

Multifunctionality in Agriculture and Development of Cooperative Credit Banks: A Comparative Analysis in Italy and Ireland

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Cooperative credit banks in Italy and Credit Unions in Ireland are financial co-ops based on people, with the aim to save and to lend money not for profit. Comparing Italy to Ireland it has been possible to observe a different development of cooperative credit banks, tightly linked to a distinct level of participation of people and public authorities in financial activities. The main goals of this research have been to analyse, from 2000 to 2010, using a quantitative approach, by a panel data statistical model with balanced random effects (GLS), which socio-economic variables have had an action on the growth of credit co-ops; in particular, the aim of this paper has been to estimate if the multifunctionality in agriculture, in terms of numbers of farms and agro-tourism enterprises, has had some direct effects on the development and growth of credit co-ops in Italy and in Ireland. The main results have underlined a meaningful growth of Credit Unions in many Irish rural counties. In Italy the multifunctionality in agriculture has been able to increase the development of cooperative credit banks in the countryside and to get better living conditions in rural territories, lessening socio-economic and financial exclusion.

Keywords: rural development, multifunctionality, rural areas, agro-tourism, Credit Unions, Italian Cooperative Credit Banks, panel data

Introduction

Cooperative Credit Banks in Italy and Credit Unions in Ireland are financial co-ops democratically controlled, based on people, users and sometimes workers, who save together and lend money to each other not for profit aim. Comparing Italy to Ireland or to other European states, as Germany and the Netherlands, it is possible to observe a different development and penetration of co-op credit banks. In fact, in Ireland almost 3 million of citizens out of 4.5 million people are members of a Credit Union and despite the economic downturn, there has been a growth of ordinary members, who have decided to be involved in Credit Unions cooperatives.

In the Netherlands loans are allocated by Rabobank, another co-operative credit bank, and mortgages are mainly set up by savings that are borrowed from farmers, members of Rabobank, to other private customers and citizens. In Italy, instead, there is not a meaningful penetration and diffusion of cooperative credit banks thus, in this country it is possible to point out the lowest percentage of penetration and distribution of co-op credit banks in all member States of European Union (Sargent, 1982). The reasons of this not significant development of cooperative credit banks in Italy are ascribed to a high diffusion of private

banks since medieval time and during the 1800s, and to a dynamic participation of public authorities in many banks, before 1992, year in which there was the privatization of all Italian banks, national interest banks and other ordinary credit institutions. The origin of Irish Credit Union by Nora Herlihy and the explanation of its sharp and massive diffusion in Ireland, over the time, are tightly linked to a particular socio-economic environment in the Republic of Ireland during the 1940s and in the 1950s (Quinn, 1999; Power et al. 2011) when a lot of Irish citizens suffered of financial exclusion and they did have not any opportunities to obtain credit facilities and loans without paying a high interest rate. Hence, the environment, in socio-economic, geographical and historic terms, was an important tool to create a correct development of a co-operative bank movement in the same way analysed in other Irish productive sectors during the last century (Kennelly, 2001).

The role of cooperative in order to encourage Irish rural development policy was analysed in the 1800s by Horace Plunkett, who proposed as better socio-economic conditions in rural areas were leading variables to guarantee the economic development in rural territories and to improve farmers' living conditions (Keating, 1983).

According to the proposals of Plunkett and comparing the development and the growth of Irish credit cooperatives, in the last century, in Ireland and in Germany, it was possible to observe as cooperative credit banks had a more important role

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in Germany than in Ireland to better and to foster the economic improvement of rural space. During the 1860s the Raiffeisen co-op bank was the first and foremost credit cooperative working in Germany; the reasons of its expansion were linked to a particular socio-economic environment, which, in terms of skills and knowledge, specific role of public institutions and different productive specialization in the primary sector was more favourable in Germany than in Ireland to allow a significant growth of credit co-ops (Guinnane, 1994).

Nevertheless, in Germany an urban credit cooperative was created by Schulze-Delitzsch in 1850, only in 1864 Friedrich Wilhelm Raiffeisen promoted the first rural co-ops in response to failures in traditional financial institutions, that were not able to guarantee a satisfactory source of credit to finance the primary sector (McKillop & Wilson, 2011) and to support the rural development.

In Italy the first co-operative banks were funded in 1883 by Luigi Luzzatti in a province in the north of Italy (Padua) and in 1886 in other provinces but in 1955 there was the publication of a complete law to create and to regulate both the cooperative in the agricultural sector (Stupazzoni, 1986) and also the cooperative credit bank. The role of Cooperative Credit Banks in Italy was very important to reduce the marginalization of rural areas (Galluzzo, 2009) and to guarantee the development of industrial districts (Becattini, 2000), in which it is spread a meaningful level of social capital based on informal relationships and knowledge (Finaldi-Russo & Rossi, 2001).

Irish Credit Unions have been important to develop some rural areas and to promote some agricultural productions, as butter, milk and meat, increasing the level of involvement and the sensitivity of belonging to rural communities throughout the development of informal relationships, supported by an high level of trust. Hence, in Irish rural communities, where Credit Union co-ops are working there has been a growth of a positive shared environment, in terms of skill and not codified knowledge, avoiding the development of free riding and opportunistic situations (Ward & McKillop, 2005).

In Italian regions, where there are both certified quality food, as Protected Denominated Origin (PDO) and Protected Geographical Origin (PGI), and also agro-touristic farms, some studies have outlined, as the role of Italian Cooperative Credit Bank was irreplaceable to develop rural and agro-industrial districts, strongly connected to the primary sector (Galluzzo, 2010) with positive effects to lessen the problem of marginalization of rural areas.

Cooperative credit banks have to satisfy some economic and humanitarian performances and they

have to support many social initiatives both in local Italian regions and Irish communities and also in other different developing countries and poor rural areas in the world (McKillop et al, 2006). Sometimes it is not easy to reach the final aim of cooperative credit banks, that means to support and to promote cooperation at national and international level and cooperation among cooperatives (Briscoe et al., 1982) for many reasons, such as the high level of corruption in some developing countries and a low level of social capital but, despite these issues, the cooperative credit movement seems to be a sensitive, efficient and effective answer in reducing an array of problems in poor areas and in rural territories in developing countries (Birchall, 2010).

According to neoclassical theories, Credit Unions in Ireland and Cooperative Credit Banks in Italy represent an unique and main example of economic paradox in business activities because the maximization of the profit is not the pivotal and foremost aim of these banks, that means and implies to gain the maximum level of dividends and shares discriminating borrowers and savers inside the cooperative (McKillop & Wilson, 2009; Taylor, 1971). This neutral equilibrium, among borrowers and lenders, who have equal rights and they are not discriminated, was hugely criticized during different empirical studies about the distribution of assets in cooperative credit banks by different authors (Flannery, 1974; Smith 1986; Patin & McNeil 1991; McKillop & Ferguson, 1998).

Although this cooperative credit model seems to be anachronistic and an old example of financial institution, some studies in Wales, England and Scotland have pointed out the positive role of governmental initiatives, in order to provide financial support to the Credit Unions, because these aforementioned co-ops have had the main advantage to reduce problems of social exclusion and to allow an easy access to financial and economic resources (Chambers & Ryder, 2008).

Aim of the Research

The main goals of this research have been to analyse, over 10 years from 2000 to 2010, in all Italian regions and in all Irish counties, the role and function of credit co-ops in terms of economic impact, growth and penetration in the society and to value which socio-economic variables and other variables, tightly linked to the multifunctionality in the primary sector, have been an incentive to act on the development of credit cooperatives in both analysed nations.

The aim of this paper was to find out, through a quantitative model, which direct independent socio-economic variables as labour force employed in agriculture, savings in credit cooperatives,

population, agricultural cultivated surface and number of farm holidays farms (agro-tourism), proxy variable of multifunctionality in agriculture and rural development, have had an effect on the dependent variable development of cooperative credit banks in the primary sector.

In this paper are described and proposed new functions and features of credit cooperatives to allocate and to arrange supports and funds of European Union, their relationships on rural development, and how the rural activity, specifically agro-tourism, can be an useful tool to develop cooperative credit banks. In fact, the cooperative credit bank can allow an easier access to credit than traditional banks, due to relationships based on trust, mutual aid and human-centred pillars, with the positive effect to protect rural territories against the socio-economic marginalization and financial exclusion.

Methodology

To analyze the role of Credit Unions and Cooperative Credit Banks in Italy it has been used a quantitative approach taking into account the statistical data source of Italian Central Institute of Statistics (ISTAT) and Irish League of Credit Unions (ILCU).

The first stage of this research was to define, in the year 2000 and 2010, the growth and the development of Credit Unions and Cooperative Credit Banks and the level of incidence of savings in all Irish counties and Italian regions. The starting point of this research was an application of Gilbrat's Legacy or Gilbrat's Law, according to him, in fact, size and growth are two variables that have a significant correlation thus, more size can imply more growth (Sutton, 1997). Hence, a growth of farm holidays farms or agro-tourism, proxy variable of multifunctionality in agriculture, can affect on the size of cooperative credit banks; even if, some studies in UK have underlined as there is a threshold level over which it is better to discourage the development and the growth of other Credit Unions, in particular if the expansion of cooperative credit banks is located in some rural territories (Ward & McKillop, 2005).

Following the Gilbrat's Law, it seems that some investigations have demonstrated as there is an inconsistency in relationships between size and growth (Kumar, 1985; Acs et al., 1990) with few exceptions in specific economic activities (Tschoegl, 1983; Wilson et al. 2000) and in Credit Union in some European Countries (Ward & McKillop, 2005). The quantitative methodology, through the panel data approach used in this

research, has estimated as rural development, in terms of pluriactivity, has had an effect on the growth and development of cooperative credit banks. To estimate the parameters or coefficients in the quantitative approach it has been used a panel data statistical model with logarithmic transformation of all variables, useful to reduce the variance on the dataset in Italy and in Ireland taking action on the development of credit cooperatives.

The panel data approach is a good procedure to reduce the heterogeneity and to explain it in the units of observations (Gujarati, 2011) and to analyse the most significant changes during the time of study in these two countries, estimating some effects inside and outside the analysed clusters of Italian regions and Irish counties (Baltagi, 2011).

Another positive aspect of panel data model is to use the main information inside and between groups with the favourable effects of reducing the statistical error term. In this paper to estimate the parameters it has used the panel data statistical model with balanced random effects (GLS) in which the number of time observations was the same for each Italian regions and Irish counties and none observations was missed over the time and in the cross section units (Asteriou & Hall 2004).

The GLS has estimated the unobservable heterogeneity in the groups and in particular the different extractions have had a defined and specified distribution of probability. To decide if the random effects model has been better than the fixed effects model it has analysed the statistical results of Hausman test, which was cardinal to define if the random effects panel data model has been consistent and adequate to describe in an appropriate best way the independent variables that have had an effect on the dependent variable growth and development of Cooperative Credit Banks and Credit Unions.

The panel data statistical model with balanced random effects (GLS), in which it has been included all the analysed social and economic variables, in its algebraic form of matrix, can be represented in this explicit form (Verbeek, 2006): $Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \dots + \beta_k X_{kit} + u_{it}$ $i = 1, \dots, n; t = 1, \dots, T$ u_{it} comes from a_i and ε_{it} . In this model the error terms (u_{it}) is the sum of a part which is linked to the analysed unit and it does not change during the time (a_i) and an another residual part that is not correlated with the time thus, the term of error (ε_{it}) is the result in each unit of individual effects; a_i is IID $(0, \sigma_a^2)$, $\text{Cov}(x_{it}, a_i)$ is equal to 0, ε_{it} is IID $(0, \sigma_\varepsilon^2)$ and $\text{Cov}(\varepsilon_{it}, a_i)$ is equal to 0.

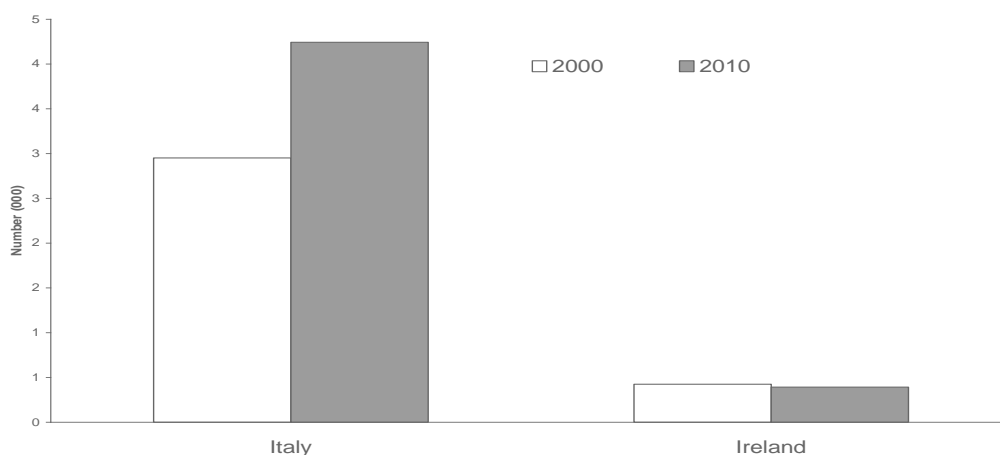


Figure. 1- Main differences over 10 years in the growth of Italian Cooperative Credit Banks and in Irish Credit Unions. Source: our elaboration on data Istat, (2011; 2001) and ILCU (2011).

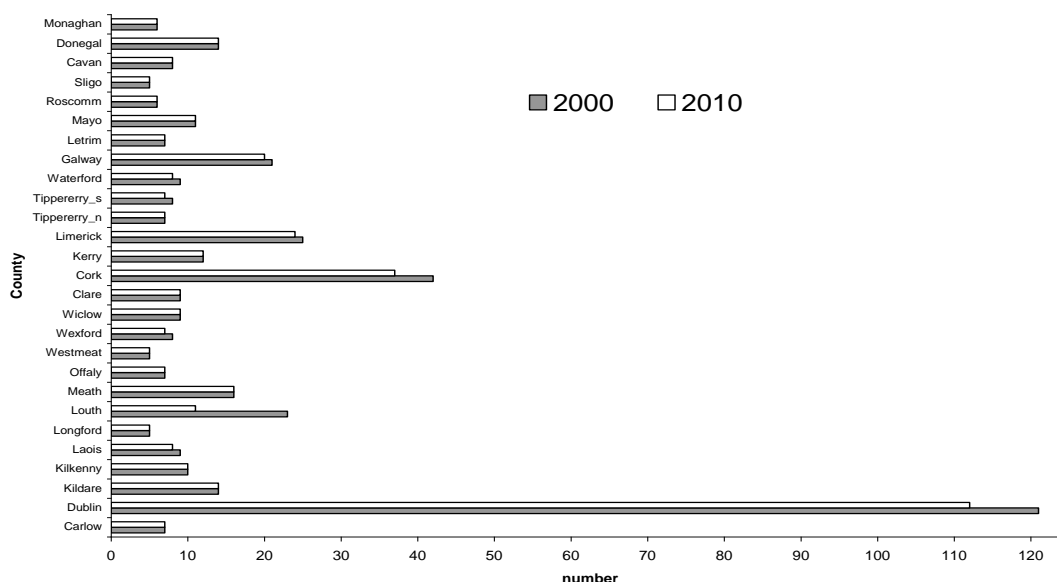


Figure 2. Growth of Irish Credit Unions in different counties over 10 years ((Source: our elaboration on data ILCU, 2011)

Results and discussion

Comparing two analysed countries, over the time 2000-2010, it has been possible to observe an increase in Italian Cooperative Credit Banks due to different merges in all Italian regions of many cooperative banks to be more competitive, to cut down operating expenses, to offer broader financial services and to overtake new challenges creating an unique organization with the same system of accountancy and management.

This paper has not pointed out a significant decrease of Irish Credit Unions due to economic downturn in particular after the financial and economic crises of Celtic Tigers since 2007. The analysis of statistical data was able to underline, despite the Irish economic recession, as the drop of

Credit Unions was circumscribed enough and it has involved just few credit co-ops (Figure. 1) with a significant decrease in cities as Dublin and Cork. In small villages and in many Irish rural areas Credit Unions have been steady over the time and this was a very important factor to reduce social and financial exclusion and to contrast the marginalization of Irish poor rural territories (Figure 2).

In Italy the statistical data has pointed out an high concentration of Cooperative Credit Banks (Figure 3) in the north Italian regions; over the time of observation, it was possible to highlight a meaningful level of growth of credit cooperatives in some industrialised areas, such as Lombardia and Veneto, where there are many agro-industrial districts, and in few Italian regions where

cooperative spirit has been strongly developed since the 1860s and where there are rural and agro-industrial districts as well (Trentino Alto Adige, Emilia Romagna, Umbria and Tuscany). The analysis of penetration of Credit Unions in Ireland

and Cooperative Credit Banks in Italy (Figures 4-5) has outlined different results compared to the structural characteristic analysis made by other authors (McKillop et al, 2006).

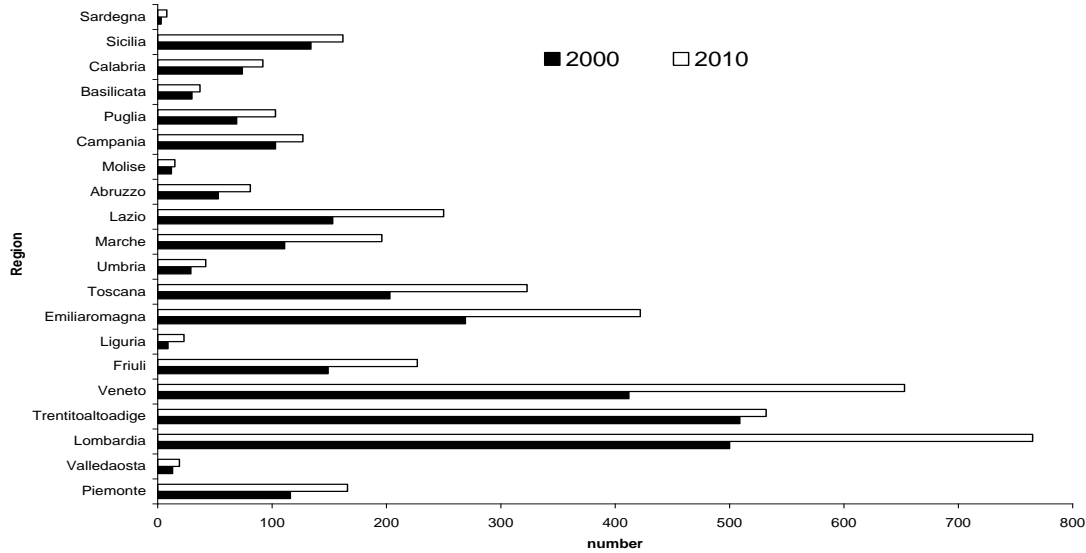


Figure 3. Growth of cooperative credit banks in Italian regions during 10 years (Source: our elaboration on data Istat, 2011, Istat, 2001)

In Italy the level of penetration of savings in cooperative credit banks is increased in all regions; instead, in Ireland just 6 out of 27 counties, as Sligo, Louth, Kildare, have highlighted an increase, from 2000 to 2010, in the level of penetration of savings; even if, the county of Louth, according to the study of McKillop et al. 2006, has pointed out

an high level of penetration of Credit Unions in this rural area, both in terms of diffusion of credit co-ops and also in terms of total amount of savings, due to a significant percentage of incidence of Credit Unions on the total aggregate of Irish credit cooperatives (5.5%).

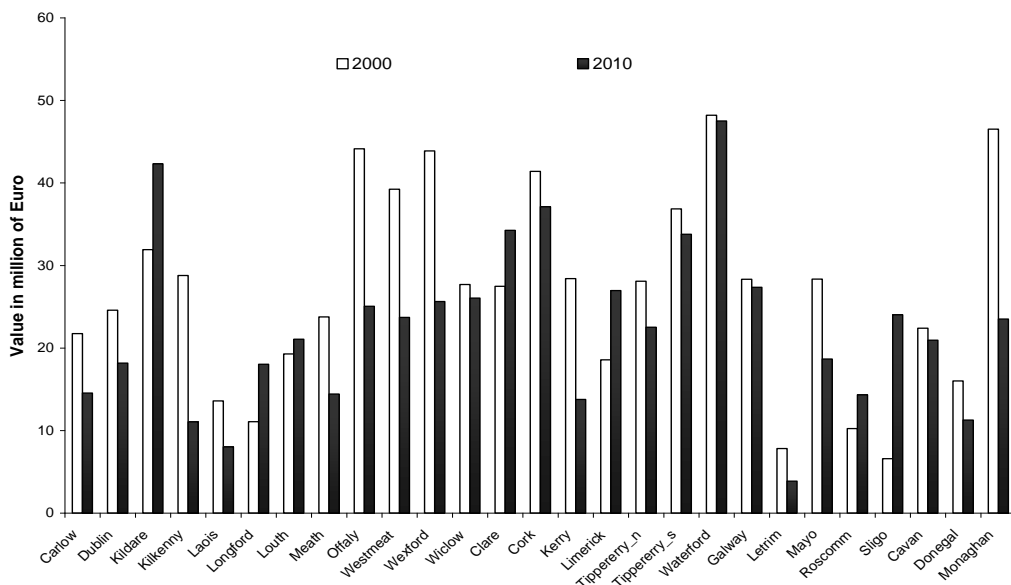


Figure. 4. Penetration of savings in Irish Credit Unions; Source: our elaboration on data CSO (2000, 2010) and ILCU (2000, 2011)

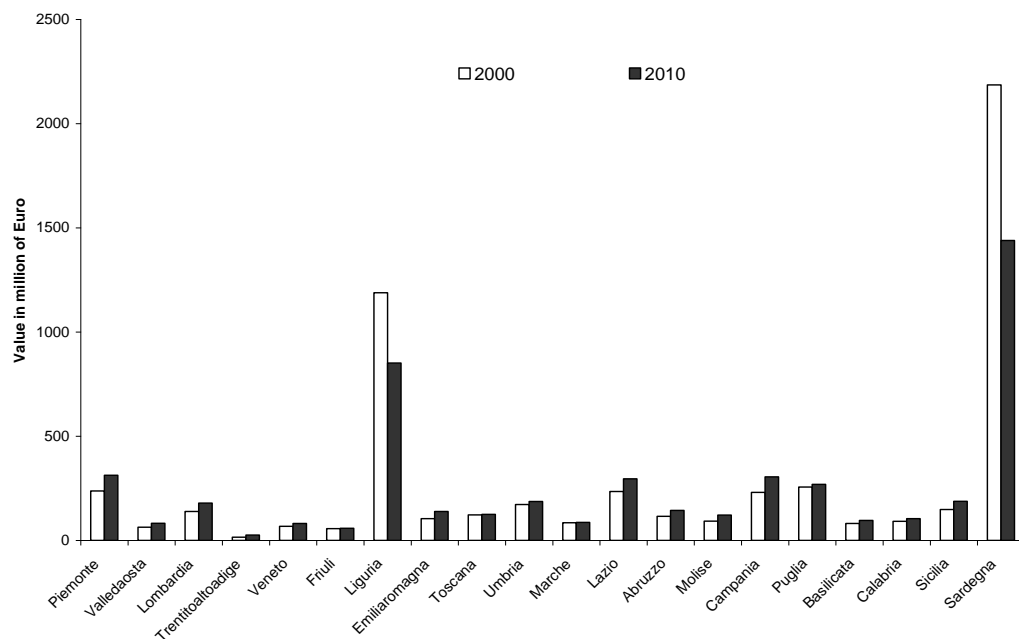


Figure 5. Penetration of savings in Cooperative Credit Bank in Italian regions (Source: our elaboration on data ISTAT 2000, 2011)

The choice about which kind of panel data statistical model has been the best between the random effect model (GLS) and the fixed effects model, has been in favour of the GLS model. In fact, the GLS model gave a good statistical information in terms of both Breusch-Pagan test, chi square (1 degree of freedom) equal to 13.88 and also in terms of Hausman's test, chi square (6 degrees of freedom) equal to 10.27 in the Irish model and 11.56 in the Italian statistical panel model. Hausman's test, compared to the same test used in the fixed effect panel data model, has not exceeded the critical value of chi square at 5% of significance, that is a good explanation to justify the use of panel data statistical model with balanced random effects (GLS) that is more

appropriated then fixed effect model. The main results of GLS model in Ireland has pointed out as the independent variables workforce in agriculture, Irish population and the amount of savings in credit cooperatives have had a direct effect of the development of Credit Unions; instead, the independent variables agricultural surface and pluriactivity in the primary sector, through the number of farm holidays farms in activity, have had an indirect correlation with the dependent variable growth of Credit Unions. This has meant as in the Irish counties, where there has been an high level of diversification of rural activities, in many cases connected to a drop of cultivated surface, there has been a low diffusion of credit cooperative structures (Table 1).

Table 1. Main statistics in balanced random effects panel data in Ireland using a logarithmic transformation. Dependent variable: Credit Unions.

Independent variable	Coefficient	Standard error	t statistic	p-value	Significance
Constant	-6.20918	1.86063	-3.3371	0.00166	***
Agricultural surface	-0.473296	0.235282	-2.0116	0.05001	*
Farmers	-0.403413	0.386229	-1.0445	0.30160	ns
Population	0.769362	0.0889937	8.6451	<0.00001	***
Agritourism	-0.137127	0.0636426	-2.1546	0.03635	**
Workforce in agriculture	0.913054	0.4144	2.2033	0.03251	**
Savings in Credit Unions	0.115147	0.0514008	2.2402	0.02985	**

ns not significance; *** <1%; ** at 1%; *at 5% Source: our elaboration on data ILCU, 2001, 2011 and CSO (2000, 2010).

Table 2. Main statistics in balanced random effects panel data in Italy using a logarithmic transformation. Dependent variable: Credit Cooperatives Banks

Independent variable	Coefficient	Standard error	t statistic	p-value	Significance
Constant	-12.5709	4.54126	-2.7682	0.00917	***
Agricultural surface	-0.274391	0.148177	-1.8518	0.07302	*
Farmers	0.423165	0.259643	1.6298	0.11265	ns
Population	-0.84804	0.717017	-1.1827	0.24537	ns
Agritourism	0.12873	0.0583778	2.2051	0.03452	**
Workforce in agriculture	0.408857	0.202452	2.0195	0.05161	*
Savings in Credit Cooperatives	1.00071	0.418092	2.3935	0.02253	**

ns not significance; *** <1%; ** at 1%; *at 5%, Source: our elaboration on data ISTAT (2000, 2011).

The main results of panel data model using the random effects (GLS) in Italy has underlined an indirect relationship between the independent variable surface in agricultural activity and the dependent variable linked to the development of Cooperative Credit Banks; the independent variables growth in terms of pluriactivity in the primary sector in Italy, by the diffusion and the expansion of agro-tourism such as farm holidays farms, the increase in savings in cooperative credit banks and the growth in labour force in the primary sector have produced a direct effect on the development and growth of the dependent variable Cooperatives Credit Banks (Table. 2).

To sum up, comparing the two analysed countries, the panel data model was a good statistical approach to estimate which statistical socio-economic variables have been pivotal to act on the development of cooperative credit banks and to demonstrate as in Italy, more than in Ireland, the multifunctionality has been an useful, efficient and sensitive factor to guarantee the development in rural areas of Cooperative Credit Banks improving also, throughout an increase in the level of job opportunities, in terms of number of employed farmers, the development of co-ops specialised in allocation of loan and credit.

Final Remarks

The main results of this paper have showed a significant role and function of credit co-ops to protect the rural space. Policy makers and stakeholders in Italy and in Ireland should take into account as co-operative in general and credit co-ops in specific, can be tools able to improve the socio-economic development in rural areas and to reduce the marginalization of rural territories. In particular, the positive effect of cooperatives on the rural development is important in some marginalised rural territories located in inner Italian provinces, close to mountains areas, where agriculture is something of fundamental to guarantee the protection of environment by

multifunctionality. Instead, in some Irish less favoured rural areas, situated above an hypothetical line, that connects Galway to Dublin, in the north of the country, where farms have small plots to cultivate and there are limited opportunities to find a job, the Credit Union is a fundamental pillar to guarantee a local development, reducing financial exclusion, throughout the development of some community cooperatives specialized on tourism promotion, protection and promotion of local language, heritage centres and able to offer an array of services as rural tourism, agro-tourism, green tourism and sustainable tourism. In the next future, Credit Unions and Cooperative Credit Banks could be pivotal to use, to administer and to cope directly funds, grants and other means of economic and financial supports allocated by the European Union, through a bottom-up approach, characterized by a powerful level of social capital and social interactions, with paramount impacts to increase the reciprocal level of trust in many local rural communities. Comparing Credit Unions in Ireland to Italian Cooperative Credit Banks there is a main difference in terms of human capital and management; in fact, Irish Credit Unions are co-ops human self-aid centred instead, in Italy credit cooperatives are coops human centred but with a prevalent role and function of business centred management thus, credit cooperatives are more similar to limited companies than to co-ops, lessening from time to time the spirit of supporting local activities.

The credit cooperatives to be adequate to the next challenges should offer new services as fiscal and tax advice, business and agronomical consultancy towards farmers. Credit co-ops should be more flexible about the allocation of mortgages and loans; in fact, this is the main element to discriminate, in positive terms, traditional banks and cooperative credit banks. Italian credit banks required to farmers to satisfy rigorous criteria set out by Basel II accords, which are recommendations on banking laws and regulations to create an international standard for banking regulators and to guard the banks against risks of

default. To fulfil Basel II criteria is a negative downside for farmers, in particular in Italy, because they must respect some meticulous rules to access to credit; for example, the farmer must have a written and certified budget and the farmer has to respect also other fiscal and account rules, that are not compatible with the small economic dimensions of Italian farms. The cooperative banks are based mainly on personal, self-aid and mutual relationships, and they could lend easily money to the members only. Therefore, Cooperative Credit Banks and Credit Unions, in particular, in these times of economic crises, could be able to protect the rural areas from financial exclusion and socio-economic marginalization, lessening bureaucratic and fiscal aspects, with the positive effect to get better living conditions in the countryside and to give more opportunities to farmers, in specific young farmers, to invest money and to support their processes of innovation.

In conclusion, it is important to outline the role of the national and regional government to give more attention towards credit cooperatives, both in Italy and also in Ireland, following other initiatives put into practice in UK, where the State gave money to Credit Unions, with positive effects to support and to promote local development. To sum up, if the aim of central government and European Union is to encourage multifunctionality in agriculture by funds or other kind of financial aids, it is helpful to put into effect the growth of credit cooperatives, that can meet real needs of local rural communities, generating many informal personal networks of relationships, which could stimulate new actions in rural areas, reducing social exclusion and rural marginalization.

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