THE DETERMINANTS OF TIME SPENT ON SOCIAL, COMMUNITY AND LEISURE ACTIVITIES BY FARM HOUSEHOLDS IN THE WEST OF IRELAND

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Abstract

Understanding the determinants of farm households' social engagement patterns in rural communities is important for public policy programs that seek to improve the well-being of the rural population and promote rural sustainability. Within this context, this paper examines the factors that influence both the participation in, and the number of hours dedicated to, social, community and leisure activities among farm operators and their spouse/partner in a region in the West of Ireland. The theoretical underpinnings of this research are an extension of Becker's (1965, 1974) and Gronau's (1977) agricultural household models, whereby households maximise utility subject to a set of constraints, household income and time endowment. The study employs a time-use diary survey, combined with an individual and household survey, to collect data from farm households in counties Galway, Mayo and Roscommon. A Craggs double hurdle model is used to estimate the predictors of time-use and the number of hours spent participating in a range of off-farm activities.

Keywords: Rural sustainability; Agricultural household model; Time use survey; Craggs two-step model.

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1. Introduction

The aim of this paper is to examine the factors influencing both the participation in, and the number of hours dedicated to, non-market activities among farm operators and their spouses/partners in the West of Ireland. The non-market, free-time pursuits examined are social, community and leisure activities. The Irish Government and the European Union, in various policy documents, have recognised the significant contribution of farm families to rural communities and have pledged their support to ensure the maximum number of farm families. Their policy frameworks are directed towards the maintenance of the rural population by providing income support for farm households and encouraging them to take a more active role in participating in community affairs (DAFRD, 1999; European Union, 1999; DELG, 2002).

Policy interventions, such as those mentioned, have much to learn from a better understanding of the reasons why some farm households are more actively engaged in their communities than others. To date, very little work has been done on the determinants of participation in community and social activities by farm households in Ireland. Thus, this paper addresses an important gap in the literature. A time-use diary survey combined with a questionnaire that collects information on the respondents' background characteristics is utilised for the collection of data, thereby facilitating more accurate measurement of time allocation for households. Farm operators and their spouse/partner were selected as the target population and all respondents kept diaries for two distinct 24-hour day periods. Each questionnaire records, from a list of 31 activities, all primary (and secondary) activities performed in fixed 15-minute intervals within a structured diary format.

2. Theoretical Framework

The agricultural household model used is an extension of the simple household consumption-leisure decision model provided by Becker (1965, 1974) and Gronau (1977) in which household members maximise total utility, constrained by the household income and time endowment. The decision units are single-family farm households[1]. Household members' welfare is assumed to be represented by a single household utility function and household utility is assumed to depend on:

$$U = U(Y_h, T_{h_i}; Z_{h_i})$$

where Y_h represents goods purchased for direct or indirect consumption; T_{h_i} represents home time for individual i ($i = 1$ for the farm operator and $i = 2$ for the spouse/partner); and Z_{h_i} represents "other" characteristics of household member i, such as human capital.

In the model, each household member has an endowment of time in each year ($\overline{T_i}$). It is assumed that time allocated to home and farm work is positive, but that hours of work in off-farm employment and hours spent on non-market activities may be zero i.e. the individuals in question may not work off-farm or may not participate in social, community or leisure activities. Thus,

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[1] It is reasonable to assume in the case of West of Ireland farm households that there is only one family living in each household.

$$\overline{T} = T_{f_i} + T_{of_i} + T_{h_i} + T_{s_i} + T_{c_i} + T_{l_i},$$

where $T_{f_i} > 0$, $T_{h_i} > 0$ and $T_{of_i} \geq 0$, $T_{s_i} \geq 0$, $T_{c_i} \geq 0$, $T_{l_i} \geq 0$, and T_{f_i} = on-farm work, T_{s_i} = social activities time, T_{of_i} = off-farm work, T_{c_i} = community time, T_{h_i} = home time, and T_{l_i} = leisure time. In the model, it can be shown that farm household members use their time in such a way that the shadow value of time in its different uses is equalised for all uses.

3. Modelling Approach

The starting point of the modelling approach assumes that the individual faces two sequential and possibly interrelated decisions: 1.) whether or not to participate in the various social, community or leisure activities; and, 2.) how much time to allocate to each activity. The first stage is a discrete choice of whether or not to allocate any time to the various activities during an observed diary day. Once the decision to participate has been made, the second stage involves selecting the amount of time to devote to the activity. In this paper, a Cragg's hurdle model for both operator and spouse is used, following the two step procedure outlined. More specifically, a participation probit model, estimating the binary choice between participating and not participating is combined with an hours truncated regression model for positive values of time spent ($T_{s_i} > 0$, $T_{c_i} > 0$, $T_{l_i} > 0$). A key assumption of the Cragg model, as applied in this case, is that the parameters of the determinants of the participation decision and the social, community and leisure hours decision are not restricted to be the same for both decisions. For example, having children may affect the participation decision in one direction (e.g. decreased likelihood of participation), but may affect the hours decision in a different direction (e.g. increasing the number of hours).

4. Results

Survey data for this research is currently being finalised for analysis. A full paper and presentation of results will be available for the AES conference.

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