunity cost of resources. This has allowed us to highlight situations where farms are unable to*

*remunerate fairly the factors employed and to identify areas of Italian agriculture at risk. By comparing profitability indices with and without public aid and by analyzing demographic factors and production characteristics, it is possible to investigate how EU payments affect the persistence of non-profitable farms.*

*Keywords: farms' profitability, CAP reform, FADN sample*

## 1. Introduction

In the last ten years the Common Agricultural Policy (CAP) has changed considerably. The single payment scheme, introduced by the 2003 Fischler reform for arable crops, beef, lamb, and the dairy sector, has been gradually extended to most agricultural products. Thus, with the exception of suckler cow, goat and sheep premia, the coupled support has been removed and the bases for more radical changes in CAP have been laid. Today, in fact, an agreement on a new CAP reform has been reached that should enter into effect from January 2014, except for new direct payments that will apply from 2015 onwards. This reform aims at a redistribution of aid between regions and Member States and proposes the “segmentation” of direct payments into several components, each of which meets one of the goals that the CAP has been adding over time: income support, environmental sustainability, maintaining the population in the less favored areas, increasing the number of young farmers. On the other side, a single CMO is foreseen that should simply maintain the function of market intervention: a safety-net mechanism with a set of exceptional/emergency measures that should help farmers to manage situations of market crisis.

The convergence of direct payments and their distinction into different components will inevitably lead to two consequences:

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1. the level of aid per farm will be lower than in the past, both because of redistribution, and because not all farms will be eligible for all components of the support;
2. historical references for direct payments will come to an end and that will bring about a redistribution of support between holdings and sectors.

To understand how the reform will affect Italian agriculture it is important to know the role that aid has played so far and to assess the economic viability of farms, namely whether the profitability of a farm “holds” in the absence of aid.

To achieve this objective we used 2010 Italian FADN data, which contain information on structural and production characteristics, as well as economic and financial data. Based on these data, we first estimated a profitability index that relates real net income to a reference income. The latter makes assumptions about the opportunity cost of all internal resources and has been calculated taking into account the value of production with or without European aid. Secondly, the comparison of indices with and without aid was carried out with reference to different areas, sectors, and farm types. This allowed us to point to situations where economic sustainability is at greater risk and to assess the impact in terms of number of holdings and of abandonment of land in a scenario of lower European aid.

## **2. A farm profitability index**

The literature and current practice dealing with farm performance and assessment of profitability have always underlined the difference between agriculture and other sectors. In fact, while for firms in the industrial and service sectors the net income/profit and return ratios, such as ROI and ROE, give useful information on the profitability of capital invested and allow comparison between performance of different firms, in agriculture the use of these indicators can be rather misleading. Farm profitability analysis should take into account at least two distinctive features that characterize the agricultural sector. First, the entrepreneur generally provides several factors to the farm, labor and land in addition to capital, and the estimated net income rewards them as a whole. Second, the objectives can vary across holdings and the return on capital may not be the only indicator that explains the farmer’s choices. Moreover, the term profit by itself is not used with the same meaning in business and in agricultural economics studies. While in business analysis the profit is assumed as capital remuneration, in agricultural economics the term profit is used as “compensation for the entrepreneurial factor”.

Taking account of that, and following similar analyses carried out on the Italian FADN data (Tosco, 2010, Scardera and Tosco, 2012), we estimated a farm profitability index, PI, given by the ratio of the real Net Income (NI) obtained from official data and a Reference Net Income (RNI), calculated as the sum of opportunity costs of the implicit factors the farmer contributes to production. Such an index expresses the overall profitability of the factors used in the agricultural activity and allows comparison between situations that are different in terms of the amount and features of factors the farmer and his family contribute. It can give information on the higher/lower ability of the farm to remunerate family resources and can help to understand whether the farm is economically sustainable.

It can, moreover, be useful in addressing several analytical objectives, depending on the way it is estimated. If income is calculated before depreciation and amortization, the PI allows assessment of the farm’s viability in a short-term perspective. By considering income with or without aid it is possible to highlight the role of public intervention in maintaining a specific farm

structure. The Reference Net Income can be estimated with reference to opportunity costs that differ among regions or farmers (e.g. full time vs part time, retired vs active farmers) in order to consider the real alternative possibilities for the factors and farmer's aims.

In this study three main indices have been estimated:

1. a standard Profitability Index (PI) where the opportunity costs used to calculate the Reference Net Income are the same for all farms in the FADN sample. In particular, for family work we used data published annually by the Ministry of Labor, that refer to average daily wages of agricultural workers; the average yield of government bonds was assumed as reference value for the working capital; for land and buildings, the opportunity cost was based on the average ratio between the rent and the land value resulting from FADN data;
2. a Profitability Index net of public aid (PI<sub>na</sub>), where the net income is calculated excluding the value of EU and State aids;
3. a "Sustainable Profitability Index" (PI<sub>su</sub>) where the Reference Net Income is estimated by considering only the labor. The PI<sub>su</sub> can help to assess whether the farm is able to remunerate labor, at least at opportunity cost. Moreover, the PI<sub>su</sub> was determined using opportunity costs that differ with respect to the economic size of the farm (higher the larger is the economic size), in order to take into account different farmers' expectations. In this case, the PI<sub>su</sub> assumes short-term perspective where the farmer can accept to keep on farming without any return for the capital invested provided that the labor can be fairly paid<sup>1</sup>.

### 3. Profitability in the Italian FADN sample

The Profitability Indices have been estimated using the 2010 Italian FADN accounting data. The analysis has been carried out on a sample consisting of 10,566 farms<sup>2</sup>, of which 45% are in Northern Italy, with Southern and Central Italy representing 37% and 18%, respectively.

Distribution of farms and land by PI classes is reported in table 1. While almost half the holdings and 29% of the Utilized Agricultural Area (UAA) have a profitability index lower than 0.66, 36.4% of farms, with 56.8% of the UAA, is able to guarantee factor remuneration equal

**Tab. 1 - Distribution of holdings and Utilized Agricultural Area (UAA) by class of Profitability index**

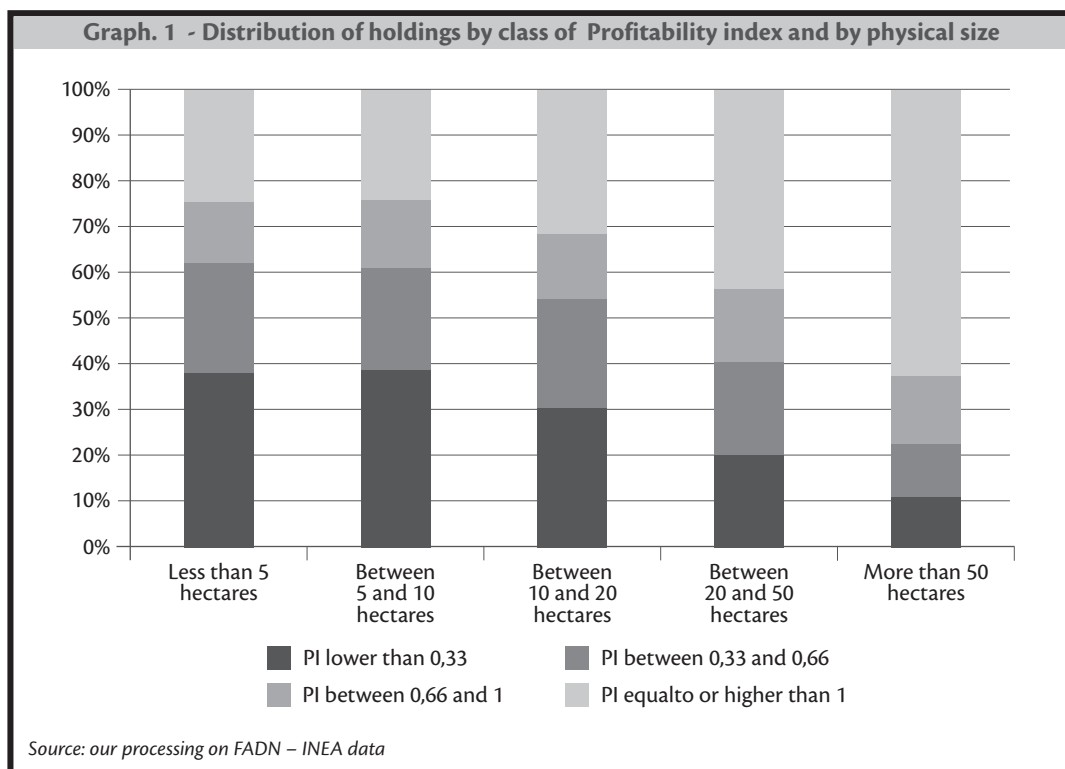
	Holdings		UAA	
	Number	%	Hectares	%
PI lower than 0,33	2959	28.0%	51212.41	14.5%
PI between 0.33 and 0.66	2213	20.9%	51718.23	14.7%
PI between 0.66 and 1	1554	14.7%	49492.73	14.0%
PI equal or higher than 1	3850	36.4%	200267.04	56.8%
Total	10576	100.0%	352690.41	100.0%

Source: our processing on FADN – INEA data

<sup>1</sup> When capital is the prevailing factor (capitalist farms) the PI<sub>su</sub> is estimated by the ratio between the Net Income and the opportunity cost of the capital. That occurs in less than 5% of the sample. In these cases the PI<sub>su</sub> still gives information on the short-term viability of the farm.

<sup>2</sup> This number is net of some cases with anomalous data.

or higher than opportunity cost. The comparison of data in terms of holdings and UAA clearly highlights how profitability is closely related to the physical size of farms. That is demonstrated in graph 1 where distribution of farms by PI has been distinguished by UAA size. While no difference exists between the two lower classes of size, the percentage of farms with PI equal to or higher than 1 accounts for 30% of the farms between 10-20 hectares and increases to 60% in the class with more than 50 hectares.



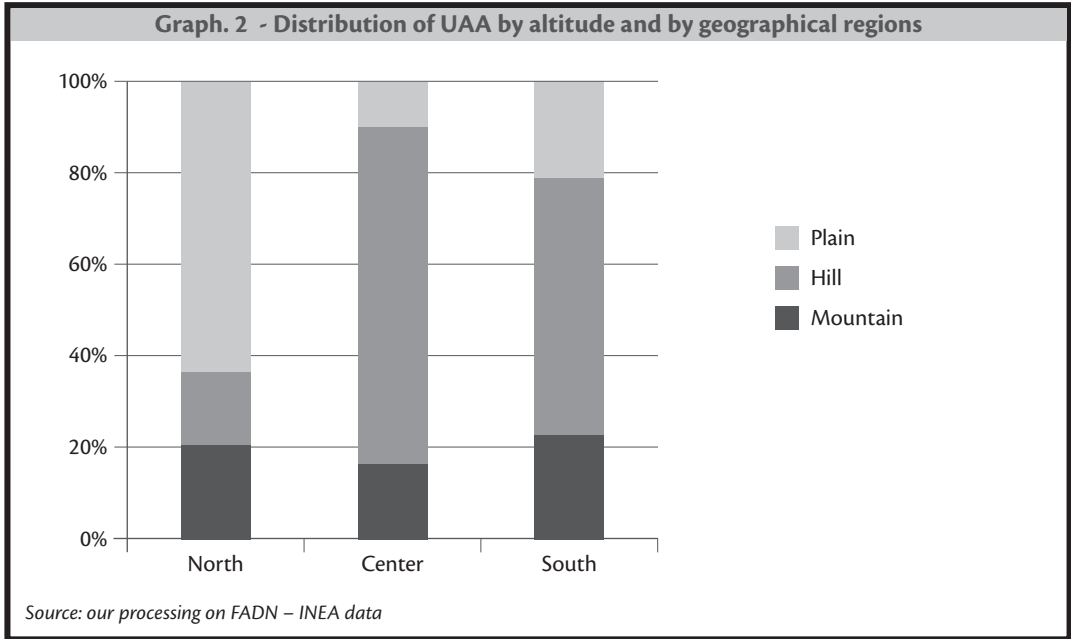
Data by geographical areas show levels of profitability that are not statistically different when Central and Southern Italy are compared (average PI value equal to 0.99 and 1.02, respectively), while in Northern Italy they are significantly higher (average PI value equal to 1.28)<sup>3</sup>. In fact, the number of farms and the UAA in the highest PI classes (PI higher than 0.66 and equal to or higher than 1) represent respectively 55% and 74% in the North, while moving to the Center and South of Italy these percentages decrease to 46%-48%, in terms of farm numbers, and to 68%, in terms of UAA.

Geographical differences can be linked to two factors that appear to act strongly on profitability: the quality of the land and the type of farming.

The mean value of PI is statistically different according to altitude and, in particular, is higher in the areas of plains (average PI equal to 1.31) than in mountains and hills (average

<sup>3</sup> A univariate analysis of variance and a multiple comparison T2 Tamhane's test were used to determine whether PI means are statistically different by geographical areas and which means differ from each other.

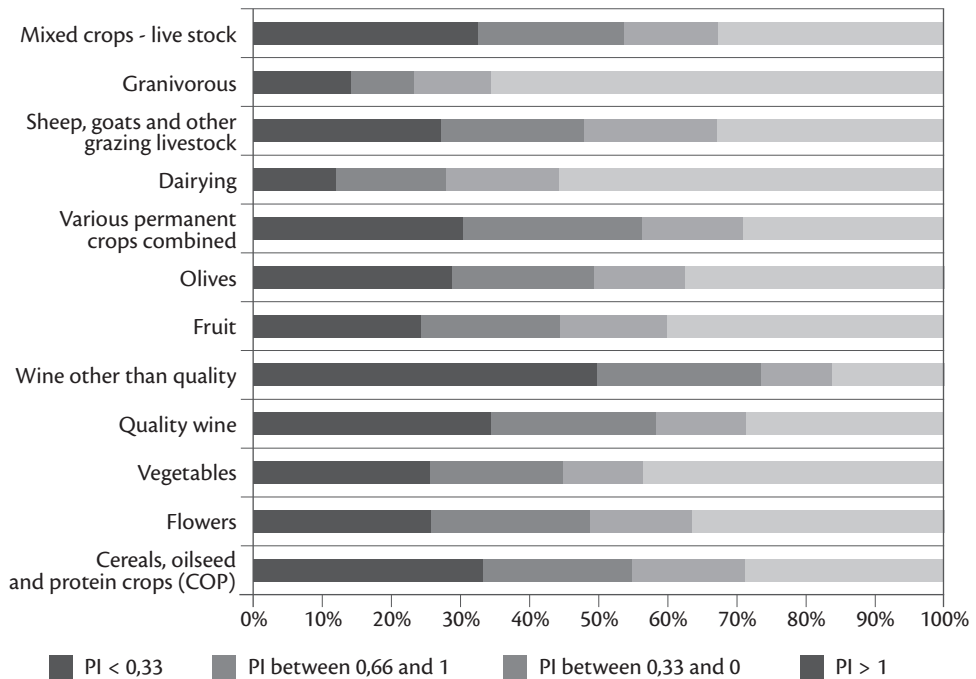
values equal to 1.06 and 1.03 respectively). The role played by land quality in geographical differences can be detected roughly by comparing the incidence of UAA localized at different altitudes in each geographical region (graph 2). In Northern Italy 63% of UAA of FADN sample is localized in the plains; these percentages are significantly lower in Central (10.7%) and Southern Italy (22%).



Type of farming is relevant, too (graph 3). The granivorous, dairy and vegetable sectors show values of PI above the average, while values for wine other than quality wines and for mixed farms stay below it. In particular, two-thirds of granivorous farms are in the highest PI class; the percentage is 55% in the dairy sector and 44% in horticulture. On the other hand, the Profitability Index remains under the value of 0.66 for 50% to 78% of wine and mixed farms.

The distribution of types of farming varies across geographical regions, thus affecting the territorial average PI. For instance, the dairy sector accounts for 15% in North Italy and only 4.7% and 7.4% in Central and Southern Italy, while wine other than quality wines or mixed farm types have a higher weight in the South of Italy than in other areas.

Graph. 3 - Distribution of PI by types of farming



Source: our processing on FADN – INEA data

The PI index can give an idea of the ability of the farm to guarantee sufficient revenue for rural households and that represents a starting point for assessing the long term viability. This can be compared with the “Sustainable Profitability Index” (PIsu) that assesses the profitability of the farm in a short-term perspective on the assumption that, given the low mobility of capital invested in agriculture, the probability that the agricultural activity continues in the short term is higher if at least the labour receives adequate remuneration.

Taking 0.66 as a limit to discriminate critical from viable situations, a small group (6% of the total sample) emerges where the PI<sub>su</sub> is higher than 0.66, while PI is lower. Almost 40% of these farms are located in plains and two-thirds are less than 10 hectares. Without a policy aimed at improving their efficiency, in the medium-long term these farms are likely to leave the sector and that risk is higher in areas of plains where the competition in land use is higher. More uncertain is the case of farms with values of both PI and PI<sub>su</sub> below the limit. These represent 42% of the total sample and are equally distributed in all size classes and altitudinal areas.

## 4. Public support and profitability

### 4.1. Public aid and territory

In 2010, the amount of public aid received by farms included in the FADN sample was € 160.8 million, an average of € 18,900 per farm (table 2). More than 77% of payments came from

the first pillar that still represents the largest part of EU support. In fact, in the same year the second pillar contributed only € 15 million (about 20% of the total support).

At territorial level, significant differences exist in the average amounts received per farm (graph 4). This difference is mainly related to the first pillar, as in Northern and Central Italy each farm received € 14 thousand of decoupled payments, while in the South the average amount per farm was €9.1 thousand. The non-decoupled aid within the first pillar shows a larger difference. In this case, the average aid per farm amounts to €3.7 and €2 thousand, respectively in Northern and Central Italy, and to €0.9 thousand in the South. Differences are less relevant in the case of agri-environmental payments and payments for areas facing natural or other specific constraints, while other aid within the second pillar is higher for southern farms than in other areas. Considering financial support as a whole, including State aid, northern farms receive €23 thousand on average, an amount that is 65% higher than the payment assessed in South Italy (€14 thousand).

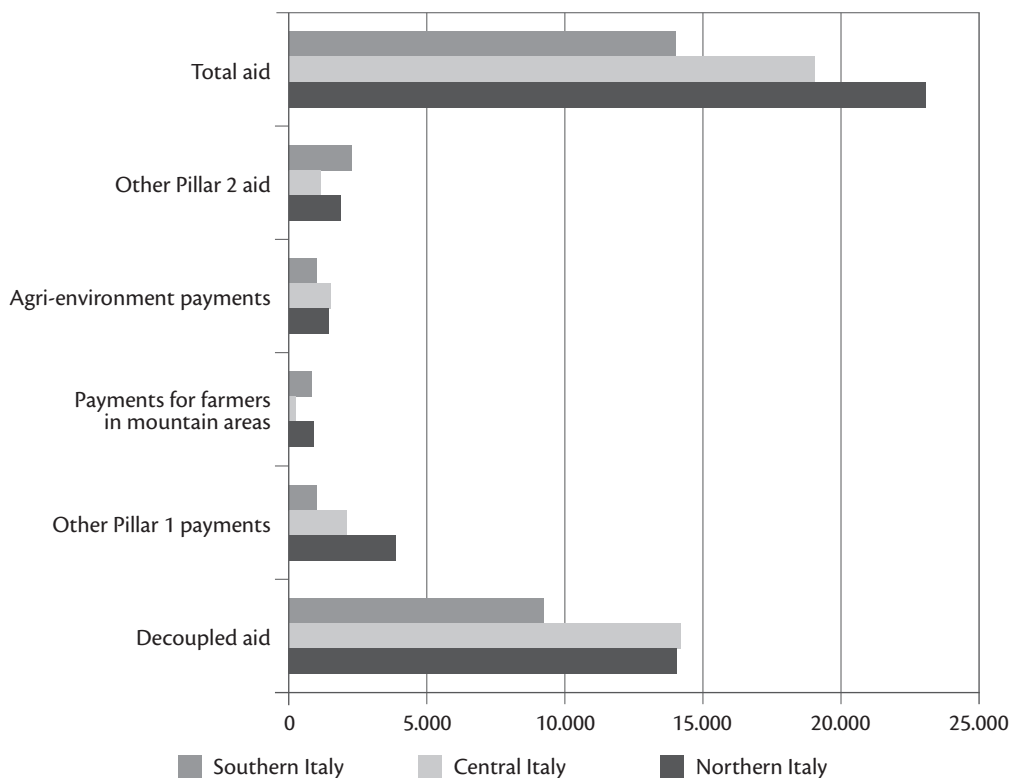
Thus farms in North Italy are able to “intercept” the policies to a greater extent than those in other areas. This is especially true with regard to the first pillar (53.8% of the total amount goes to Northern Italy), but is even more evident for state aid. With regard to the second pillar, data show that farms in Central Italy are less able to attract funds than others, but these figures should be read with some caution, as these types of payments are part of a multi-annual programming and thus annual amounts could be misleading. At the same time, however, it is true that funds for rural development plans are mainly allocated to two measures, agri-environmental measures and payments to farmers in mountain areas, which are granted annually and represent a fairly constant support over time.

**Tab. 2 - Number of Italian FADN farms and amount of payments by type of aid and geographical area**

	Number of Italian FADN farms	Number of farms that receive payments	First pillar aid (euro)	Second pillar aid (euro)	State aid (euro)	Total payments (euro)
North	4,768	3,766	€ 67,092,669	€ 14,945,325	€ 4,488,839	€ 86,526,833
Centre	1,929	1,607	€ 25,999,364	€ 4,530,611	€ -	€ 30,529,975
South	3,879	3,138	€ 31,729,568	€ 12,046,900	€ -	€ 43,776,468
Italy	10,576	8,511	€ 124,821,601	€ 31,522,836	€ 4,488,839	€ 160,833,276
Percentages						
North	45,1	44,2	53,8	47,4	100,0	53,8
Centre	18,2	18,9	20,8	14,4	0,0	19,0
South	36,7	36,9	25,4	38,2	0,0	27,2
Italy	100,0	100,0	100,0	100,0	100,0	100,0
Source: our processing on FADN – INEA data						



**Graph. 4 - Average aid per farm by geographical area and type of support (data in euro)**



Source: our processing on FADN – INEA data

#### **4.2. Public aid and types of farming**

Because of the high incidence of the first pillar on the whole of CAP support, the difference in the average amount of aid at territorial level can be directly linked to the different types of farming.

Table 3 shows how 60% of the first pillar aid is directed to three types of farming, that is field-crops (Cereals, oilseed and protein crops, COP; 33.6%), dairy production (13.6%) and farming with mixed crops-livestock (12.7% of the total). Data on the geographical distribution of these types of farming show a clear predominance of northern regions: the latter account for 47%-48% of fieldcrops and mixed crops-livestock farms and for 69% of the dairy farms, much more than the share of Northern Italy in the total number of holdings.

The public support plays a very important role in all situations, but it is strategic for the survival of some sectors. First pillar payments account for 61% of the net farm income on average, but in some farming systems the profitability is only guaranteed by the support to production: this is the case, as is well known, of the tobacco sector where aid exceeds 110% of the average net income, but it is also true of cattle-rearing farms, where the average incidence of aid at the farm level reaches 120%. Very high levels of protection characterize fieldcrops (the average ratio

aid/net income is 84.3), grazing livestock (73.9%), mixed crops - livestock farming (82.6%) and mixed permanent crops (73.8%).

For other sectors, the first pillar aid ranges between 40% and 60% of net income. These are farming systems specialized in wine, citrus fruit, mixed vegetable and permanent crops which, however, represent a small share in terms of total net income. Special cases are those of quality wine and dairy farms in which support, equal to 47% and 44.9% of net income respectively, is associated with a significant share in economic terms (9.7% and 23.1%).

Data on first pillar payments confirm the lower level of protection given to farms specialized in sectors such as horticulture and floriculture (ratio aid/net income between 1.5% and 8.2%), but also fruit and olives where the aid is around 20% of the net income.

The relationship between aid and net income is an indicator of the degree of dependence of farms on policies and, therefore, provides important information about the economic sustainability of different types of farming. In particular, the relevance of aid for a large sector, such as that of fieldcrops, makes the production of COP one of the weakest, that could fall into a very critical situation when the new CAP rules are implemented.

The degree of dependence on public support is an indicator of higher/lower economic viability. However, this indicator should be related to the overall farm profitability, which in turn depends on the type of farming, but also on structural characteristics and, in particular, on farm size.

As first pillar aid is historically linked to the quantity produced and, therefore, to land area, it is not surprising that the support is highly polarized according to size classes. Table 4 shows how farms below 10 ha of UAA, which correspond to 30% of the FADN sample, receive less than 5% of first-pillar aid, as opposed to 22.7% of holdings, those above 50 hectares, that receive two-thirds of total funds.

Average data on the ratio between first pillar payments and net income point out strong differences among size classes. In particular, farms between 10 and 20 hectares are the ones with the highest levels of support (88%); on the contrary, the weight of the aid is much lower the case of small farms (31.7%).

**Tab. 3 - Italian FADN sample: amount of First pillar aid , Net Income (NI) and Aid/Net Income ratio (average level per farm) by types of farming**

Type farming	First pillar aid (euro)	%	Net Income (euro)	%	Aid/Net income (%)
Cereals, oilseeds and protein crops - COP	41,984,624	33.6	€ 71,553,881	15.2	85.2
Tobacco	6,733,708	5.4	6,993,681	1.5	111.1
Vegetables under glass	139,737	0.1	1,438,216	0.3	16.2
Flowers	98,897	0.1	3,098,817	0.7	8.2
Flowers and vegetables	106,317	0.1	3,763,164	0.8	1.5
Specialist vegetables	6,510,405	5.2	20,089,683	4.3	63.6
Quality wine	3,747,678	3.0	45,445,779	9.7	47.0
Wine other than quality	1,013,530	0.8	5,056,910	1.1	37.0
Table grapes	84,685	0.1	1,485,585	0.3	42.6
Mixed vineyards	192,912	0.2	671,499	0.1	45.6
Citrus fruit	1,351,017	1.1	4,885,069	1.0	53.0
Fruit	1,677,430	1.3	14,804,457	3.1	23.1
Fruit & citrus fruit	404,766	0.3	3,084,596	0.7	16.5
Olives	4,987,338	4.0	10,569,567	2.2	18.2
Permanent crops combined	2,370,318	1.9	8,579,171	1.8	73.8
Dairying	16,956,883	13.6	108,427,752	23.1	44.9
Cattle rearing	2,048,596	1.6	8,417,755	1.8	120.6
Sheep and goats	6,795,867	5.4	23,027,535	4.9	73.9
Granivorous	4,454,085	3.6	62,994,524	13.4	23.6
Mixed crops	6,389,693	5.1	19,019,102	4.0	52.3
Mixed livestock	866,413	0.7	3,307,929	0.7	9.1
Mixed crops and livestock	15,906,702	12.7	43,609,803	9.3	82.6
Total	124,821,601	100.0	470,324,475	100.0	61.1

Source: our processing on FADN – INEA data

**Tab. 4 - Italian FADN sample – First pillar aid, Net Income (NI) and Aid/Net Income ratio (average level per farm) by size class**

Class of UAA	Holdings (number)	%	First pillar aid (euro)	%	Net Income (euro)	%	First pillar aid/NI (%)
Less than 5 ha	1,043	12.7	1,664,257	1.3	18,093,405	3.8	31.7
Between 5 and 10 ha	1,426	17.4	4,198,092	3.4	25,484,544	5.4	44.1
Between 10 and 20 ha	1,781	21.7	10,252,694	8.2	54,142,866	11.5	88.0
Between 20 and 50 ha	2,090	25.5	26,031,300	20.9	112,287,554	23.9	55.4
More than 50 ha	1,862	22.7	82,675,258	66.2	260,316,106	55.3	71.4
Total	8,202	100.0	124,821,601	100	470,324,475	100	61.1

Source: our processing on FADN – INEA data

### 4.3. Public aid and farm viability

The economic sustainability of Italian farms in a scenario of lower CAP payments can be assessed by means of the Profitability Index net of public aids (PI<sub>na</sub>). This index allows us to define the higher/lower degree of dependence of the farm on public support and can thus measure its ability to survive and develop in a context of agricultural policy change.

A first insight into this issue comes from the comparison between profitability indices with and without aid. Data on farms by classes of size and profitability (table 5) show that the weak area (farms with PI lower than 0.66) increases by 13% and by 25% in terms of farm number and UAA, respectively, when PI<sub>na</sub> is considered. Removal of aid mainly affects farms larger than 50 hectares: in this size class are included 41% of farms and 79% of UAA with PI higher than 0.66 that are no longer profitable in a scenario without public payments.

**Tab. 5 - Italian FADN sample – Number of farms and UAA by size class and by PI with and without aid**

Class of UAA	PI lower than 0.66	PI equal to or larger than 0.66	PI <sub>na</sub> lower than 0.66	PI <sub>na</sub> equal to or larger than 0.66	Total
Number of farms					
Less than 5 ha	1,558	934	1,615	877	2,492
Between 5 and 10 ha	1,179	743	1,313	609	1,922
Between 10 and 20 ha	1,094	923	1,313	704	2,017
Between 20 and 50 ha	906	1,320	1,310	916	2,226
More than 50 ha	435	1,484	1,009	910	1,919
Total	5,172	5,404	6,560	4,016	10,576
UAA					
Less than 5 ha	4,057.66	2,264.36	4,254.15	2,067.87	6,322.02
Between 5 and 10 ha	8,386.71	5,410.99	9,425.49	4,372.21	13,797.70
Between 10 and 20 ha	15,385.66	13,398.71	18,672.39	10,111.98	28,784.37
Between 20 and 50 ha	27,498.17	42,753.31	41,050.88	29,200.60	70,251.48
More than 50 ha	47,602.44	185,932.40	116,416.93	117,117.91	233,534.84
Total	102,931.00	249,760.00	189,820.00	162,871.00	352,690.00

Source: our processing on FADN – INEA data

The relationship between profitability and medium-long term viability, however, requires a deeper analysis, first, because several factors can play a role in influencing the farm's choice to stay in business or to exit and, secondly, because these factors can intervene in the short- rather than in the medium- or long-term and time matters in economic decisions.

Producing and staying in the market depends on the ability to remunerate farm resources at least at their opportunity cost. But economic issues are only one part of the story in Italian agriculture.

A first aspect to be considered concerns the farm-household system that characterizes most of Italian agriculture. This feature has two main consequences:

- business and family choices can overlap and income is not the only goal that guides farmers' behaviour. Other objectives can be equally valid: the possibility of employment for members of the family or the need to reconcile farm-working time with outside activities;

- the farm's life cycle is closely linked to the family life cycle. The aging process that characterizes part of Italian agriculture strongly influences continuance of agricultural activity, and that is especially true in some areas and where the farmer lacks a successor. But it also affects investment and farm development, as the age of the holder is relevant for long-term choices and for the time horizon to which they relate.

A second issue concerns the nature of land, which is a productive input but also a family asset. The decision on whether to use the land depends on the ability to remunerate this factor at its opportunity cost, but it is also related to the decision of maintaining the ownership of the land, on the one hand and to real possibilities of alienation, on the other.

Moreover, different production systems and organizational situations coexist and pluriactivity represents a structural element of Italian agriculture. Pluriactivity can integrate agricultural incomes when the farm size and the quality of the land are not able to guarantee satisfactory income levels and, therefore, represents a factor for equilibrium of the agricultural system, affecting farm survival.

Thus, to assess the risk of abandonment one must take into account the demographic characteristics of the farmer, the farm's level of employment and possible outside revenues.

Limiting the analysis to farms with PI lower than 0.66, the farmer is older than 65 years in 31% of cases. In these cases the intensity of production is low, more than 37% of farms are below 5 hectares, the value of capital investment is below the average and direct payments represent 59% of net income. All these factors might push the farm out of the sector in a medium-long term scenario of decreasing aid.

On the other hand, focusing on farmers less than 65 years old, in 28% of cases the holder is a woman and that frequency is statistically different with respect to farms where PI is higher than 0.66<sup>4</sup>. Women's farms are smaller (32% are less than 5 hectares whereas only 25% of farms fall into this size group when the holder is a man), are less capital- and labour-intensive, have a lower economic size. Many studies have underlined the feminization of Italian farming as a process of fairer gender opportunities. That is certainly true, but at the same time, when the economic performance of farming is lower than the average and the farm is not able to pay its resources adequately, there is room for thinking that the farm plays an accessory role in the family revenues. Thus, even situations of low farm profitability are likely to persist in the medium-long term and that could still be true when public payments are totally or partially removed.

When low profitability indices are associated with young farmers (males), high employment levels and high intensity of capital and labour, the situation is seemingly different and long-term perspectives could be very critical. This is the case of 2,461 farms (23% of the FADN sample) that become 3,295 (31% of the sample) when public support is removed. This corresponds to a third of the sample's UAA and represents the more risky area where stronger structural intervention is needed.

## **5. Concluding remarks**

The analysis of profitability indices in the Italian FADN sample has highlighted a large share of non-profitable farms. In fact 49% of the sample is not able to remunerate the resources employed at their opportunity cost and that percentage increases to 62% in a scenario of removal

<sup>4</sup> That was tested by means of the chi-square test.

of public support. Profitability is closely related to the physical size of farms, the quality of land and the type of farming: values of PI above the average are more likely to occur the larger the farm is, when it is located in plain areas and when it operates in the granivorous, dairy and vegetable sectors.

When the farm has low values of profitability indices, two questions arise. First, what makes these farms continue, even in the short term? Secondly, what will happen to them in the medium-long term?

The first question recalls the role farm and agricultural activities play for rural families' incomes. The segmentation of the sample by holders' age, by gender and by labor time showed that more than 30% of the low profitability farms is held by older farmers, and another 19% is conducted by women. In these cases the agricultural revenue could be considered additional for the family income, mainly based on pensions, on the one side, or external (husband's) incomes, on the other. When the holder is a man and the farm employs one unit of labor or more, the situation is more debateable, even more so with a very low Sustainable Profitability Index (PI<sub>su</sub>), that estimates the reference income by considering only the opportunity cost of labor, thus adopting a short-term perspective.

Public support can play an important role in stabilizing agricultural incomes and data of first pillar payments on net income has shown that on average more than 60% of the farm net income is related to this aid. Direct payments are particularly strategic for the survival of some sectors, the tobacco sector first of all, but also in cattle rearing farms, fieldcrops, grazing livestock mixed crops-livestock farming. Moreover, the incidence of aid on net income is higher in farms that are larger than 10 hectares, that is, in those farms that should represent a stronger component of Italian agriculture. Thus, a reduction of European payments could be a critical factor for the survival of a large share of agricultural production, even in those areas such as the plains where the quality of land is higher.

The EU reform is pointing to innovation as a key factor for rural development. That certainly responds to the need for higher productive efficiency and thus to a more adequate remuneration of farm resources. Careful planning of the intervention should take into account two relevant issues. First, innovation should be focused on those farms where profitability potential can exist and a way to assess this potential should be carefully studied. Second, rural development plans cannot be separated from land policy. The latter is entirely lacking in Italy but it becomes essential in a context of long-term low profitability of agricultural production, both for preserving agricultural use in areas where competition for land use is more intense and for preventing the risk of abandonment of land in inland areas.

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