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THE IMPACT OF II PILLAR ON THE MULTIFUNCTIONALITY IN ITALIAN FARMS: ANALYSIS ON THE FARM HOLIDAYS

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Abstract

This analysis has examined the relationships between the European funds for rural development and the multifunctionality during a short time, comparing two different situations before and after the Common Agricultural Policy (CAP) reform. The main problem was to find a variable able to describe the multifunctionality; the agritourism, in particular, number of farm holidays farms, has been the dependant variable useful to value the rural multifunctionality and the impact of the increase of II pillar fund. The Principal Component Analysis and the model of Ordinary Least Square have confirmed the positive impact of European Agricultural funds in the rural development and in the increase of active farm holidays farms.

Key Words: agritourism, farm holidays farms, Italian agritourism, II pillar, certified quality food.

JEL code: C01, Q18.

Introduction

In Italy, after the changes of Common Agricultural Policy in 1992, it was possible to find an interesting change in the consumers behaviour toward the farms, that have to ensure a function of rural protection through the multifunctionality (*Idda, 2005*); in particular, a lot of agricultural farms reconverted their production and their main objects to the environmental protection and to the production of certified food. This has determined a territorial specialization and the development of some districts in the primary sector able to protect the rural areas (*Galluzzo, 2008 - Galluzzo, 2005*); after that the Italian politicians have issued many laws to modernize the farms by legislative interventions able to assign a role and a function to the rural multifunctionality (*Abler, 2003*). A first consequence of the changes of the CAP reform has been that a lot of States of European Union predisposed many financial tools of the rural development planning; the aim was to stimulate the multifunctionality of agricultural quality food and the supply of services able to defend the rural spaces by different actions like the agritourism (*Eboli, 2004*). After the first CAP reform in the nineties, in Italy there was a significant increase of the agritouristical farms with the consequent territorial specialization in some regions, in which there was a strong presence of certified quality productions that gave rise to the development of agricultural districts internationally accepted in which food is an element able to identified the territory (rural space) and vice versa.

Background

Some studies and researches in Italian agricultural sector defined and delimited many zones with different agricultural specialization (*Rossi-Doria, 1969*); after the reform of Common Agriculture Policy there was in Europe an increase of studies to appraise the output of the multifunctionality in agriculture (*Randall, 2002*). In Italy a first modelling of multifunctionality has made comparing two highlands and observing some variables linked to the farms, to the rural space and to the agritourism (*Finco et al., 2005*).

Objectives

The objective of the present research has been to value the relationships among some social-economic variables linked to the territorial and productive specialization in all Italian regions and the changes intervened in the CAP in two different periods, precedents and antecedents the reform Fischler; in particular, the aim of this research was to estimate the role of agritourism in a sustainable agricultural model, with the purpose to underline the evolution, in the space and during the time, and the impact of the II pillar towards some large areas, using the first indications obtained in a precedent application in a limited inner area (*Galluzzo, 2006*).

Methodology

The datasets have been treated with a preliminary multivariable Analysis of the principal components (PCA). In this case the analysis has been a simple comparison of some percentage variations in two different periods (before and after Fischler reform), treating these last data with multivariable analysis able to show a lot of significant indications, highlighting the relationships among independent variables, as production of certified quality food, the number of agricultural districts, the functioning farms, the business dimension, the added value and the presence of banks, considered a variable proxy linked to the district development, because it is able to influence its growth (*Zanetti, 2008*) and the incidence of zootechnical specialization and production in the observed farms. Other independent variables used in this research have been the percentage of the used budget of European Union for those rural politics in the primary sector predisposed since 1994 in the different Italian regions, the percentage increase of agritouristical farms in every regions and the presences in the agritouristical farms, with the purpose to appraise the impact of the agricultural multifunctionality of the Common Agricultural Policy and, in particular, her ability to increase the profitability of agritouristical farms. The analysis of the principal components has underlined the most important relationships that exist in the first factorial level, defining a base model able to consider the most significant variables through analysis of the explained variable, using the application of different models of regression. In this case the main purpose was to define a model to interpret the most meaningful relationships among the studied variables, changing, in some cases, the methodological approach. The Principal Components Analysis (PCA) is a methodology of multivariable analysis able to simplify the object of study because it allows to turn a whole quantitative dataset n into p unity reducing the number of new non correlated variables, called principal components, able to summarize the most important information (*Bolasco, 2004*). The principal components analysis allows to break up and to reproduce the variance and the covariance of a matrixes of correlation; in this case it is possible to observe that the first component is able to reproduce two different conditions: in fact the first principal component is the main quota of variance and the second component is smaller compared with the first component, reducing the dimension of the space of observation (*Di Franco, 2005*), or rather:

on matrix	Correlati	Aut	Autovec
		o value	tor
11 21 31	1	11 21 31	
11 22 32	2	12 22 32	
13 23 33	3	13 23 33	

To obtain the first autovalue, it is important to solve the resolution of a system of homogeneous equations in the following matrix:

$$(\mathbf{R} - \lambda_1 \mathbf{I}) \mathbf{u}_1 = 0$$

where \mathbf{I} is identity matrix, \mathbf{R} is a square matrix of correlations and \mathbf{u}_1 is the autovector of the weight of different variables in the matrix \mathbf{R} ; the main condition is to maximise the variance, and this is possible if the determinant of square matrix of correlation among observed variables \mathbf{R} , reduced of autovalue multiplied by identity matrix, is equal to zero. This become necessary to choose the biggest value of variance, or rather the highest value of λ_1 , and put this value in the correlation matrix \mathbf{R} it is possible to obtain an autovector matrix of the first principal component (*Di Franco, 2003*). La first principal components is a linear combination, with zero average, of base variables, which aim is to optimize the final target function, or rather the variance (*Righi, 2000*). In this research of the principal component analysis, to obtain homogeneous variable has been used only a dataset with the change, in two different period, of the studied variable, the matrix form is:

$$\mathbf{y}_1 = \mathbf{X}\mathbf{I}\mathbf{a}_1$$

\mathbf{I} is a matrix of order p that has unitary elements on the diagonal and zero elsewhere

The main problem has been the choice of the number of variables to observe for the application of the principal components analysis, which it is obviated using both the model with the plot of the variance (*Jolliffe, 1986*) that defining a minimum level of explained variance, that has been set above the 80%, in such way this model has considered all the variables with a variance above one. Subsequently, through the analysis of the values of the components that have underlined significant values of correlations, the model has chosen the most interesting variables, treating them with a statistical process able to create an econometrical model, to underline and to simulate, the role of the second pillar politics on the development of the farm holidays farms what it is a proxy variable to explain the multifunctionality in agriculture.

The following phase of the analysis has used a statistic treatment of the data, like cross section in two different interval, with the application of the multiple regression by Ordinary Least Square (OLS) with the aim to compare and to treat statistically the most significant variables during the previous analysis by PCA and to define and to compare different statistical additive models that were able to appraise the effect of the Common Agricultural Policy on the multifunctionality, using as proxy variable the number of farm holidays farms. To value if the productive specialization of Italian agricultural farms in the different Italian regions could play a role in the model of estimate of multifunctionality, it has been introduced a dummy variable about the typology of farm production specialization (zootechnical farms

vs vegetable farms), considering a percentage of zootechnical farms on total farms in each Italian region.

Table 1 - Independant and dependant variables during the analysis in all Italian regions

Independant variables	Independant variable(*)
Farms in activity	Log farms in activity
Used Agricultural Surface (UAS)	Log Used Agricultural Surface (UAS)
Percentage of zootechnical farms	Percentage of zootechnical farms
Number of banks in activity	Log Number of banks in activity
Bank savings	Log Bank savings
Number of certified quality food	Number of certified quality food
Number of agricultural district	Number of agricultural district
Added value	Log Added value
Total costs of II pillar before Fischler Reform	Total costs of II pillar before Fischler Reform
Total costs of II pillar after Fischler Reform	Total costs of II pillar after Fischler Reform
Attendances in farm holidays farms	Log Attendances in farm holidays farms
Dependant variable	Dependant variable (*)
Number of farm holidays farms	Number of farm holidays farms

() in this case there is a logarithmic transformation of some variables*

The dependant variable used to value the multifunctionality has been the number of farm holidays farms for every region put in relationship with different independant variables (Table 1); a further examination of the analysis has used in the model the dependant variable presences in the agritouristical farms, with the purpose to appraise the impact of the multifunctionality of the CAP on the ability of the farm holidays farms to attract the tourist flows and to increase their incomes.

In all different simulations it has been considered the presence of strong standard errors, or rather the errors have corrected for the eteroschedasticity. A following phase has put in relationship in the OLS model, the variations percentages only that have been valued in the same time before and after CAP reform, according to the methodological protocol used during the PCA.

The econometrical general model in which it has put inside and evaluated all the variables in algebraic matrix is this (Verbeek, 2006):

$$y = X\beta + \varepsilon$$

where y and ε are vectors with n -dimension and X has a dimension $n \times k$.

The general form of OLS model is:

$$y = \alpha_0 + \alpha x_1 + \beta x_2 + \gamma x_3 + \delta x_4 + \varepsilon_{jt}$$

α_0 constant term

x_1, x_2, x_3, x_4 independent variables as indicated in table 1

ε_{jt} error term normally distributed

The utilization of dummy variable of zootechnical specialization above or below 30% in the different Italian regions has used to obtain this following new Ordinary Least Square model:

$$y = \alpha_0 + \alpha_3 (\text{zootechnical specialization}) + \alpha x_1 + \beta x_2 + \gamma x_3 + \delta x_4 + \varepsilon_{jt}$$

α_0 constant term

α_3 dummy variable (1 if the zootechnical specialization is above 30%, 0 otherwise)

x_1, x_2, x_3, x_4 independent variables as indicated in table 1

ε_{jt} error normally distributed

Table 2 - Different simulations in the analysis using an econometrical model

	Bifore reform	Fischler		After reform	Fischler
	W ithout dummy	With dumm	y	Wi thout dummy	With dummy
With logarithmic transformation	X	X		X	X
Without logarithmic transformation	X	X		X	X

To make more homogeneous some independent variables it is decided to use a logarithmic transformation of some of these, obtaining a second econometrical model (Table 1). The simulations on the cross section data have been:

a) application of the OLS model in the first phase before Fischler reform (Table 2), with or without a logarithmic transformation of some independent variables and using dummy variable too (static model);

b) application of the OLS model in the second phase after Fischler reform (Table 2) with or without a logarithmic transformation of some independent variables and using dummy variable too (static model);

c) application of the OLS model dynamic using the percentage variations of all considered variables in two following intervals after e before Fischler reform (dynamic model).

Table 3 - Explained variance and quality of significant variables in the first factorial axis

Variable	Initial variance	Extraction
Food quality food	1.00	0.948
Rural district	1.00	0.933
Added value	1.00	0.733
Counter number	1.00	0.876
Agritourist farms	1.00	0.871
Ammount of II pillar interval 1994-1999	1.00	0.966
Ammount of II pillar interval 2000-2013	1.00	0.815
Attendances in farm holidays farms	1.00	0.796
Bank savings	1.00	0.842

Table 4 - Explained variance in the PCA

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	3,011	25,091	25,091
2	2,396	19,968	45,059
3	1,680	14,003	59,062
4	1,423	11,855	70,916

5	1,106	9,216	80,133
6	0,812	6,771	86,903
7	0,550	4,581	91,485
8	0,450	3,748	95,233
9	0,325	2,711	97,944
10	0,140	1,168	99,112
11	0,071	0,589	99,701
12	0,036	0,299	100,000

Results

The analysis of the principal components has showed, in the circle of the correlations, the most significant variables to use in the OLS model. In the first factorial level it has been possible to underline as the southern Italian regions placed in a position near to the average; in the first factorial axis it has been possible to observe that the limits have been gotten by the variation of incidence of zootechnical specialization (in strong decrease) and by the production of certified quality food (in increasing), while on the dimension of the second axis have contributed the variation of attendance in farm holidays farms (in strong increase) and the increase of the banking counters (Table 3).

The explained quota of variance about the variation of the Usable Agricultural Surface (in diminution), production of certified quality food (number of certified products), presence of districts in the primary sector and, total costs of II pillar used in the different Italian regions during interval 1994-1999 has been above 90%. This research has showed as these variables can get useful information in conformity with the aim of this study and with the used statistical methodology; even if the statistical used methodology has described 87% only of the explained variance of the variable on increase of farm holidays farms. The first sixth principals components have been able to explain 86% of the total variance even if only the first fifth components have had an Eigenvalues value above 1. The variable increase of added value in the primary sector and the variable increase of attendance in agritourist farms have shown an explained variance very low (Table 4).

In the first factorial axis the variables certified food quality productions and number of banks in activity have operated on the positive half axis; on the negative half axis they have acted the increase of the total costs of the II pillar and the decreases of zootechnical specialization; the second axis was influenced by the increase of the territorial specialization, as the increase of agricultural districts, and the growth of the farm holidays farms.

Figure 1 - Cluster analysis of different Italian region (Source: our elaboration on Istat data)

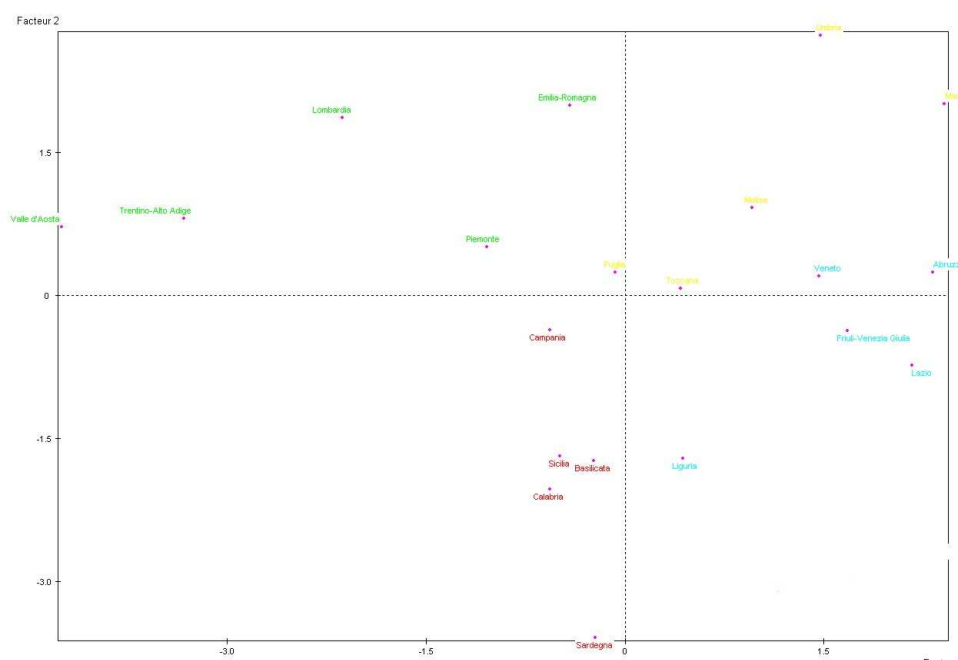


Table 5 - Cluster analysis and per cent change in different studied Italian regions

Cluster 1			
Variable	Cluster average	Cluster average	General average
Percentage of zootechnical farms	-0.519		-0.732
Total costs of II pillar after Fischler Reform	1.138		0.206
Number of agricultural districts	2.233		0.558
Certified quality food	0.305		0.656
Cluster 2			
Cluster average	Cluster average	Cluster average	General average
Added value	0.693		0.322

Number of banks in activity (n)	0.112	0.192
Cluster 4		
Cluster average	Cluster average	General average
Number of farm holidays farms	6.616	3.567
Certified quality food	1.011	0.656

Table 6 - Analysis of econometric model before Fischler reform using variables without logarithmic transformation and without a variable dummy

Variable	Coefficient	Std error	T Statistic	p-value	Significance
Number of agricultural districts	984.877	376.676	2.615	0.02806	**
Attendance in farm holidays farms	0.0174228	0.00161	10.75	<0.0000	***
R ² = 0.9746					
Adjusted R ² = 0.9464					
Akaike Information Criterion (AIC)		342.426			
Schwarz Information Criterion		353.379			
Hannan-Quinn Information Criterion		344.564			
Significant : *** at 1%; ** at 5%					

The subsequent phase has defined, using the cluster analysis, 4 different classes in which it was placed all the Italian regions (Figure 1). In the first class, characterized by an elevated increase of total costs in the II pillar CAP during the years 2000-2013, elevated growth of the active districts in the primary sector and limited production of certified quality food, there were all northern Italian regions in which agricultural activity is very specialized, characterized by areas with elevated incidence of farms specialized on zootechnical productions (Table 5). The second class included those regions of southern Italy where there were a significant incidence of agricultural value added, a smaller increase of the number of banks in activity, and a low diffusion of the agricultural districts; in these regions the increase of total costs in the II pillar of the Common Agricultural Policy during the years 1994-1999 has been below of the national average value. The third cluster has grouped some regions of

central Italy and the south of Italy where there was an high agricultural specialization, a lot of certified quality food and a presence of rural districts but Used Agricultural Surface (UAS) had a limited extension. In the fourth cluster there were some regions of northern and central Italy where it was observed an elevated diffusion of the farm holidays farms, above to the national average value, and with an elevated incidence of the certified quality food productions. The results of principal components analysis has defined a model to analyze the impact of the actions caused by the CAP on the development of the rural areas. The model has highlighted as the number of agritouristical farms, dependent variable and proxy variable of the multifunctionality in the primary sector, has not suffered of the increase of funds in the II pillar, but it has felt a positive effect by the increase of the banking deposits and, in indirect way, by the active districts in the primary sector. Even if, a precedent simulation had underlined a significant correlation among the variable increase of the farm holidays farms and the growth of the amount of the total costs of the II pillar of Common Agricultural Policy. In fact, the aim of the II pillar was to change over the agricultural production intensifying the productive farm reorganization; the following analysis has showed as the decrease of attendances in the agritouristical farms was linked to the strong increase of funds in the II pillar; but this short research, on the contrary, has confirmed like an elevated increase of farm holidays farms has required a greater increase of the CAP funds.

Table 7 - Analysis of econometric model before Fischler reform without a dummy variable but with logarithmic transformation of some variables

Variable	Coefficient	Std error	T Statistic	p-value	Significance
In attendances farm holidays farms	285.844	702.38	4.0230	0.0030	***
Total costs of II pillar reform	-6.729	3.6008	-1.8695	0.0944	*
$R^2 = 0.8345$					
Adjusted $R^2 = 0.65066$					
Akaike Information Criterion (AIC)		379.953			
Schwarz Information Criterion		390.906			
Hannan-Quinn Information Criterion		382.091			
Significant : *** at 1%; *at 10%					

Table 8 - Analysis of econometric model before Fischler reform using a variable dummy and variables with logarithmic transformation

Variable	Coefficient	Coefficient error	Std	T	p-value	Significance	
Constant	-	9	20601.	-2062	4	0.0692 *	
In Used Agricultural Surface (UAS)	3	5	3773.7	1662.1	2.270	3	0.0493 **
In attendances in farm holidays farms	7	7	2848.3	682.34	4.174	0	0.0024 ***
Total costs of II pillar	-	7.2993	3.5090	-2.078	3	0.0674 *	
R ² = 0.8361							
Adjusted R ² = 0.654166							
Akaike Information Criterion (AIC)	1		379.75				
Schwarz Information Criterion	4		390.70				
Hannan-Quinn Information Criterion	381.889						
Significant : *** at 1%; ** at 5%; *at 10%							

Table 9 - Analysis of econometric model after Fischler reform without a variable dummy and without logarithmic transformation of some variables

Variable	Coefficient	Coefficient error	Std	T	p-value	Significance	
Constant	7	3	3289.9	1269.2	2.592	5	0.0268 **
Used Agricultural Surface (UAS)	34	07	0.0028	0.0015	1.880	8	0.0894 *

Percentage of zootechnical farms	-2466.55	9	1094.2	-2.2545	0.0478	**
Attendances in farm holidays farms	0.0144	77	0.0006	21.40701	<0.000	***

R² = 0.9851

Adjusted R² = 0.9717

Akaike Information Criterion (AIC) 362.82

Schwarz Information Criterion 372.77

Hannan-Quinn Information Criterion = 364.764

Significant : *** at 1%; ** at 5%; *at 10%

Table 10 - Analysis of econometric model after Fischler using dummy variable and without logarithmic transformation of some variables

Variable	Coefficient	Std error	T Statistic	p-value	Significance
Farms in activity	0.0135	0.0033	4.045	0.0029	***
Used Agricultural Surface (UAS)	0.0027	0.0008	3.080	0.0131	**
Number of banks in activity	5.7802	1.6595	3.483	0.0069	***
Number of certified quality food	405.90	165.06	2.459	0.0362	**
Attendances in farm holidays farms	0.0144	0.0005	28.949	<0.000	***
Added value	-0.01219	0.0029	-4.180	0.0023	***
Total costs of II pillar	7.9237	2.3468	3.376	0.0081	***
Dummy	-2131.90	654.99	-3.255	0.0099	***

R² = 0.9955

Adjusted R² = 0.9906

Akaike Information Criterion (AIC) 340.66

Schwarz Information Criterion 351.62

Hannan-Quinn Information Criterion 342.805

Significant : *** at 1%; ** at 5%

Table 11 - Analysis of econometric model after Fischler reform without using dummy variable and without logarithmic transformation of some variables

Variable	Coefficient	Std error	T Statistic	p-value	Significance
Total costs of II pillar	-7.9192	4.3190	-1.8343	0.0999	*
Attendances in farm holidays farms	9231.05	2892.8	3.1919	0.0109	**
$R^2 = 0.8370$					
Adjusted $R^2 = 0.6559$					
Akaike Information Criterion (AIC)	412.735				
Schwarz Information Criterion	423.688				
Hannan-Quinn Information Criterion	414.873				
Significant : ** at 5%; *at 10%					

Table 12 - Analysis of econometric model after Fischler reform using dummy variable and logarithmic transformation of some variables

Variable	Coefficient	Std error	T Statistic	p-value	Significance
Attendances in farm holidays farms	8981.31	3207.38	2.8001	0.0207	**
$R^2 = 0.8055$					
Adjusted $R^2 = 0.5895$					
Akaike Information Criterion (AIC)	416.265				
Schwarz Information Criterion	427.218				
Hannan-Quinn Information Criterion	418.40				

Significant : ** at 5%

The statistical model before Fischler reform without the utilization of dummy variable of the zootechnical productive specialization and without the logarithmic transformation of some variables has underlined as the increase of the farm holidays farms has statistically had some effects of the number of districts in the primary sector and of the attendances in the farm holidays farms (Table 6). This confirmed like the territorial specialization has influenced the multifunctionality increase, that was an element of integration and of productive specialization in some Italian regions. The same results have been gotten with the application of the dummy variable about the productive specialization without the utilization of transformation in logarithm of some other independent variables. In these cases it was possible observe that the amount of total costs of II pillar during the interval before the Fischler reform has not had some effects on the increase of agritouristical farms. The econometrical OLS model before Fischler reform with the utilization of the transformation in logarithm of some independent variables but without using a dummy variable (productive specialization) it has statistically underlined that there was a significant and direct relationship between the variable attendances in a farm holidays farms and the increase of agritouristical farms; a weak but significant relationship there was among the amount of total costs of II pillar and the increase of farm holidays farms (Table 7). In this case, in particular, the relationship has been indirect; this has meant that an increase of farm holidays farms was not linked to the multifunctionality and to amount of total costs of II pillar of Common Agriculture Policy. The use of dummy variable and some independent variables with logarithmic transformation has underlined as the multifunctionality has been very important and directly linked in a positive and significant way to the usable agricultural surface and to the attendances in the agritouristical farms; in fact this has proved as, in a logical way, there was a weak and meaningful relationship among the amount of total costs in the II pillar and the growth of the farm holidays farms (Table 8). In the first phase. It seems that the agritourism is a prerogative of areas where there is a productive specializations and it exists the rural districts and there are a lot of used agricultural surfaces able to guarantee a greater protection of rural territory. The statistical model after Fischler reform without the utilization of dummy variable of productive specialization and without the utilization of logarithmic transformation of some variables has underlined that it does not exist a relationship among the agritourism and total costs in the II pillar of the CAP (Table 9); some positive effects on the increase of farm holidays farms has been due to the independent variables agritouristical attendances and usable agricultural surface that has confirmed the role of this variable to guarantee in some Italian regions, where it is elevated the farm dimension, the increase of farm holidays farms and the increase of multifunctionality by agritourism.

The production specialization has confirmed to be a variable very important on the increase of agritouristical farms; in fact in Italian regions where there is a lower incidence of zootechnical production the farm holidays farms diffusion has been greater and able to protect the rural territory. The statistical model without the application of the dummy variable of the productive specialization but using the logarithmic transformation of some variables it have confirmed the role of the independent variable as agritouristical attendances on the increase of farm holidays farms (Table 10); the role of total costs of II pillar allocated by the Common Agricultural Policy has been very important to increase the multifunctionality and to spread the farm holidays farms.

The model has underlined, in this case, the ability of the farms that have had not much contributions by European Agricultural Funds to be able to make agritouristical activity and to ensure a significant diffusion of multifunctionality. The static model after Fischler reform with the application of dummy variable in the productive specialization and using, in the same time, the logarithmic transformation of some independent variables it has not had a lot of statistical significant results and a direct relationship among the variables farm holidays farms attendances, using a logarithmical transformation, and the farm holidays farms diffusion (Table 11).

The statistical model after Fischler reform using dummy variable of the productive specialization and without the logarithmic transformation of some variables it has been able to interpret better the multifunctionality of the farm holidays farms (Table 12). The analysis of the statistical data has shown as the multifunctionality, or rather as dependent variable of the agritouristical farms in activity, is directly correlated with the farm dimension (usable agricultural surface) and with the number of operating farms. The total amount of the II pillar and the increase of the services to support a social-economical activity in the rural spaces, as the diffusion of banking counters, has underlined a significant role for the multifunctionality and for the farm holidays farms increase. The certified quality productions, that are also considered an independent variable able to act on the multifunctionality, linked to a strong increase of the agritouristical attendances, has underlined that there were many significant relationships with the dependent variable farms in full production, or rather, with a proxy variable of the multifunctionality. The farm holidays activity has confirmed her own role of protection for the rural territory and main agent to ensure a rural multifunctionality; in fact, during this analysis it has emerged that in the second period after Fischler reform, thanks to the total funds assigned by Common Agriculture Policy, in the Italian regions, characterized by a low agricultural value added and a low rural specialization, there should be a considerable increase and diffusion of agritouristical farms and a significant protection of rural spaces.

The least ordinary squares model applied on the change of the observed variables (dynamic model), in two different intervals, has shown as the increase of the farm holidays farms has been subjected to diffusion of the number of banks in activity in the rural areas; in

fact, an increase of banks in activity has required a reduction of agritouristical farms. This has born up that the banks had a fundamental role on the development of rural areas and they were able to reduce the impoverishment of these areas. A change of a methodology of study in the model, replacing the dependent variable agritouristical farms, in strong increase, with rural funds allocated by the European union, in the second pillar, it has been some negative effects on the dependent variable like used agricultural surface, quality food productions and attendances in the farm holidays farms. In fact, a decrease of the used agricultural surface has caused an increase of allocated funds by the European Union for the development of rural areas; on the contrary, an increase of the certified quality food and an increase of farm holidays farms attendances has caused a strong decrease of European rural funds with statistical level of significance. In realistic terms there was a decrease of used agricultural surface in all agricultural Italian regions but, in the same time, an increase of European Union funds, with a partial compensation effect during the analysed years. This underlines like a farm able to produce a lot of agricultural products and environmental positive products receives or it should receive few subsidies by the European Union to guarantee the multifunctionality and the rural protection.

Final remarks

This short research has underlined that there is a relationship among the II pillar of European Agricultural Funds and farm choices on farm income, showing as the Common Agricultural Policy has determined some positive effects on the rural management and farm business. The agritourism, the certified quality food and the agricultural districts, or rather a large common cohesive rural space, has been able to represent some appropriate indicators to explain the multifunctionality in agriculture. As well as, the examination of the statistical data has confirmed the fundamental role of some structures outside the farms, that are able to guarantee a completed utilization of the rural space, a correct social-economical growth and an environmental protection, linked to the economic development and to certified quality food.

The dynamic model is not able to explain, during the period of study, the effects of the II pillar of the Common Agricultural Politics, on the multifunctionality.

The statistical model used during the period after Fischler reform, without a logarithmic transformation of some independent variables and using a dummy variable for the farm specialization, has been more significant than the static model before Fischler reform with logarithmic transformation of some independent variables; in this case the agricultural districts and the development rural funds have had a significant role on the multifunctionality; the econometrical model after Fischler reform has shown the importance of II pillar funds, the certified food quality and the agricultural districts for the increase of multifunctionality. This research has underlined as the agritourism is a very important variable to evaluate the multifunctionality, confirming as this indirect activity is not much evident in the specialized

agricultural areas in which there is a limited zootechnical specialization with direct consequences on the environment protection and a limited ability to protect by multifunctionality the primary sector.

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