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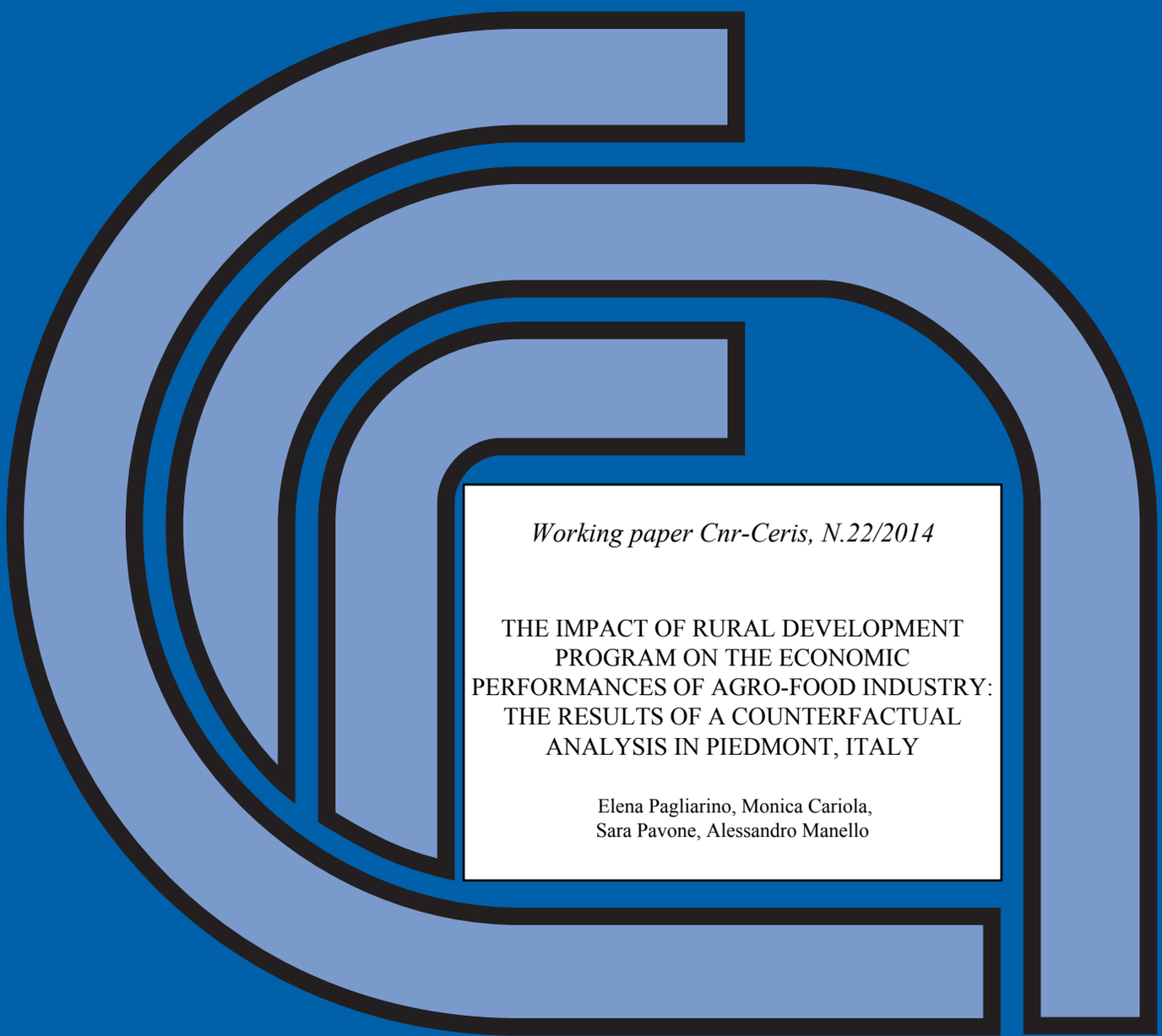

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THE IMPACT OF RURAL DEVELOPMENT PROGRAM ON THE ECONOMIC PERFORMANCES OF AGRO-FOOD INDUSTRY: THE RESULTS OF A COUNTERFACTUAL ANALYSIS IN PIEDMONT, ITALY

Elena Pagliarino, Monica Cariola,
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The impact of Rural Development Program on the economic performances of agro-food industry: the results of a counterfactual analysis in Piedmont, Italy[1]

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ABSTRACT: The purpose of this research is to compare, by means of a counterfactual analysis, the economic performance of Piedmontese agro-food enterprises in 2005-2012, period characterized by the economic crisis, in relation to whether they received fundings during the last two programming periods. In particular, the main objective is to analyse the role played by the Rural Development Programme in the agro-food businesses in Piedmont and the effects of financing on the enterprises under investigation. The results provide insights and guidelines for policy makers as well as for researchers involved in the evaluation of public policies and they can be used to elaborate effective interventions and targeted actions.

KEYWORDS: policy evaluation, rural development, counterfactual analysis, agro-industry

JEL CODES: O13, Q16, Q18, Z18

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CONTENTS

1. INTRODUCTION

The research presented here broadens and deepens the results of the *in itinere* evaluation (2010) of the Rural Development Programme (RDP) of the Region of Piedmont (Italy), which showed the existence of the so called 'picking the winners' effect. However, given that in 2010 the time elapsed since the adoption of new systems and equipment was not enough to properly evaluate the effects, this article aims to achieve more complete results.

The RDP represents the main tool to accommodate changes in the rural space and to support the agricultural, agro-food, and forestry sectors. Financed by the European Regional Development Fund (ERDF) and the European Social Fund (ESF), the RDP focuses on four main areas: improving the competitiveness of the agricultural and forestry sectors; improving the rural environment and the countryside; increasing the quality of life in rural areas and the diversification of the rural economy; and the LEADER initiative expected to augment the links among actions and territories for the development of the rural economy. Considering that the financial resources allocated to the RDP in Europe for the 2007-2013 period amount to 147 billion Euro, it clearly emerges how important it is to assess the efficiency and effectiveness of the programme.

This survey analyses the effects of investments financed through the Measure 123, aimed at increasing the added value of agricultural and forestry products. The beneficiaries of this Measure are small and medium enterprises dealing with the transformation, processing, distribution and marketing of agricultural and forestry products. Some of the priority objectives of the Measure 123 are: promoting the processing of agricultural and forestry products; encouraging the involvement of primary production sectors in the promotion of products; strengthening the economic and environmental performances of the enterprises; improving the quality of products and encouraging diversification and innovation.

The paper proceeds as follows: in section 2 the theoretical framework and the present research are described; section 3 provides an overview on the RDP measures for the agro-food industry; section 4 shows the results obtained while concluding remarks are given in the final section.

2. THE THEORETICAL FRAMEWORK AND THE RESEARCH METHODOLOGY

This work aims to better understand the role played by the Rural Development Programme (RDP) to support the agro-food industry in Piedmont, by means of counterfactual analysis. The agro-food sector is the portion of the production chain dealing with food processing and characterised by the highest added value.

Differently from other production sectors, it includes various types of businesses: large farming enterprises, cooperatives of producers, as well as processing industries. The role and effects of public support measures is a much debated subject in the economic literature (Bezlepkina *et al*., 2005; Kleinhanß *et al*., 2007; Alston and James, 2002; Sckokai and Moro, 2009, Cerulli, 2010), with some scholars claiming that

public support can have negative effects on the enterprises (Bergström, 2000; Bakucs *et al.*, 2007; Rizov, 2013) and other scholars detecting positive effects (Mary, 2013; Galanopoulos *et al.*, 2011; Czarnitzki and Lopes-Bento, 2013).

In relation to the case study presented here, have funded activities improved the performance of enterprises? Should beneficiary enterprises be the businesses which can be defined as having the *best performance* (Calabrese, 2008) or the businesses mostly in need of public subsidies (Bojnec and Latruffe, 2013)? If the answer is yes, what are the implications in terms of policy and programmes?

To answer the above research questions, this work takes into account the financial statements of the sample enterprises in order to analyse certain variables of interest at the microeconomic level. The economic indicators considered concern: business development, enterprise organisation, financial structure, assets structure, and profitability.

The *in itinere* evaluation carried out in 2010 (Milanetto *et al*., 2011), by comparing the economic performance of the two sets of enterprises under investigation, confirms the existence of a 'picking the winners' effect. In other words, the enterprises of the agro-food sector which received subsidies had the best financial and economic performance for what concerns both the 2007-2013 and the 2000-2006 programming periods. These preliminary results, therefore, show that the most successful enterprises on the market were also the most inclined to innovate and the most suited to receiving public funding.

Considering that in 2010 the enterprises had received financing but the time elapsed since the adoption of new systems and equipment was not enough to evaluate the effects of the investments, it seems important to complete the assessment by including this aspect.

When the implementation of a policy and its effects are evaluated, it is best to start by performing a process analysis. This does not study the effects caused by the policy implementation but analyses the whole process, from policy formulation to the actual offer of services/interventions, trying in particular to understand if the way in which the programme is managed is in line with its implementation guidelines and the target users envisaged and if it is possible to improve it while it is already in progress (Cariola, 2005).

However, due to lack of time and resources, the evaluation typically performed focuses solely on the results of the policy intervention, which primarily involves an evaluation of *performance*. In general terms, this evaluation applies analytical methods to produce, starting from empirical observations and the collection of mainly quantitative data, an assessment of the results achieved by implementing a certain action. Therefore, the scope of the analysis is limited to the aspects of an action which have a direct or indirect impact on the external environment, both for what concerns the outputs used externally and in terms of changes in the environment which the action aims to produce. In order for the performance analysis to reach its full potential, it should be followed by an impact analysis, to be performed once the intervention is concluded and using control groups which were not targeted by it, i.e. the so-called counterfactual analysis. Choosing the control groups – i.e. subjects which are similar to the beneficiaries but did not receive subsidies and are observed in order to understand what the situation

would be like had the action not been implemented, so as to measure its net effect – is no easy task and often leads to unsatisfactory results. Indeed, it is rather difficult to separate the effects of variables directly linked to a certain policy action from the effects other variables existing within a certain context which might have led to similar results also in the absence of subsidies (Martini, 2006).

The impact analysis and the counterfactual analysis always prove difficult to apply, especially because it is complicated to identify meaningful explanatory variables in the medium-long term and because they require long follow-up times to monitor results.

This is why they are rarely used in combination.

Performance evaluation is in an intermediate position along a scale of various assessment levels, since it does not merely acknowledge what has been done – which does not specifically require the analytical interpretation of data and information needed for performance evaluation –, but it is not yet able to determine whether the final objectives of a policy action have become stabilised in the long run, thus changing the pre-existing status quo, which is, instead, what an impact analysis aims to verify.

Based on these assumption and on the fact that, as mentioned in the introduction, the main purpose of this research project was to compare agro-food businesses in Piedmont which received and did not receive economic support through the Rural Development Programme, we tried to reduce as much as possible the criticalities highlighted above – mainly linked to the application of a counterfactual analysis able to identify truly explanatory comparison variables – by using all the tools and data on the actions analysed which were available at the regional level.

More specifically, for what concerns the beneficiaries of the actions, the analysis was carried out on enterprises which received public subsidies in the last two European programming periods. In order to do this, we considered enterprises which received financing at least once through: Measure G "Improving the processing and marketing of agricultural products", referring to RDP 2000-2006 of the Piedmont Region; Measure 123.1 "Adding value to agricultural products", referring to RDP 2007-2013 of the Piedmont Region.

The comparison between beneficiary enterprises and the control group also made it possible to achieve another objective, i.e. describing and analysing the agro-food system in Piedmont, concentrating in particular on its economic and financial performance during the 2005-2012 period.

The analysis was carried out by dividing the enterprises into five main agro-food production chains: wine production chain, cereals and rice production chain, meat production chain, fruit and vegetables production chain, and dairy products production chain.

The investigation included three distinct phases. During the first phase, we constructed a comprehensive picture of the agro-food system in Piedmont.

In the second phase, we carried out a performance evaluation on the economic-financial results of the enterprises and the trends of the 2005-2012 period. Lastly, we adopted the counterfactual approach to study the positioning of beneficiary enterprises in comparison to other Piedmontese enterprises which did not receive subsidies.

The analysis was performed on data from Bureau van Dijk's AIDA database ("Analisi Informatizzata Delle Aziende"), which provides financial statement data for a large number of Italian corporations and cooperatives. Corporations represent only a small portion of the total entrepreneurial activities in the agro-food sector, but they are largely predominant in terms of employment, creation of added value, and investments.

Choosing to use the AIDA database enabled us to concentrate on larger and more structured enterprises, such as corporations and cooperatives. Moreover, it allowed us to also include enterprises belonging to the primary sector, something which is not possible if other databases are used. By including the agricultural sector, we were able to look at medium-large agro-food businesses dealing with production as well as processing.

The corporations which were active at the time of the research were extracted from the AIDA database.

It should be underlined that, for the purposes of this research, an active business is understood as an enterprise which filed its financial statements in the two most recent years (2011 or 2012). By doing so, we avoided excluding businesses which were late in filing their financial statements.

Lastly, the available time series concerning financial statement data offered us the opportunity to further investigate the trends of some performance indicators.

This was done on a panel of businesses belonging to the agro-food industry for which financial statement data for the entire observation period (2005-2012) were available.

On the one hand, this methodology makes it possible to elaborate coherent time series, allowing for sound time comparisons. On the other hand, however, it reduces the number of businesses analysed, since it excludes enterprises set up or gone out of business after the first year under investigation as well as enterprises which underwent corporate changes during the period in question.

As for the micro-economic analysis of the enterprises, choosing to use the AIDA database allowed us, thanks to financial statement information, to study some variables of interest which are rather meaningful within a counterfactual framework, since they are clearly defined and stable, hence easily comparable over time.

More specifically, the indicators used for the purposes of this work are the following:

- indicators on business development and organisation: average number of employees, value added per employee, capital per employee;
- profit indices:
  - -ROE (net): Return On Equity is the rate of return on equity, given by the ratio between net income and total equity; it is a synthetic measure of an enterprise's profitability.
  - ROI: Return On Investment is an index calculated as the profit deriving from the capital invested in the firms over the total amount of capital invested.
  - ROS: Return On Sales is an index of economic performance of sales, given by the ratio between net operating margin and turnover and indicating the average operating profit per unit of revenue.

3. AGRO-FOOD INDUSTRY AND PUBLIC SUPPORT: THE RURAL DEVELOPMENT PROGRAMME

The agro-food industry is the production sector including agro-food businesses in the narrower sense of the word as well as enterprises producing technologies and services for this sector. The main technologies and services are: agricultural machinery, processing and packaging systems, packaging materials, traceability and process control systems, management systems, engineering services, food and quality technologies, patents, trademarks, regulatory and legal updating.

Agricultural production, processing, and distribution are the three main segments of the agro-food production chain, divided, in turn, into sub-production chains. The agro-food system of Piedmont is extremely variegated, although it displays some characteristics which are common to all its production chains and is strongly linked to certain peculiar features of the region. The region's agro-food production can be schematically divided into two types: undifferentiated production (commodities) and highly specialised production (specialities). The first category comprises cereals, meat (with some exceptions), milk and dairy not linked to typical productions, and most fruit and vegetables. The second group, instead, includes DOC (Controlled Designation of Origin) wines, cheeses with or without the IGT certification (Typical Geographical Indication), traditional agro-food products (known as PATs), meat with guaranteed breed and quality certification, organic products, etc.

For what concerns public policies targeting this sector, agriculture in Piedmont has heavily relied on the EU's Common Agricultural Policy (CAP). The CAP put in place a system of rewards and obligations which deeply influenced the farmers' income and production choices. Other relevant aspects concern financing for structural interventions (Rural Development Programme and regional or national laws), as well as hygiene-health and environmental regulations, which are becoming increasingly strict due to the growing importance of environmental issues within the framework of rural policies.

The purpose of this section is to provide a brief description of the two measures included in the Rural Development Programme which focus on the agro-food industry. The first is Measure G, referring to the 2000-2006 programming period, while the second, Measure 123, refers to RDP 2007-2013. The results of the analysis performed on the beneficiaries of these two measures are illustrated below. It should be noted that both measures continue and complete the actions initiated through Regional Law 95/95 "Regional Interventions for the development of Piedmont's agro-food system".

Measure G "Improving the processing and marketing of agricultural products" had among its key objectives the modernisation of agro-food processing equipment, the modernisation of agro-food marketing equipment, and a wider commercialisation of quality products, in particular typical and superior products strongly linked to the local territory. Accordingly, incentives were put in place to promote investments in processing and marketing equipment and in quality control systems. The beneficiaries of Measure G were mainly enterprises and, in particular, corporations, whereas cooperatives played a more marginal role.

By means of Measure 123 "Adding value to agricultural and forestry products", the 2007-2013 Rural Development Programme of the Piedmont Region continued the work initiated during the previous programming period, specifically through Measure G. Measure 123 comprises three actions aimed at increasing the value added of agricultural and forestry products and at supporting the development of micro-enterprises for the processing and marketing of agricultural products. Investments for which subsidies are available must pursue one of the following objectives: increasing the efficiency of harvesting, processing, and marketing processes; promoting the use of agricultural and forestry products to produce renewable energy for self-consumption; developing new products, processes, and technologies; reaching new market outlets; investing to increase quality and achieve product certifications, pursuing greater environmental protection; and encouraging waste recycling and disposal.

This brief introduction highlights the fact that, when comparing enterprises which were supported through RDP subsidies to non-beneficiary enterprises, it is fundamental to take the differences between the two groups into account. First of all, beneficiary enterprises display specific characteristics thanks to which they were able to receive financial aid from the RDP.

Secondly, further differences characterise the enterprises supported through Measure G and the enterprises supported through the Measure 123. Although this paper does not illustrate in detail the requirements needed to apply for the subsidies, it is worth noting that the selection criteria for the two programming periods are partially dissimilar. To begin with, the first element of discontinuity is given by the different orientation of the two measures, which implies different types of beneficiaries. The ultimate goal of Measure G was to boost the quantity of products, whereas the Measure 123 aimed to increase the quality of products. Indeed, the inputs, scenarios, and policies which led to the drafting of the Rural Development Programme for 2000-2006 and for 2007-2013 resulted in different choices to define the limitations regulating access to financial aid. As briefly mentioned above, difficulties in finding not only appropriate comparison variables but especially control groups of non-beneficiaries truly similar to the beneficiaries represent the chief limitation of a valid counterfactual analysis. In cases like this, when completely homogeneous data are not available, one might make the drastic choice to forego the comparison. Yet, we believe that even an imperfect correspondence between the two groups can lead to meaningful results, provide useful elements to evaluate the effects of the policy measures under investigation, and offer a preliminary evaluation of the role played by rural development policies in support of the agro-food sector.

4. RESULTS OF THE COUNTERFACTUAL ANALYSIS AND REMARKS ON THE EFFECTS OF THE SUBSIDIES

Let us now turn to the most significant differences emerging from the comparison between the enterprises subsidised through the Measures 123 and G and the enterprises which did not receive any financing.

Table 1 lists the number of enterprises which received aid through the two measures analysed here as well as the number of

Table 1 – Beneficiaries and non-beneficiaries of regional aid: number of enterprises by production chain.

Production chain	Beneficiaries		Non-beneficiaries
	Measure 123	Measure G	
Cereals and rice	5	6	279
Meat	7	13	152
Milk and dairy*	14	26	128
Fruit and vegetables	15	34	231
Grapes and wine	10	39	266
Other	3	4	28
Total	54	122	1.084

Source: Piedmont Region.

enterprises included in the control group (non-beneficiaries). The enterprises are divided on the basis of the production chain to which they belong.

The column "Beneficiaries of RDP funding at least once" refers to enterprises which were financed only once, either through Measure 123 or through Measure G or through both.

It can be seen that the enterprises which were financed through the RDP at least once represent 14% of the total, whereas 86% of the enterprises did not receive any aid. The main beneficiaries of the RDP were enterprises operating in the grapes-wine sector, while the highest number of non-beneficiaries is found in the cereals and rice sector.

Table 2 illustrates the data regarding the first variable chosen for the counterfactual analysis, i.e. the average estimated number of employees per enterprise. It emerges that the beneficiaries of Measure 123 were medium-small enterprises but, on average, larger (41 employees on average) than the enterprises in the control group (13 employees on average).

The same conclusion is reached when the beneficiaries of Measure G are analysed, since they are noticeably bigger (46 employees on average) than the enterprises in the control group.

Considering the 2005-2012 period, both the beneficiaries and the non-beneficiaries are generally characterised by a decrease in the number of employees.

Beneficiaries went from 51 to 45 employees, whereas non-beneficiaries went from 23 to 14 employees. Hence, both groups of enterprises suffered due to the economic crisis, which translated into personnel cuts, although these were more limited in the case of the RDP beneficiaries.

However, despite a drop in personnel between 2005 and 2009, which was equal to 54% among non-beneficiaries and 20% among beneficiaries, a recovery is detected in the 2009-2012 period, with 26% and 10% staff increases respectively.

These preliminary data hint at positive signs in the second three-year period, especially in relation to size growth.

Said growth is more visible among non-beneficiaries, which had, however, been more affected by personnel cuts during the crisis years.

Table 2 – Average estimated number of employees per enterprise (2012).

Production chain	Beneficiaries		Non-beneficiaries
	Measure 123	Measure G	
Cereals and rice	16	42	19
Meat	90	49	8
Milk and dairy*	43	52	14
Fruit and vegetables	39	42	10
Grapes and wine	24	45	9
Other	30	68	41
Total	41	46	13

Source: own elaboration from AIDA.

Moving on to evaluate the profitability indicators for what concerns the beneficiaries of funding from Measure 123 and Measure G as well as the enterprises in the control group, it is worth underling that significant differences have been detected in relation to all the profitability aspects analysed. The beneficiaries' level of profitability is much higher than that of non-beneficiaries, an aspect which stimulated further investigation.

As shown in table 3, the counterfactual analysis also regarded changes in value added per employee during the period between 2005 and 2012.

It emerged that in 2005 the two groups of enterprises did not display remarkably different values. Actually, the values of the control group were slightly higher than those of the beneficiaries. However, the gap widened over time, so much so that in 2012 there was a diametrically opposite situation. The value added per employee had grown by 24% among the beneficiaries, whereas it had dropped by 9% among non-beneficiaries.

The production chains displaying the most significant increase were: the milk and dairy production chain, the cereals and rice production chain, and the grapes and wine production chain. Conversely, decreases are found in the meat and fruit and vegetable sectors.

A more refined analysis was also performed using parametric (T-test) and non-parametric (Wilcoxon) tests, which confirms that major differences exist between the beneficiaries and the control group.

Table 3 – Added value per employee, 2005-2012.

Year	Beneficiaries		Non-beneficiaries
	Measure 123	Measure G	
2005	57.465	65.884	65.612
2007	74.535	73.772	67.340
2009	86.484	78.282	63.072
2012	77.665	71.078	50.096

Source: own elaboration from AIDA

Table 4 – Capital per employee, 2005-2012.

Year	Beneficiaries		Non-beneficiaries
	Measure 123	Measure G	
2005	122.159	123.508	119.041
2007	134.351	176.396	161.642
2009	161.800	261.604	227.732
2012	218.945	208.195	191.958

Source: own elaboration from AIDA

Looking now at the enterprises' capital per employee (table 4), the data once again show that the enterprises which received RDP funding at least once were more virtuous. In 2005 they already displayed higher values, and their growth rate during the 2005-2012 period was more considerable than that of agro-food enterprises which were not granted access to public funding. These findings are somehow predictable and fully in line with the type of financing enjoyed by the beneficiaries.

Indeed, it should be underlined that the funding made available through both measures aimed at boosting competitiveness was, therefore, used to finance major structural actions in the beneficiary enterprises. Since capital per employee is an indicator of an enterprise's level of mechanisation, the beneficiaries increased their fixed capital through financing and, as a result, ended up having higher values of capital per employee than the enterprises belonging to the control group. More specifically, when analysing the first profitability indicator, i.e. ROI (table 5), it can be seen that the beneficiaries displayed a lower index than the control group for most of the period between 2005 and 2012. ROI refers to an enterprise's profitability in relation to the capital invested. Since they increased the capital invested thanks to public financing, as for the ratio between operating results and said capital (which is the denominator of this ratio) the beneficiaries display a lower value than the non-beneficiaries, which probably did not invest large sums during the period in question. However, this might mean that a rise in capital thanks to public financing was not actually able to stimulate a proportional (or more than proportional) increase in operating income, which is directly related to an enterprise's core activities. Hence, in terms of greater profitability of the capital invested, public support does not appear to have been very effective. Indeed, the enterprises which received aid through at least one RDP measure had the lowest ROI in 2012, although in 2007 it was higher than that of non-beneficiaries. It is worth pointing out that the trend reversed in 2009.

Yet, it should be noted that the investments made by the beneficiaries thanks to public funding might not have yielded immediately detectable results over such a short period. Therefore, especially when looking at the profitability indices linked to Measure 123 – more concerned with structural rather than incremental innovations –, it is not yet possible to determine whether their decrease in 2012 is due to the limited effectiveness of public actions or depends on the short time elapsed, insufficient to understand if the investments achieved the income objectives pursued by the Measure.

Table 5 - ROI of non-beneficiaries, beneficiaries of Measure 123, and beneficiaries of Measure G, 2005-2012.

Year	Beneficiaries		Non-beneficiaries
	Measure 123	Measure G	
2005	5,33	4,94	5,32
2007	6,94	5,69	5,37
2009	4,22	4,15	3,93
2012	3,31	3,27	3,78

Source: own elaboration from AIDA

Table 6 - ROS of non-beneficiaries, beneficiaries of Measure 123, and beneficiaries of Measure G, 2005-2012.

Year	Beneficiaries		Non-beneficiaries
	Measure 123	Measure G	
2005	2,33	2,37	2,05
2007	3,66	1,88	1,95
2009	2,94	1,46	1,39
2012	1,59	1,57	1,42

Source: own elaboration from AIDA

When examining another key profitability indicator, ROS, which considers operating income in relation to sales, the beneficiaries display a more positive trend, which then reverses in the most recent period, probably also due to the difficult economic circumstances and other factors already underlined in the analysis of ROI. Lastly, ROE displays a more uneven trend, which makes it harder to draw significant conclusions, but the difficulties encountered are probably the same as those mentioned above for the other two indices. In any case, all the beneficiary enterprises seem to be characterised by larger amounts of capital per employee, so that their labour profitability is higher, which, however, does not translate into greater profitability levels than those of the control group. The productivity indicators analysed show that the effectiveness of public actions aimed at stimulating competitiveness in the sector is not yet extremely evident, at least in the short term. Indeed, a comprehensive counterfactual evaluation of this kind would require a follow-up analysis over a much longer period of time after the implementation of public support measures.

To conclude, it is worth underlining that the enterprises able to access structural funds tend to be larger and better organised, which means that they can invest time and resources in the difficult process of submitting a funding application, but they are not necessarily the most profitable, above all after 2010.

5. CONCLUSIONS

The sample under investigation comprises enterprises which received financing earmarked for the agro-food industry during the periods 2000-2006 and 2007-2013 and enterprises which did not received public support. Even if the sample includes various types of businesses: large farming enterprises, cooperatives of producers, as well as processing industries, from the results it can be concluded that the economic downturn has generally affected the entire agro-food sector, reducing its profit margins.

Within this scenario characterised by a negative economic situation, the performance evaluation carried out by means of a counterfactual analysis shows that the enterprises which received public aid were not always able to curb the impact of the crisis more effectively than the non-beneficiary enterprises belonging to the control group. They managed to do this in terms of value added per employee, capital invested per employee (also thanks to their larger size), and, more generally, in relation to job retention. Vice versa, profitability understood in the narrower sense, expressed by indicators like ROI and ROS, did not display a more positive trend among the beneficiaries, affected by the economic crisis especially in the more recent period. Indeed, in 2012, these values were lower for the control group, but to a more limited extent. However, as already mentioned above, if the aim is to provide a realistic evaluation of the underlying policies, a comprehensive counterfactual analysis of this kind would require a follow-up analysis over a much longer period of time after the implementation of public support measures. Furthermore, as pointed out at the beginning of this paper, a counterfactual analysis does indeed have certain limitations, linked to the fact that it is rather difficult to separate the effects of variables directly linked to a certain policy action from the effects other variables existing within a certain context or related to (not always observable) intrinsic enterprise characteristics, which might have led to similar results also in the absence of subsidies. In this regard, an interesting point emerged from the questionnaire presented to the enterprises which received funding through Measure 123 – the results of which were presented during the RDP *in itinere* evaluation. When they were asked whether they would have made investments even without receiving public subsidies, 49% of the enterprises gave a positive answer. Almost half of the sample stated that they were willing to innovate even if this meant using their own resources. This result is cause for reflection, as it seems to support the abovementioned hypothesis that the beneficiary enterprises are more geared towards innovating and intercepting public aid, while also having more financial resources to make effective investments. On the other hand, this suggests that public funds might be a valid tool to strengthen the competitiveness of enterprises, even though this is not always true. Furthermore, despite the fact that 49% of the enterprises declared that they would have made investments even without RDP support, no information is available on the quality of these investments if public contribution had not been received. Hence, another sound hypothesis might be that, without public aid to the agro-food industry, around half of the enterprises would have made investments, but these would have been qualitatively inferior.

If this hypothesis had been confirmed, Measure 123.1 would have indeed succeeded in strengthening the competitiveness of the beneficiaries. Yet, the counterfactual analysis involving a comparison with the control group of non-beneficiaries indicates that, especially in relation to the profitability of the capital invested, the performance of the non-beneficiaries is not actually very different from that of the beneficiaries. Indeed, as already underlined, the non-beneficiaries were less affected by the crisis than the beneficiaries, thus showing that they were somehow more able to cope with a difficult economic situation.

This hypothesis was, however, not confirmed by the empirical evidence emerging from a previous analysis of economic performance referring to 2005-2009. The beneficiaries of both Measure 123 and Measure G coped better during the crisis than the non-beneficiaries. For what concerns the financing provided by the new RDP, since most of the enterprises which were being supported had not yet made their investments in 2009, the positive data might be ascribed to these enterprises' stronger competitiveness. As for the aid offered during the previous programming period, the hypothesis that investments had an effect on the enterprises' competitiveness is confirmed.

On the one hand, as expected, it emerges that sounder enterprises are better equipped with the skills and means to devote financial resources (time and professional expertise) to the preparation and submission of funding applications, diverting said resources from their everyday business activities. On the other hand, this situation raises major questions about whether public funding should be allocated to the enterprises which would achieve positive results even without it.

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