

Annex 1 – Extended abstract for Contributed Paper session

Paper Title	Evaluating the Effectiveness of Leader on Job-Creation
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Contributed Paper abstract prepared for presentation at the 91st Annual Conference of the Agricultural Economics Society, Royal Dublin Society in Dublin, Ireland

24 - 26 April 2016

Abstract	200 words max
<p>This study investigates the relationship between the number of jobs created and grants awarded as part of Leader within the Rural Development Programme (RDP). A case study of Northern Ireland is evaluated using ex-post data based on Axis 3 applications in the 2007-2013 period. A two-step procedure is used to estimate a negative binomial model and correct for sample selection. Pairs bootstrapped standard errors were calculated to improve the efficiency of the estimates.</p> <p>Preliminary results indicate that there is a positive and statistically significant relationship between number of created jobs and the amount of awarded grant per application. However, significant differences are also found once the specific categories, or measures within Axis 3, of each application were considered.</p>	
Keywords	Public spending, job creation, rural development programme, count data models, sample selection
JEL Code	Discrete Regression and Qualitative Choice Models C35 Agricultural Policy Q18
Introduction	100 – 250 words
<p>Leader is an initiative of the EU to support rural development projects at the local level in order to revitalise rural areas and create jobs. Leader was first implemented in Northern Ireland in 1994 and has subsequently grown steadily in terms of total budget and number of initiatives.</p> <p>Despite the huge amount of research on the effectiveness of Leader, there is still a lack of evidence about its effectiveness. Moreover, the United Kingdom may design its own Leader program in the near future due to the forthcoming Brexit and, therefore, Northern Ireland will require an evidence base to support its position on its preferred future policy landscape.</p> <p>This study investigates the capability of Leader to create jobs in Northern Ireland by analysing <i>ex-post</i> application-level data for the 2007-2013 period. The main relationship explored is between the number of created jobs and the amount of grant paid per application. As Leader during the period was organized into six measures, each with different objectives and funding structures, the relationship between grant funding and jobs is examined for each measure.</p>	
Methodology	100 – 250 words

The sample size corresponds to 6,363 applications. The dataset contains variables that describe the economic and demographic characteristics of each application. In addition, the dataset contains the amount of grant paid and the target number of jobs created for every completed application, and actual number of jobs of all concluded applications. Finally, through the spatial coordinates, we matched every application to the corresponding geographic region such as Super Output Area and Electoral Ward. This was done to populate the model with socio-economic variables of the application's local area and so to control if these characteristics affect job creation.

The methodology to estimate the relationship between the jobs created and the amount of grant awarded is based on count data models. In particular, we estimated a negative binomial model to control for the over-dispersion of the dependent variable, the number of jobs created. In addition, we include the log of the duration in days as an exposure variable to control for different observation periods of the applications.

Finally, we corrected the sample selection problem through the inverse of the Mills ratio in the structural equation (job-creation) after estimating a probit model for the selection equation. To improve the efficiency of the standard errors, we jointly performed pairs bootstrapping of the selection and the structural equation.

Results	100 – 250 words
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Preliminary results indicate that the relationship between the number of jobs created and the amount of grant depends on which Axis 3 measure is associated with the application. Although the total effect is not statistically significant, a positive and significant relationship is present once each measure is separately considered.

In particular, the use of binary response variables allowed recognizing the overall effect from the individual effect of every measure. In terms of jobs created, the strongest effect is observed for the second measure “business creation and development” followed by the first measure “diversification into non-agricultural activities”. All the other four measures failed to show any statistical significant relationship.

The second and first measures show different degrees of marginal effects: a one percent increase of the awarded grant increases the expected number of created jobs by 1.46 in the former and 0.81 in the latter.

Discussion and Conclusion	100 – 250 words
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Results indicate that there is a positive relationship between number of jobs created and grant awarded under Axis 3 in Northern Ireland during the 2007-2013 period. However, statistically significant differences were found with respect to the category assigned to the applications, namely their “measure”. This is not surprising, as some measures by conception are more linked to economic development, while others are focused on social or cultural development. This seems to be supported by the data, in the sense that the measures statistically linked to job creation are those explicitly targeting business.

However, it is also possible that the design of individual measures *per se* plays a fundamental role in what types of applications are successful. This means that the specific thresholds and fixed budget designed for each measure can affect the

outcome in terms of how much grant money is awarded per application and, therefore, the creation of new jobs. The next stage of research deals specifically with this issue.