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The income effects of direct payments on internal convergence models in Italy

In a troubled time, the Common agricultural policy (CAP) again decisively influences farms' strategic choices. Therefore, the need to enhance the net farm income (NFI) has remained one of its cornerstones. The so-called "national flexibility" offered the opportunity to improve consistency between national targets and political decisions to allow a greater effectiveness of public resources. These tasks were particularly intricate for the Italian Government, which had to face the consequences of the overall reduction of ceilings for direct payments. Considering that the choice of a specific internal convergence model affects the profitability of many farms, this represents one of the most relevant decisions Italy had to take.
The article aims at analysing and comparing how convergence models might differently impact on net farm incomes.

1. Introduction

Although the Common Agricultural Policy (CAP) had shifted from CMOs (Common market organizations) towards direct payments, in the last two decades, by leaving its previous productive approach for embracing a more competitive, environmental friendly, and market oriented attitude, the need to enhance the net farm income (NFI) has remained one of its cornerstones (Tranter *et al.*, 2007; Lowe *et al.*, 2010; Henke and Coronas, 2011). Even more so, in such a troubled period, the CAP cannot stop supporting the European farmers and their activities, since it again decisively influences farms' strategic choices, by indirectly orienting the management of natural input, production dynamics and the nature of buyer-supplier relationships (Bartolini and Viaggi, 2013; Kazukauskas *et al.*, 2013; Raggi *et al.*, 2013). In November 2010, the European Commission firmly stated that, in the future, the CAP would remain a fundamental common policy structured on two complementary pillars[1], func-

[1] Communication (COM) no 672 (final) from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions of 18 November 2010 "*The CAP towards 2020: meeting the food, natural resources and territorial challenges of the future*".

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tional and strategic targets in the changeable and challenging world of the 21st century (Huang *et al.*, 2010; Rizov *et al.*, 2013). At the same time, CAP Reform 2014-2020 has introduced new important elements into the architecture of direct payments[2] (Westhoek *et al.*, 2013). Indeed, starting from January 2015, the current SPS (Single Payment Scheme) has definitely been replaced by an innovative system of direct payments with eight components[3] (three mandatory and five optional). This new target-oriented approach aims at better linking every payment with a specific political objective (van Ittersum *et al.*, 2008; Grant, 2010).

Regulation (EU) No. 1307/2013 has recognised a strong mandate for each Member State (MS) for managing many aspects related to direct payments. The so-called "national flexibility" provides the opportunity to improve consistency between national targets and political decisions, so as to allow a greater effectiveness in the public resources spending (van Ittersum *et al.*, 2008; Grant, 2010; Erjavec *et al.*, 2011; Westhoek *et al.*, 2013). These tasks may be particularly intricate for the Italian Government, which will have to face the consequences of the overall reduction of ceilings for direct payments and of the process of internal convergence. Therefore, Italy shall reconcile the need to balance the level of payments per hectare between administrative regions, agricultural regions (mountain and hill *versus* plain) and agricultural sectors with increased requests for enhancement of the NFIs, in a sector where prices, incomes volatility and natural risks are remarkable and the profitability levels are, on average, below those in the rest of the economy (Severini, Tantari, 2013). Considering that the choice of a specific internal convergence model – that strives for reducing the gap between the value of payments per hectare – will affect the profitability of many farms, this has represented one of the most relevant decisions Italy had to take. The present article aims at analysing and comparing how the convergence models that the Reg. (EU) No. 1307/2013 establishes might differently impact on the NFIs.

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[2] Regulation (EU) No. 1307/2013 of the European Parliament and of the Council of 17 December 2013 establishing rules for direct payments to farmers under support schemes within the framework of the common agricultural policy and repealing Council Regulation (EC) No. 637/2008 and Council Regulation (EC) No. 73/2009.

[3] These components are the basic payment scheme (mandatory), the payment for agricultural practices beneficial for the climate and the environment (mandatory), the payment for young farmers (mandatory), the redistributive payment (optional), the coupled support (optional), the payment for areas with natural constraints (optional) and the small farmers scheme (optional). The eighth component is the crop-specific payment for cotton, which is available only for Spain, Portugal, Greece and Bulgaria.

2. Methods

A plausible and realistic assessment of the economic impacts ascribable to the new reform of direct payments requires a strict application of the technical mechanisms provided by the above-mentioned Regulation. It has introduced three alternative convergence models (art. 25):

1. a flat rate basic payment (FRBP) by 2015, without a convergence in steps;
2. a FRBP by 2019, with convergence in steps, during the 2015-2019 "transition period"[4];
3. a partial convergence, also called the "Irish model" (IrM), that increases the basic payment below 90% of the national average by 1/3 of the difference between their current payment and 90% of the national average by 2019 due to a proportional decrease in payments above the average. Moreover, this model introduces a "stop loss mechanism" that reduces losses (no more than 30% of their initial value in 2015) for high payment entitlements.

While the calculation of both FRBP models is not particularly complex, conversely, the mechanism of the IrM depends on two main parameters: the initial unit value of payment entitlements (IUV) and the national unit value (NUV). In 2019, this latter value has amounted to approximately 180 €/ha[5] in Italy, simply determined by the following formula:

$$(X / Y) * (P / R) \quad (1)$$

where X is the national ceiling for the basic payment scheme for the year 2015, Y is the national ceiling for 2015, P is the national ceiling for the basic payment scheme for calendar year 2019 and R is the number of allocated payment entitlements in 2015, excluding those allocated from the national reserve.

The value of payment entitlements for farmers in the 2015-2019 period will depend on the IUV[6], which can be set up as follows:

$$(x / y) * (A / B) \quad (2)$$

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[4] Because this model will produce the same effects as the previous one in 2020, henceforth, FRBP by 2015 and FRBP by 2019 are considered as a unique model of internal convergence.

[5] This value is obtained considering that the eligible utilized agricultural area amounts to 12 million hectares, the national ceiling amounts to 3.902 Mio € in 2015 and to 3.704 Mio € in 2019. Moreover, the basic payment is 58% of the national ceiling.

[6] Indeed, it represents a sort of reference value that allows for calculating payment. If the IUV is less than the NUV, then the direct payments shall increase progressively, while they shall decrease if the IUV is greater than the NUV.

where x is the national ceiling for the basic payment scheme for the year 2015, y is the amount of the payment for 2014 under the single payment scheme in the MS, A is the payment the farmer received in 2014 and B is the number of payment entitlements allocated in 2015, excluding those allocated from the national reserve.

In addition, it should be considered the payment for agricultural practices, beneficial for the climate and the environment, that receives a fix percentage (30%) of the annual ceiling. To obtain the greening payment the farmers will have to undertake three standard measures and it is always a flat rate payment in 1) and 2), but MSs may calculate it as a flat rate payment[7] (IrM-FRG) or as a percentage of each individual farmer's payment (IrM-InG) if 3) is chosen[8]. Moreover, it should also be considered the coupled support (art. 52). It depends on production (hectares, yields, number of heads) and is adopted to maintain certains levels of production in some sectors or regions, where specific types of farming or specific agricultural sectors undergo difficulties and are particularly important in terms of economic, and/or social, and/or environmental reasons.

On such a legal and technical basis, a simulation model was implemented in Excel to determine the effects of the internal convergence models. The units of analysis are represented by some representative agricultural holdings, analyzed by main type of farming (TF[9]) (Cafiero *et al.*, 2005). Some of these represent sectors that have usually received payment entitlements higher than the regional (and national) average payment per hectare (e.g., dairy cattle livestock and rice in Northern Italy, sugar beets in Central Italy and olive oil in Southern Italy), while some others are sectors with no payment entitlements or entitlements lower than the regional (and national) average payment per hectare (e.g., the wine, fruit and sheep sectors) (Severini and Tantari, 2013).

To identify the main features of the representative farms, the 6th Agricultural Census figures and the FADN (Farm Accountancy Data Network) databases (years 2010-2012) were employed (Sckokai and Moro, 2009; European Commission, 2012; Moro, Sckokai, 2013; Rizov *et al.*, 2013; Severini, Tantari, 2013). First, for each TF, the representative region (stratified by altitude zone) was identified as the one with the highest percentage of Standard Output. Second, analysing the FADN samples of the representative regions, the average UAA of representative farms was calculated, as were all the average values

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[7] In this case greening payment amounts to 98 €/ha in 2015 and to 93 €/ha in 2020.

[8] Both options, Irish model with flat rate greening (IrM-FRG) and Irish model with "individual greening" (IrM-InG) are simulated. Obviously, in the latter case, farmers that hold high value entitlements shall receive a higher greening payment.

[9] A classification of farms based on determining the percentage of the production standards of the various productive activities of the company with respect to its total standard output.

(during the 2010-2012 period) of the main variables of interest (AWU, i.e. annual work unit, SPS payments, coupled payments of Art. 68 and NFI). Third, descriptive statistics of each variable were determined with SPSS, and the average characteristics of the representative farm were identified. At last, these data were inserted into a simulator that considers all the Italian Government decisions on direct payments[10]. The final output shows how direct payments vary during 2015-2020, thus providing the possibility to analyse how the *ceteris paribus* internal convergence models differently affect 1) NFI, 2) NFI/UAA and 3) NFI/AWU.

3. Results

The analysis of the 6th Agricultural Census database figures allowed the identification of eight administrative regions where representative farms' features should be investigated (Tab. 1). These are five Northern Italy regions (Piedmont, Lombardy, Trentino Alto Adige, Veneto and Emilia-Romagna), and three Southern Italy regions (Calabria, Sardinia and Sicily[11]). As for altimetric areas, plain was selected six times, while hill and mountain were, respectively, selected twice and once. Afterwards, based on the FADN database, selected variables (UAA, SPS payments, NFI, AWU and – where necessary – the coupled support of art. 68) of each representative region were calculated. All these data represent the average features of the representative farms to be inserted, as input, into the simulator. Special attention must be paid to the various weights of direct payment with respect to the NFI in the observed TF. There are TFs with a high ratio of direct payments/NFI – above all, TF 162 (115,7%), TF 460 (71,5%) and TF 152 (61,4%) – that are definitely more responsive to a decrease in direct aid and TFs that, conversely, show a low ratio of direct payments/NFI – above all, ET 351 (4,3%), ET 361 (9,4%) and ET 352 (12,3%) – and are consequently less subjected to any change in the level of the CAP direct support (Tab. 1). In detail, TFs with a high incidence of direct payment on NFI are usually those that received SPS payments greater than the national average

[10] The basic payments are 58% of the national ceiling, young farmers payment takes approximately 1%, and greening receives a fixed percentage (30%). Concerning optional payments, coupled support is 11% (of which 50% is for animal husbandry, 26% for arable crops, 8% for protein crops and 16% for olive), while the redistributive and the payment for areas with natural constraints are not considered. The small farmers, scheme is also not considered because, to finance it, MSs shall deduct the amounts to which the small farmers would be entitled from the other direct payment funds anyway.

[11] These latter, Lombardy and Emilia Romagna, were selected for more than one TF, as shown in table 1.

Table 1. Type of farming, representative regions and main features of representative farms.

Type of farming	Representative region	Average UAA [ha]	Average SPS payments [€/ha]	Total SPS payments [€]	Coupled payment (art. 68) [€/ha]	Average NFI [€/ha]	Total NFI [€]	Average AWU [n.]	(Direct payments)/ NFI (%)
152 - Specialist rice farms	Piedmont (plain)	71,1	584	41.534	:	952	67.665	2,1	61,4
162 - Specialist cereals, oilseeds and protein crops and root crop farms	Emilia-Romagna (plain)	30,2	731	22.081	3.946	745	22.491	1,7	115,7
351 - Specialist quality wine farms	Piedmont (hill)	6,1	183	1.115	:	4.256	25.961	1,9	4,3
352 - Specialist wine other than quality wine farms	Sicily (hill)	5,3	109	580	:	888	4.708	1,5	12,3
361 - Specialist fruit (other than citrus, tropical fruits and nuts) farms	Emilia-Romagna (plain)	8,5	258	2.196	:	2.746	23.343	2,2	9,4
362 - Specialist citrus fruit farms	Sicily (hill)	3,1	491	1.522	:	2.369	7.345	1,6	20,7
370 - Specialist olive farms	Calabria (hill)	2,2	1.021	2.247	:	2.963	6.518	1,8	34,5
450 - Specialist dairy farms	Lombardy (plain)	46,1	716	32.994	4.600	5.155	237.639	3,0	15,8
450 - Specialist dairy farms (only mountain)	Trentino Alto Adige (mountain)	13,6	230	3.126	1.611	1.424	19.372	2,2	24,5
460 - Specialist cattle (rearing and fattening) farms	Veneto (plain)	15,9	735	11.687	39.152	4.470	71.067	3,5	71,5
460 - Specialist cattle (rearing and fattening) farms (only mountain)	Sicily (mountain)	43,0	145	6.246	:	414	17.787	1,4	35,1
481 - Specialist sheep farms	Sardinia (plain)	42,5	206	8.770	:	849	36.087	1,9	24,3

payment per hectare (almost 300 €/ha) and, in many cases, those that benefit from coupled support; conversely, TFs with a low incidence of direct payment on NFI (<20%) received SPS payments lower than the national average payment per hectare without even receiving any coupled support.

The results show how differently NFIs and related indicators vary depending on the internal convergence models implemented. Since the simulation aims at comparing the NFI variation during 2010-12[12]/2020, and the two FRBP models will produce the same effects on direct payments by 2020, these latter were jointly analysed (table 2). The simulated production detects a wide difference between sectors, both taking into consideration the effects of each single convergence model and comparing the differences between the models.

The first approach underlines how representative farms of sectors, which historically hold high value entitlements, will face *ceteris paribus* drop in NFI, particularly where direct payments are a relevant component of NFI. This effect is particularly evident in TF 162 (-28,4% due to IrM-InG, -36,6 due to IrM-FRG and -51,8% to FRBP), TF 370 (-15,7% due to IrM-InG, -23,2 due to IrM-FRG and -37,3% to FRBP) and TF 152 (-9% due to IrM-InG, -10,9 IrM-FRG and -14,2% to FRBP) and less pronounced in TF 362 (-7,2% due to IrM-InG, IrM-FRG and FRBP) and TF 450 (-3,5% due to IrM-InG, -4,6% due to IrM-FRG and -3,7% to FRBP). However, the representative farms of the sectors which usually hold low value entitlements will experience a *ceteris paribus* increase of the NFI, with the lower the value, the larger the growth. This is the case of TF 352 (+7,3% due to IrM-InG, +11,4% due to IrM-FRG and +19,5% to FRBP), while less evident effects are exhibited for TF 450 (+2,3% due to IrM-InG, +3,6% due to IrM-FRG and +6,3% to FRBP), TF 481 (+0,5% due to IrM-InG, +3,7% due to IrM-FRG and +10,1% to FRBP) and TF 351 (+0,3% due to IrM-InG, +1% due to IrM-FRG and +2,5% to FRBP). Apparently counterintuitive is the result of TF 460 where, although the SPS payment is higher than the national average payment per hectare in Italy, the simulation carried out shows that the NFI of the representative farm is expected to increase by 2020 (+5,7% due to IrM-InG, +4,3% due to IrM-FRG and +1,7% to FRBP). This outcome is because all the convergence models of direct payments will affect only the decoupled component of payment received (735 €/ha) and not the coupled part that represents instead a large part of the direct support received from TF 460 (2.462 €/ha). In this case, the NFI is expected to increase by 2020 just because the negative effects due to the convergence models will be sufficiently contrasted by a further increase of the coupled support for cattle beef during 2015-2020[13].

[12] FADN observation period.

[13] The coupled payment per head increases from 42m1€ (average 2010-2012) to 46 € with the new coupled payment system.

Table 2. NFI variation: a comparison between alternative internal convergence models.

Type of farming	Internal convergence model	NFI [€]			NFI/UAA [€/ha]			NFI/UWA [€/UWA]			Variation 2010/12-2020
		2010/12	2020	Δ	2010/12	2020	Δ	2010/12	2020	Δ	Δ %
TF 152	IrM-InG	67.665	61.590	-6.075	952	866	-85	32.243	29.348	-2.895	-9,0
	IrM-FRG		60.302	-7.363		848	-104		28.734	-3.509	-10,9
	FRBP(*)		58.047	-9.618		816	-135		27.660	-4.583	-14,2
TF 162	IrM-InG	22.491	16.093	-6.397	745	533	-212	12.902	9.232	-3.670	-28,4
	IrM-FRG		14.253	-8.238		472	-273		8.176	-4.726	-36,6
	FRBP(*)		10.830	-11.661		359	-386		6.213	-6.689	-51,8
TF 351	IrM-InG	25.961	26.039	78	4.256	4.269	13	13.933	13.974	42	0,3
	IrM-FRG		26.231	270		4.300	44		14.077	145	1,0
	FRBP(*)		26.614	653		4.363	107		14.283	350	2,5
TF 352	IrM-InG	4.708	5.052	344	888	953	65	3.147	3.377	230	7,3
	IrM-FRG		5.244	536		989	101		3.505	358	11,4
	FRBP(*)		5.626	918		1.062	173		3.761	614	19,5
TF 361	IrM-InG	23.343	23.208	-135	2.746	2.730	-16	10.537	10.476	-61	-0,6
	IrM-FRG		23.360	17		2.748	2		10.544	8	0,1
	FRBP(*)		23.672	330		2.785	39		10.685	149	1,4
TF 362	IrM-InG	7.345	6.813	-532	2.369	2.198	-171	4.723	4.381	-342	-7,2
	IrM-FRG		6.813	-532		2.198	-171		4.381	-342	-7,2
	FRBP(*)		6.813	-532		2.198	-171		4.381	-342	-7,2

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Type of farming	Internal convergence model	NFI [€]			NFI/UAA [€/ha]			NFI/UWA [€/UWA]			Variation 2010/12-2020
		2010/12	2020	Δ	2010/12	2020	Δ	2010/12	2020	Δ	Δ %
TF 370	IrM-InG	2.963	2.498	-465	1.347	1.136	-211	1.677	1.414	-263	-15,7
	IrM-FRG		2.276	-687		1.035	-312		1.288	-389	-23,2
	FRBP(*)		1.859	-1.104		845	-502		1.052	-625	-37,3
TF 450	IrM-InG	237.639	229.445	-8.194	5.155	4.977	-178	80.405	77.632	-2.772	-3,5
	IrM-FRG		226.785	-10.854		4.919	-235		76.732	-3.673	-4,6
	FRBP(*)		221.846	-15.793		4.812	-343		75.061	-5.344	-6,7
TF 450 (only mountain)	IrM-InG	19.372	19.827	454	1.424	1.458	33	8.674	8.878	203	2,3
	IrM-FRG		20.078	706		1.476	52		8.990	316	3,6
	FRBP(*)		20.596	1.224		1.514	90		9.222	548	6,3
TF 460	IrM-InG	71.067	75.092	4.025	4.470	4.723	253	20.031	21.166	1.134	5,7
	IrM-FRG		74.110	3.043		4.661	191		20.889	858	4,3
	FRBP(*)		72.284	1.216		4.546	76		20.374	343	1,7
TF 460 (only mountain)	IrM-InG	17.787	19.185	1.398	414	446	33	13.149	14.182	1.034	7,9
	IrM-FRG		17.787	2.960		483	69		15.337	2.188	16,6
	FRBP(*)		23.845	6.058		555	141		17.627	4.479	34,1
TF 481	IrM-InG	36.087	36.249	163	849	853	4	19.076	19.162	86	0,5
	IrM-FRG		37.406	1.319		880	31		19.774	698	3,7
	FRBP(*)		39.731	3.644		935	86		21.003	1.926	10,1

* Flat rate basic payment by 2015 or 2019.

The comparison between the simulated models of convergence also allows a distinction between the two different typologies of farms: the ones that would benefit from the IrM models limiting the losses caused by FRBP models and the ones that, conversely, due to IrM models, would loose a relevant part of the advantage deriving from FRBP models (Tab. 2). The first group is composed by all the TFs with high value entitlements during the period 2010-12 and, in most cases, a high incidence of direct payments with respect to NFI (i.e., TF 162 and TF 152); indeed, due to the stop-loss mechanism, the IrM models (especially the IrM-InG, since the greening payment is calculated as a percentage of farmers' basic payment) offer a sort of protection to those categories of CAP beneficiaries (above all, specialist cereals, oilseeds, protein crops, root crops and specialist olive farms).

However, to the second group belong all the TFs that benefit from IrM models but that could nonetheless benefit of FRBP models; this is the direct consequence of the above mentioned stop-loss mechanism, that for limiting losses of the biggest CAP beneficiaries hinders the increase of the smallest ones. Most of these TFs show, furthermore, a low incidence of direct payment on NFI (above all, TF 351, TF 361 and TF 352). Such a negative impact is particularly evident for TF 460m (+7,9% due to IrM-InG and +16,6% to IrM-FRG, instead of +34,1% due to FRBP), TF 352 (+7,3% due to IrM-InG and +11,4% to IrM-FRG, instead of +19,5% to FRBP) and TF 481 (+0,5% due to IrM-InG, +3,7% to IrM-FRG and +10,1% to FRBP) because, in the past, these sectors have not usually benefited from high value entitlements. In addition, there are two cases that are beyond the above highlighted connections. The first is TF 362 (citrus), whose NFI does not vary depending on the internal convergence model adopted (-7,2% both with IrM models and FRBP); the other is TF 361 (fruit, with some arable crops[14]) that goes from a negative NFI variation (-0,6 due to IrM-InG) to positive ones (+0,1% and +1,4%) due respectively to the IrM-FRB model and to the two FRBP models.

In summary, the methodology allowed analysis of whether the representative farms of each TF do benefit from the internal convergence models and which is the most convenient model for each of them. There's a clear relationship between the way the IrM models affect NFI variation and the differences between the effects on the NFIs of the different models. Figure 1 shows how the TFs with high value entitlements benefit from the IrM-FRG models. Indeed, this model reduces the impacts on NFI of the internal convergence

[14] Arable crops such as wheat, maize and soybean augment the amount of direct payments that the representative farm of TF 361 received in the past. Such a detail explains the level of title entitlements observed (258 €/ha), higher than that of fruit farms without arable crops.

process, but in the meanwhile still guarantees a greening payment consistent with its purposes – namely without linking this payment to the value of entitlements held by farmer – and capable to really remunerate public goods also produced by the TFs with low level entitlements.

In addition Figure 2, that compares the NFI effects of the IrM-FRG with the IrM-InG ones, clearly shows how this latter further disadvantages low level

Figure 1. The impact of the IrM-FRG on NFI (main Italian TFs).

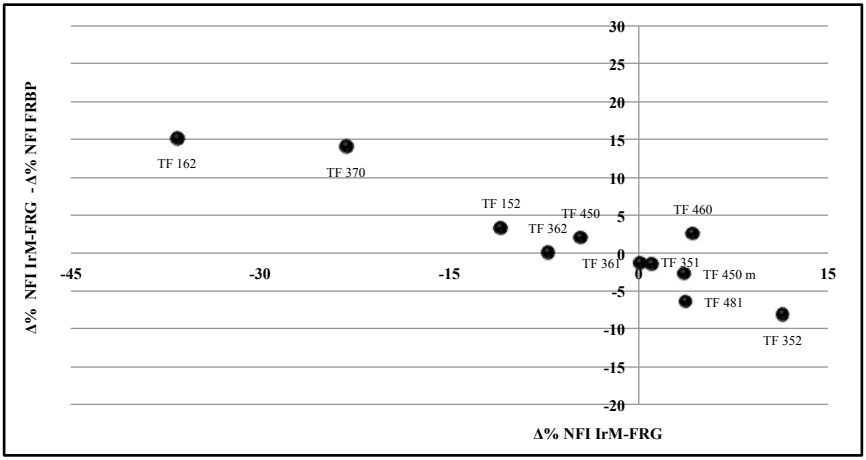
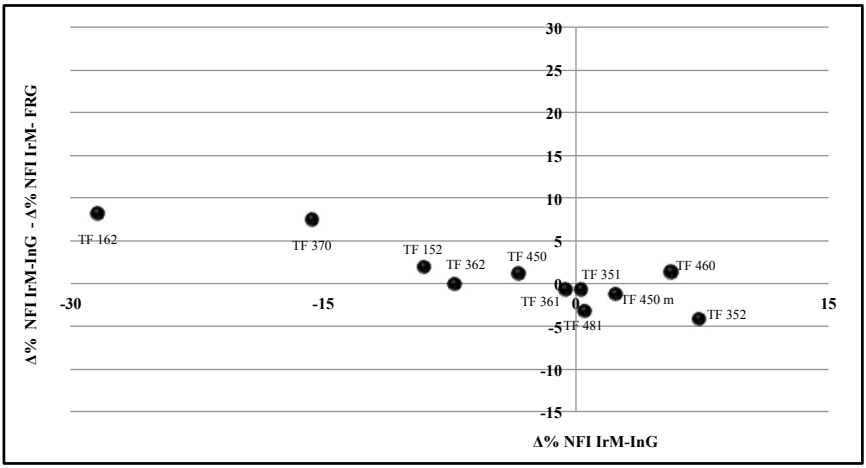


Figure 2. The impact of the IrM-FRG and IrM-InG on NFI (main Italian TFs).



entitlements, since besides limiting the internal convergence mechanism (due to the "stop loss mechanism") it considers the greening as a percentage (30%) of the value entitlements, so as to support high value entitlements again. In this case, it should be noted that applying greening proportionally to the basic payment scheme makes this payment completely discriminatory, because the same efforts to provide a public good, made for instance by farms specialising in olive oil (TF 370) and wine farms (TF 352), are differently remunerated.

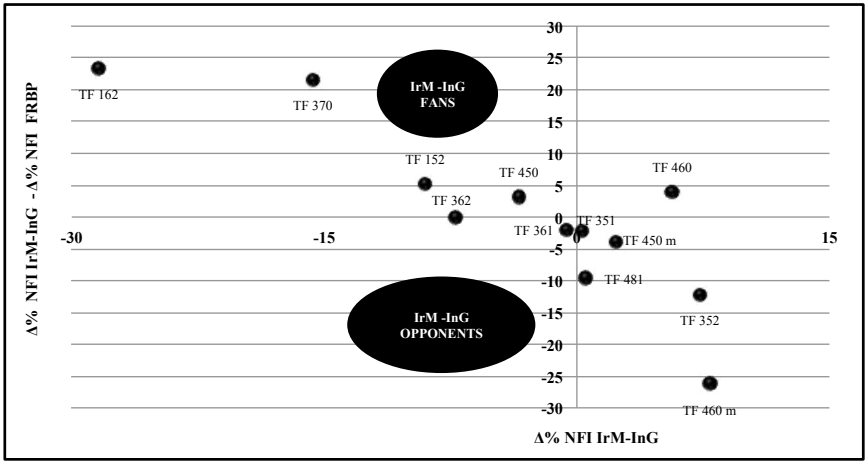
In conclusion, even though TFs with high value entitlements will be subjected anyway to a decrease of the NFI due to the internal convergence process, the decision of introducing contemporarily both the "stop loss mechanism" (Irish model) and the "individual greening" (that is a greening as an offshoot of the basic payment scheme), has led to a double penalization for the TFs with low value entitlements.

In order to assess the effects on NFIs of the IrM-InG, Fig. 3 highlights two main groups of TFs, called "IrM-InG fans" and "IrM-InG opponents". The first group (over the x-axis) includes all the representative farms that, due to the IrM-InG, increase their NFI (subgroup F1) or experience a decline in NFI less significant than the IrM-FRG and the FRBP models (subgroup F2). In this group there are many "CAP dependent" TFs that show a high incidence of direct payments (coupled support included) with respect to NFI. In the second group (under the x-axis) there are, conversely, TFs that are "CAP independent" (low incidence of direct payments with respect to NFI and low or no coupled support) and that, due to the IrM-InG, enhance NFI, but less than they could do with the IrM-FRG and the FRBP models (subgroup O1), or the farms that, due to the IrM-InG, face a drop in NFI instead of the increase produced through the other models (subgroup O2). All these subgroups may contribute to explain the purposes of the IrM-InG – that was introduced during the Interinstitutional debate on CAP (the so-called CAP Trilogue) and accepted by Italian policymakers as well – to weaken the drastic effects of FRBP models on "CAP dependent" farms with high value entitlements, by reducing economic resource transfer towards the TFs, historically with low value entitlements.

In conclusion, Figure 3 shows that the IrM-InG fans are mainly TFs with high levels of SPS payments, where these latter represent also a relevant component of NFIs (above all, TF 152 and TF 162). These TFs reduce their losses – or even increase their NFIs (i.e., TF 460) – benefitting, in many cases (i.e., cattle beef, rice, olive oil, durum wheat, sugar beet and dairy milk), from the new Italian coupled payments system[15]. However, the IrM-InG opponents are

[15] Established in July 2014 by the document "The new CAP: national choice on Reg. (EU) no. 1307/2013" (available in Italian).

Figure 3. The impact of the IrM-InG on NFI (main Italian TFs).



represented by all sectors that did not benefit from the 2003 Fischler Reform (above all, mountain animal husbandry) and that – although improving their NFIs – miss a great chance to decisively enhance the incidence of direct payments on their NFIs, in order to be rightly remunerated for the provision of public goods, and definitely improve their economic results.

4. Conclusions

CAP 2014-2020 has introduced a relevant change in the architecture for direct payments, both imposing an internal convergence process and establishing a strong mandate for each MS, to improve the effectiveness of the 1st Pillar of the CAP. Simulations undertaken by employing the FADN database demonstrated that all the internal convergence models worsen the profitability of some specific "CAP-dependent" TFs (above all, root crops, olive oil, rice and dairy milk) in some Italian regions with high level entitlements (above all, Calabria and Lombardy), while internal convergence simultaneously contributes positively to the NFIs of some traditional "CAP-independent" production (wine) and eco-friendly activities (mountain animal husbandry). Nevertheless, the present paper verified that losses or gains for each TF will consistently vary depending on the adopted convergence model and that the IrM models, more than the FRBP models, protect the NFIs of the biggest CAP beneficiaries (where NFI is deeply affected by SPS and coupled support) and, at the same

time, they limit the NFI increases of the smallest ones (where, conversely, direct payments represent a small component of the NFI).

Among the IrM models, the IrM-InG seems to be less justifiable and consistent with the CAP's objective to foster the provision of public goods than the IrM-FRG. Indeed, this latter model considers the greening payment as a flat rate payment, that is each hectare receives the same direct aid, while the IrM-InG gives a greening payment that depends on the value of the entitlements. Therefore, while the IrM-FRG offers a uniform support for public goods, the IrM-InG supports largely TFs with high value entitlements, often highly represented by intensive productions (i.e. rice, cereals, cattle livestock, dairy milk) traditionally located in the plains, to the detriment of production equally (or even mainly) capable to deliver environmental benefit (i.e. vineyard, sheep, livestock in the mountains).

In conclusion, while on the one hand, the IrM models maintain a sort of enduring relationship with the old SPS, which is too far from the future challenges of the CAP, on the other hand, the analyses conducted in the present work clearly show that the partial convergence – together with some specific measures of the new coupled payment system adopted in Italy – is the only solution for reducing the negative effects that FRBP models could have on the NFIs of many strategic agricultural sectors in Italy (here called "CAP-dependent" sectors), where direct payments have indeed traditionally played a strong role of income support. Nonetheless, the choice for a flat greening rate, instead of an "individual greening", would appear more logical and effective for the above-mentioned reasons.

All these facts considered, the political decision to apply the IrM-InG and to provide most of the new coupled payments to these "CAP-dependent" sectors, to address the reduction in the CAP budget and the main consequences of a redistribution of scarce financial resources between farmers in the 2015-2020 period, is a clear signal that Italian policymakers preferred to enhance farm incomes in a time of turbulence rather than to foster the provision of public goods.

This option might turn out to be reasonable and justifiable, provided that instruments will be used as a type of (temporary) accompanying measure towards 2020, when the application of a flat rate model of income support should be inevitable for each MS, Italy included.

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