

THE VALUE OF LAND ACCORDING TO DATA FROM THE ITALIAN FADN

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- **Objective**: to verify the compliance of FADN information with the analysis of Italian agricultural Land Market
- **Methodology**:
 - sources: FADN, FSS, Land Market survey, Average Agricultural Values
 - methods: data 2006 – 2007
Panel technique
>= 5 obs

DETERMINING FORCES

- Prices
- Agricultural productivity
- Agricultural economic policies PAC
- Bio energy
- Land uses
- Other markets

- Value of agricultural land
- Value of plantation
- Rent
- Macro – areas: administrative province and altimetric zone
- Macro – crops:
 - Dry arable lands
 - Irrigated arable lands
 - Orchards/vineyards/olives
 - Pastures
 - Woods

- **Use of panel technique**
- **Value of the stand:** most probable value of replacement (directly calculate per region and crop)
- estimation of land value by simple arithmetic average of value per hectare
- **Relevance of macro-crop in the macro-area:** to verify the coverage of the FADN sample (criteria: if MC is at least 10% of total UAA of MA (20% for woods) and irrigable area is at least 30% of UAA)
- **Rent payment:** lack of registration of the reason for rent payment reduced the amount of information available

THE MARKET VALUE OF LAND PER MACRO-CROPS AND REGION (EUROS)

REGION**	DRY ARABLE LAND		IRRIGATED ARABLE LAND		ORCHARDS		VINEYARDS		OLIVES		PASTURES		WOOD	
	Val/ha	N. obs.	Val/ha	N. obs.	Val/ha	N. obs.	Val/ha	N. obs.	Val/ha	N. obs.	Val/ha	N. obs.	Val/ha	N. obs.
PIEMONTE	11.222	650	23.186	544	17.644	263	20.412	341			3.516	25	4.073	173
VALLE D'AOSTA	25.787	96	30.323	144	45.376	20	60.849	41			14.367	121	3.068	226
LOMBARDIA	34.183	284	50.333	571	50.654	45	39.239	114	58.415	5	5.659	29	15.327	126
ALTO ADIGE	6.791	106	26.462	13	38.787	91	30.000	31					3.177	79
TRENTINO	45.741	83	90.444	18	204.811	122	205.744	79			8.000	14	13.315	25
VENETO	36.905	282	48.979	375	58.559	81	55.074	187	63.708	6			18.707	49
FRIULI-VENEZIA GIULIA	20.382	455	25.779	211	27.278	35	27.895	276					9.651	197
LIGURIA	36.996	166	221.928	505	48.131	39	65.566	55	72.770	199	4.875	6	4.398	22
TOSCANA	11.392	392	41.089	135	10.887	11	18.169	209	11.785	224	4.532	24	2.755	207
UMBRIA	10.463	375	18.257	75	13.615	30	13.496	191	11.192	221	3.645	56	3.161	225
MARCHE	12.195	312	23.396	16	20.314	14	21.982	92	19.545	76	3.414	19	3.232	108
LAZIO	16.296	363	27.712	226	20.631	75	19.377	80	18.064	127	9.336	21	6.604	51
ABRUZZO	9.130	526	20.773	244	18.600	76	20.875	369	14.875	392	2.104	24	6.782	44
MOLISE	7.848	355	21.026	79	15.435	32	14.852	96	12.373	187	2.255	20	4.737	128
CAMPANIA	13.506	227	52.341	249	41.386	132	26.391	103	22.106	135	4.286	7	4.835	40
PUGLIA	12.858	420	16.566	182	15.647	170	19.640	320	13.118	568	3.968	45	6.888	49
BASILICATA	6.582	589	13.373	134	16.172	208	11.907	94	10.593	294	2.253	277	6.849	73
CALABRIA	7.977	184	12.676	236	24.632	127	16.234	39	15.310	357	2.677	53	7.689	6
SICILIA	8.928	712	28.475	264	18.127	235	14.044	275	12.453	361	4.529	223	3.727	11
SARDEGNA	6.370	440	17.837	225	20.021	34	10.811	70	10.969	71	3.999	262	4.378	51

REPLACEMENT VALUES OF PLANTATIONS: COSTS OF PLANTATION PER HECTARE

	Stands		
	Orchards	Vineyards	Olive
Valle d'Aosta	30.942	40.713	
Piemonte	8.767	17.027	
Lombardia	19.389	21.262	16.686
Trentino	18.908	21.101	
Alto Adige	29.726	25.786	
Veneto	13.639	15.756	9.171
Friuli Venezia Giulia	20.701	17.176	9.408
Liguria	8.855	17.929	12.748
Toscana	13.505	27.100	11.549
Marche	7.226	12.817	7.839
Umbria	12.251	15.618	9.289
Lazio	10.102	10.119	8.444
Abruzzo	8.929	11.936	7.292
Molise	6.188	9.565	6.008
Campania	6.669	9.733	6.909
Calabria	8.986	8.643	6.928
Puglia	6.839	14.508	6.907
Basilicata	5.168	6.614	4.328
Sicilia	7.325	8.701	5.776
Sardegna	13.077	9.623	8.007

RENT PAYMENT: RENTS PER GEOGRAPHIC DIVISION AND MACRO-CROP

	District							
	North		Center		South		Italy	
	€/ha	cases	€/ha	cases	€/ha	cases	€/ha	cases
Dry arable land	250,00	7	250,00	77	118,00	174	161,00	258
Irrigated arable land	339,00	35	1.063,00	5	525,00	87	495,00	127
Orchards	880,00	1			398,00	5	478,00	6
Viney ards	621,00	5	635,00	3	285,00	4	512,00	12
Olives			487,00	1	321,00	19	329,00	20
Pastures	45,00	7	40,00	3	63,00	82	60,00	92
Total		55		89		371		515

NUMBER OF SOLD/PURCHASED LANDS ON TOTAL (%)

Region	Dry arable land	Irrigated arable land	Orchards	Vineyards	Olives	Pastures	Woods
Piemonte	0,09	0,10					
Valle D'Aosta	1,98	2,24				0,23	0,29
Lombardia		0,11					
Trentino	1,74		1,22	1,23			
Alto Adige				1,37			
Veneto	0,42	0,28		0,32			
Friuli-Venezia Giulia	0,74	1,08		0,42			0,69
Toscana	0,42			0,28		1,72	
Marche	0,17						
Lazio	0,17	0,52		0,80			
Abruzzo	0,30			0,21			
Molise	0,20				0,35	1,96	
Campania							1,69
Puglia	0,64	0,38		0,45	0,38	1,19	1,18
Basilicata	0,11		0,36				
Sicilia	0,11	0,61	0,27				
Sardegna	0,11	0,17				0,18	

AGRICULTURAL AREA OF SOLD/PURCHASED LANDS ON TOTAL (%)

Region	Dry arable land	Irrigated arable land	Orchards	Vineyards	Olives	Pastures	Woods
Piemonte	0,00	0,01					
Valle D'Aosta	0,23	0,09				0,00	0,01
Lombardia		0,01					
Trentino	0,17		0,27	0,46			
Alto Adige				0,19			
Veneto	0,04	0,04		0,06			
Friuli-Venezia Giulia	0,60	0,15		0,05			0,23
Toscana	0,06			0,12		3,16	
Marche	0,02						
Lazio	0,01	0,19		0,70			
Abruzzo	0,03			0,05			
Molise	0,12				0,09	0,03	
Campania							1,53
Puglia	2,17	0,02		0,03	0,07	0,02	1,29
Basilicata	0,03		0,05				
Sicilia	0,09	0,05	0,04				
Sardegna	0,01	0,01				0,00	

VALUE OF SOLD/PURCHASED LANDS ON TOTAL (%)

Region	Dry arable land	Irrigated arable land	Orchards	Vineyards	Olives	Pastures	Woods
Piemonte	0,00	0,01					
Valle D'Aosta	0,34	0,17				0,00	0,01
Lombardia		0,02					
Trentino	0,24		0,46	0,53			
Alto Adige				0,22			
Veneto	0,07	0,07		0,12			
Friuli-Venezia Giulia	1,01	0,18		0,39			0,19
Toscana	0,07			0,18		0,00	
Marche	0,01						
Lazio	0,01	0,10		0,38			
Abruzzo	0,08			0,05			
Molise	0,15				0,08	0,27	
Campania							1,12
Puglia	3,01	0,03		0,02	0,06	0,02	0,04
Basilicata	0,00		0,17				
Sicilia	0,03	0,11	0,04				
Sardegna	0,01	0,01				0,01	

COMPARISON BETWEEN FADN AND LAND MARKET SURVEY REFERENCES

Crop references		Territorial references	
FADN	Land Market survey	FADN	Land Market survey
Dry arable land	Arable land	Mountain	Coastal Mountain
Irrigated arable land	Arable land	Mountain	Internal Mountain
Orchards	Orchards	Hill	Coastal Hill
Vineyards	Vineyards	Hill	Internal Hill
Olives	Olives	Plain	Plain
Pastures	Pastures and meadows		

DIFFERENCES BETWEEN FADN AND LAND MARKET SURVEY VALUES PER CLASSES OF VARIATION IN PERCENTAGE AND IN ABSOLUTE VALUE

Classes of variation in absolute values (€)	Classes of variation in percentage				Totale
	<5	5-25	25-50	>50	
	<i>Number of cases</i>				
<5.000	71	198	110	37	416
5.000 - 24.999	1	42	122	142	307
25.000 - 49.999		1	9	44	54
> 50.000				25	25
Total	72	241	241	248	802
	<i>Percentages</i>				
<5.000	9	25	14	5	52
5.000 - 24.999		5	15	18	38
25.000 - 49.999			1	5	7
> 50.000				3	3
Total	9	30	30	31	100

LIST OF FADN AND LAND MARKET SURVEY VALUES

VARIATIONS GREATER THAN 50% AND GREATER THAN 50,000 EUROS

Province	Altimetry		Macrocrop		Value				Notes
	FADN	Land Market	FADN	Land Market	FADN	Land Market	VAM		
							Min.	Max.	
Imperia	Hill	Coastal Hill	Dry arable land	Arable land	63.332	229.000			
Imperia	Hill	Internal Hill	Irrigated arable land	Arable land	223.500	53.100			
Imperia	Hill	Internal Hill	Vineyards	Vineyards	94.594	21.000	67.393		RA 3
Imperia	Hill	Coastal Hill	Vineyards	Vineyards	94.594	33.300	87.677		RA 5
Imperia	Mountain	Internal Mountain	Vineyards	Vineyards	114.286	32.800	81.134	87.677	RA 1 e 2
Imperia	Hill	Internal Hill	Olives	Olives	95.918	28.200	67.393		RA 3
Imperia	Hill	Coastal Hill	Olives	Olives	95.918	40.700	47.306	54.043	RA 4 e 5
Savona	Hill	Coastal Hill	Dry arable land	Arable land	22.022	185.100			
Savona	Hill	Internal Hill	Irrigated arable land	Arable land	228.338	62.100			
Savona	Mountain	Internal Mountain	Irrigated arable land	Arable land	196.643	10.400			
Savona	Mountain	Coastal Mountain	Irrigated arable land	Arable land	196.643	56.700			
Savona	Hill	Internal Hill	Orchards	Orchards	88.346	20.400	28.877	66.880	RA 4
Genova	Hill	Internal Hill	Dry arable land	Arable land	12.156	112.900			
Genova	Hill	Coastal Hill	Dry arable land	Arable land	12.156	128.100			
Genova	Mountain	Coastal Mountain	Dry arable land	Arable land	6.245	113.600			
Genova	Hill	Internal Hill	Irrigated arable land	Arable land	56.521	112.900	26.512	30.450	RA 7
Genova	Hill	Coastal Hill	Irrigated arable land	Arable land	56.521	128.100	38.842	40.174	RA 8
La Spezia	Hill	Internal Hill	Dry arable land	Arable land	8.700	58.700			
Verona	Hill	Internal Hill	Vineyards	Vineyards	85.912	216.300	103.420	184.740	RA 4 e 5
Verona	Plain	Plain	Vineyards	Vineyards	65.544	123.200	61.860	175.450	RA 6, 7, 8 e 9
Treviso	Hill	Internal Hill	Vineyards	Vineyards	41.296	105.600	91.000	133.000	RA 1 e 2
Gorizia	Hill	Internal Hill	Vineyards	Vineyards	18.592	69.400	45.000	100.000	
Pistoia	Hill	Internal Hill	Irrigated arable land	Arable land	112.273	42.600			
Napoli	Hill	Internal Hill	Irrigated arable land	Arable land	85.565	28.600			
Messina	Hill	Coastal Hill	Irrigated arable land	Arable land	86.033	17.400			

To CONCLUDE

- A vast amount of information is available in FADN to characterize land market
- A prevalence of the ownership but the rental is increasing
- Mobility of land: arable land and vineyards
- Divergent trends in changes of land values
- An alternative use of FADN to the evaluation of the land values and the analysis of the land market trends is possible
- Good quality of the information collected

Thank you

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