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“Repositioning African Agriculture by Enhancing Productivity, Market Access, Policy Dialogue and Adapting to Climate Change”
Farming, the Environment and Entrepreneurship in the Shropshire Hills 1997-2009

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Abstract
The theme of this paper is the impact of participation in an environmental scheme on the host SME and the measurement of other entrepreneurial activity associated with the same SMEs. The following work objectives were adopted: To examine a representative sub sample of these SME participants and non-participants in the Shropshire Hills Environmentally Sensitive Area (SHESA) and to conduct a longitudinal study over the 23 year period 1986 to 2009 of farming and enterprise in the families concerned.

Busenitz, Gomez and Spencer (2000) inform the study in their conceptual framework, relating the institutional perspective of entrepreneurship (regulatory, cognitive and normative) with the sample taken for this research. The conceptual framework of McElwee (2008) and the earlier work of Carter (1998) are applied to classify the actions of the farmer SMEs with relation to their entrepreneurial activities.

A longitudinal study of a stratified random sample of rural SMEs in the Shropshire Hills was undertaken in 1997 with 43 face to face interviews. A telephone survey of the same sample was carried out in 2008. Four face to face interviews with farmer SMEs were carried out in 2009.

The evidence shows that the participants in the environmental scheme farmed more intensively than the non-participant group. Participation in the environmental scheme did not appear to be an aspect of or to enhance farmers’ entrepreneurial tendencies.
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The work has implications for agencies involved with increasing entrepreneurial capacity and promoting responsible business behaviour and corporate social responsibility in SMEs and with farmers and consultants.

Key Words: Environmentally Sensitive Area, rural entrepreneurship, rural enterprise, institutional perspective, pluriactivity, farm diversification.

Introduction

Government and European Union (EU) policy on the countryside has been a key feature of countryside development since policy intervention commenced in the UK with the 1947 Agriculture Act and even before this with the Corn Laws of the 19th century. The Shropshire Hills Environmentally Sensitive Area (SHESA) was designated in 1994 as part of a UK Government initiative in response to the EU wide regulation 2078/92 which created 22 similar areas where financial incentives had been on offer to farmers to farm in a way of benefit to conservation and the environment. The objectives of Environmentally Sensitive Areas (ESA’s) were ‘to maintain and enhance the landscape, wildlife and historic value of an area by encouraging beneficial agricultural practices’ (MAFF,1998).

This was an environmental scheme with environmental objectives; however the Ministry of Agriculture, Fisheries and Food (MAFF) were offering this scheme to farm businesses for their adoption. The business impacts were not known when the scheme was designated, however businesses had to be financially viable throughout the 10 year scheme period or the grants would be reclaimed by MAFF upon business failure with interest. Business financial viability, that is defined as profitable, feasible or with positive annual net cash flow and with a worthwhile Return on Capital Employed (ROCE) (Turner and Taylor, 1998) would be affected in a positive way by the payment of the premium but in a negative way by the cost of compliance with the prescription.

Since the 1990’s European agricultural policy reform has increasingly incorporated an environmental perspective, this being integrated into the Common Agricultural Policy (CAP), (Communities, 2006). This increased environmental emphasis was established with the 1992 CAP reforms that provided for Member States to establish agri-environment schemes in Agri-environmental Regulation, (Council Regulation (EEC) No. 2078/92) (European Commission, 1992). Indeed some Environmentally Sensitive Areas had already been established in the UK as early as 1987.
The year 2001 saw the first large scale Foot and Mouth Disease (FMD) outbreak in England since 1967. All livestock businesses were directly affected, not least with relation to cash flow problems caused by closed markets if not by actual infection with the disease or the contiguous cull. Research on this FMD outbreak concluded that along with these direct effects there were a number of indirect effects such as the loss of trust in administrations (Scott, Christie and Midmore, 2004). If entrepreneurs are to benefit from the support programmes provided by the Government a loss of trust might affect the degree of engagement achieved between the Government or their agents such as the RDAs (Rural Development Agencies) and business.

Nevertheless there is evidence that SMEs have established linkages between responsible business practices, such as participation in environmental schemes and improved competitiveness and economic results (Murillo and Lozano, 2006). It has been shown in research carried out with Austrian SMEs that Responsible Business Behaviour (RBB) is intrinsically linked with social issues and the creation of sustained competitive advantage for the SMEs concerned (Avram and Kuhne, 2008). In Cambra-Fierro, Hart and Polo-Redondo (2008) carried out with Spanish SMEs, a belief that an environmentally respectful management policy would contribute to the transmission of a positive image of the business and its products was found.

A transition from headage based subsidies and the commencement of the new Single Farm Payment (SFP) took place in January 2005. This was followed later that year by the introduction of a new conservation scheme called Higher Level Stewardship (HLS) which required applicants to offer conservation improvements to the Government selected from a menu of potential conservation options in exchange for payments and the closure to new applicants, but not extensions for existing participants, of all 22 of the UK ESA schemes.

Research on the issue of the type of farmers and entrepreneurial activity engaged in was carried out in a survey of 296 farm owners (Carter, 1998). This proposed a definition of non-farming business enterprise activity as ‘additional business activities’ the distinction was whether the output could or could not be considered to be under the heading of ‘agricultural production’. Carter’s classification built on research carried out in the West Midlands that listed three types of farm owner-monoactive producers, structural diversifiers and portfolio owners respectively (Ilbery, 1991).

Following a series of interviews in 2006 with a sample of 25 farmers and in discussions on their business activities a conceptual framework that
classified farmers using two dimensions: farmer-farmer entrepreneur and entrepreneur-contractor were proposed (Mc Elwee, 2008):

Type I: Farmer as farmer-traditional land-based economic activity;
Type II: Farmer as entrepreneur-Innovative, opportunity orientated. Changing, flexible and diverse economic activities;
Type III: Farmer as contractor-Ownership of specific skills/expertise and experience coupled with possible ownership of ‘plant’;
Type IV: Rural entrepreneur, not farmer Ownership of farm, land or business.

This paper investigates the changes in agri-environment policy over this period via two farmer surveys in 1997 and 2008 with some additional pilot survey work dealing with the classification of the entrepreneurial inclination of the farmer in 2009. Together with further evidence this paper evaluates the changes in farming and farm business structures in the SHESA over this period (Tate, 2001; Tate, 2010).

Performance of the SHESA scheme was kept under review by two UK government departments, MAFF and the expenditure watchdog, the Audit Commission. The latter commented in 1997 that ‘the take-up rate of the six ESA’s launched in 1994 (the Stage IV Group) has been slower than that in previously designated areas’ (NAO,1997).

Farmers’ rate of participation in the SHESA had grown significantly from 45.9 per cent of eligible area in 1996 to 71.4 per cent of an eligible area of 32,900 Ha by 2003 compared with a national average of 64 per cent. The cost of the ESA programme to the Government in payments to farmers was £53m for 614,450 Ha enrolled (Defra, 2004). A review of the whole agri-environment programme in 2003 and the performance monitoring reports completed by the relevant agencies stated that ‘on average just over half the PIs (Performance Indicators) had been met on Stage I and Stage II ESA’s....and a quarter of Stage IV ESA’s. The report added that the impacts on wildlife and conservation in each ESA were, in any case, difficult to quantify, especially for the Stage IV ESA’s (Ecoscope, 2003).

Materials and Methods
Longitudinal studies are acknowledged to be the most appropriate research method for researchers to examine change and development over a period of time (Saunders Lewis and Thornhill, 2009). By using this method the researcher is able to exercise a measure of control over the variables being studied and their impact on the subject of the investigation (Adams and
Schvaneveldt, 1991). This method was chosen for the investigation as being the most appropriate to achieve the research objectives.

The original Phase I study was carried out by face to face interviews. This involved the researcher visiting 43 farms within the SHESA between July 1996 and February 1997, of which 42 met the sampling criteria for the study (Tate and Park, 1999). The sample comprised 22 SHESA non-participant and 20 participant farms as a stratified randomised sample and triangulated for the characteristic of area farmed with the MAFF population of holdings for Agricultural District number eight within Shropshire for the 1994 Agricultural Census (MAFF, 1996).

The research activities of Phase II were:

1. To contact the original sample of 42 farms surveyed in the 1997 investigation to ascertain changes that have been made in both their farm and non-farm enterprises over the past 11 years;

2. To relate these changes, where appropriate, to participation or non-participation in the SHESA or to changes in farm support or other policy issues over the 11 year period.

Phase II research activities consisted of a telephone survey in November 2008 of 40 farmers from the original sample of 42 farmers. Of the 40 contacted, 33 were able and willing to assist with the re-survey, while the remaining 7 were accounted for by four deaths and three farmers retiring. In all cases the land had been amalgamated into other units with the loss of an identifiable system of management and stocking regime.

Phase III of the research was executed in April 2009 following the development of the taxonomy of entrepreneurial farmers (Mc Elwee, 2008). This prompted the author to undertake some pilot work in April 2009 to establish in detail how the farming families and associated businesses had developed over a longer period. Four farm SMEs were selected to represent the four quadrants on the farm size and intensity grid shown below (Tate, 2001) that was also employed as the case study sampling frame in that earlier study. This grid distributed the 42 farm sample in the SHESA study by employing the farm size distribution or farm size index as the x-axis and a measure of farming technical intensity as the y-axis, the latter incorporating stocking rate, inorganic fertiliser nitrogen application, inorganic phosphate and potash fertiliser applications and lambing percentages as proxies for farming technical intensity. The four farms sampled were thus one each from the four quadrants of various farm size and intensity groupings as follows.
The four farms were visited and a number of open questions put and the responses recorded on audio cassette and used to assess the development of the business and any associated entrepreneurial activity. The purpose of the interview was to categorise the business activity using the conceptual four farm type framework (McElwee, 2008).

**Results and Discussion Phase I**

In 1996 the SHESA consisted of 38,500 Ha of hill farm land comprising some 531 registered holdings with 244 participants and an average holding area of 48.25 Ha (ADAS, 1996). The land use in 1996 was predominantly grassland at 73 per cent compared with the average for England and Wales of 39 per cent and 355 of the 590 holdings in Ministry of Agriculture Shropshire County Census District 8 or 60% were less than 50 Ha in size (MAFF, 1996) with the predominant enterprises as cattle and sheep.

![Figure 1-Farming Intensity and Farm Size-42 Farms from the SHESA from Tate (2001)](image)

Potential effects of the impact of participation in the SHESA were considered including stocking rates of sheep and cattle, changes in farm management practices and farmers’ business and personal objectives.
The MAFF Grazing Livestock Units system was used to assess the stocking densities of both the participant and non-participant groups of farms. The 1997 survey found that participants stocked at a greater stocking rate than non-participants in the SHESA. The actual figures showed a slight difference in stocking rates (P=1.46 GLU Ha⁻¹, NP=1.37 GLU Ha⁻¹). Although this difference was not statistically significant it was still surprising to find that participants in an environmental scheme were actually farming more intensively than non-participants.

Table 1: Perceived disadvantages of participation in the SHESA-participants and non-participants

<table>
<thead>
<tr>
<th>Reason given</th>
<th>Participants n=22</th>
<th>Non-participants n=20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced autonomy</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Reduced fertility</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Stocking rate limits</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Reduced capital value</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Reduced income</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Totals</td>
<td>11</td>
<td>29</td>
</tr>
</tbody>
</table>

Both participants and non-participants were asked their views on their perceived disadvantages of participation in the SHESA scheme. All respondents in the non-participant group mentioned at least one disadvantage from participating as shown in Table 1, the most common being reduced autonomy. The reduction in autonomy was linked to increased bureaucracy and administration.

The significance of this response was highlighted when the sample was asked what they found were the attractive aspects of farm work and farm management as an open question with the interviewer logging the responses as represented in Table 2.

Table 2: Attractive aspects of farm work and farm management

<table>
<thead>
<tr>
<th>Attractive aspect</th>
<th>Participants n=22</th>
<th>Non-participants n=20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independence and an open-air life</td>
<td>28</td>
<td>35</td>
</tr>
<tr>
<td>Working with stock</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>Variety of tasks</td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td>Totals</td>
<td>47</td>
<td>63</td>
</tr>
</tbody>
</table>
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The most popular categories were independence and an open-air life (63 responses) and the work with livestock (25 responses). None stated that they recognised any social esteem from farming or the benefits of being in business or the tax benefits of being self-employed. The attractive aspects of the work were more intrinsically bound with the lifestyle experienced by the farmer, rather than with aspects of business and entrepreneurship.

The non-participant group perceived participation as potentially onerous when their responses were compared with the actual experience of the participant group. These findings were supported by a similar study in the Pennine Dales ESA (Whitby, Saunders and Walsh, 1992) which commented that there appeared to be a gulf in the way that ESA scheme was perceived by participants and non-participants. The participants were much more positive about the scheme, in line with the findings of this research in 1997.

In 1997 the SHESA consisted of 531 registered holdings and the average holding area of these was 48.25 Ha (ADAS, 1996). Grassland percentage cover had declined slightly over the period for the South Shropshire District as a whole from 73% to 71% (Defra, 2008a) with the predominant enterprises remaining as cattle and sheep. The same data source indicated that as at 2007 average farm size had remained almost unchanged at 43.35 Ha.

**Results and Discussion Phase II**

On the issue of diversification of income there had been no applications to either the England Rural Development Plan (ERDP) or latterly since 2007 the RDPE, both schemes set up to encourage ‘on-farm but non-farm’ sources of income. There had been some development involving pluriactivity, two wives having decided to go out to work part-time and three farms going into farmhouse bed and breakfast accommodation. A number of respondents claimed to be aware of encouragement in the direction of pluriactivity.

Regarding changes in farming policy the main areas to be reported were a loss of all cattle enterprises on seven farms including four SHESA participant and three non-participant holdings, due to the availability of government schemes, a lack of economies of scale, poor buildings, poor or uncertain profitability in recent times and/or a need to improve handling facilities. Reduced fertiliser inputs were also claimed and a greater reliance on natural manures in the future due to large increase in inorganic fertiliser prices.
Table 3 shows that there was still a small positive differential between the stocking rate of participants and non-participants of 0.10 GLU, not far short of one ewe per hectare.

Table 3: Stocking rates for SHESA participants and non-participants

<table>
<thead>
<tr>
<th>Year</th>
<th>Participant sample</th>
<th>Non-participant sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>1.46</td>
<td>1.37</td>
</tr>
<tr>
<td>2008</td>
<td>1.42</td>
<td>1.32</td>
</tr>
</tbody>
</table>

Of the 33 respondents 15 had been participants in the SHESA in 1997 and 18 had been non-participants. Only 8 non-participants remained in 2008, 10 having become participants in the scheme in the intervening period. When asked why these changes had come about the new participants had been influenced by the financial incentives on offer and reports from friends and neighbours that the scheme did not greatly affect individual autonomy, this discounting the initial widespread reservations of 1997. The remaining 8 non-participants claimed that they wished to remain autonomous and carry on farming in the way they thought appropriate.

Results and Discussion Phase III

Only one of the sampled farms, Farm Sample Number 27, had recorded any entrepreneurial activity in the 1997 or 2008 surveys and was classified as Type II using the adopted taxonomy (Mc Elwee, 2008). A summary of some of the responses to the open questions are given here.

Farm Sample Number 35-This was a relatively larger and more intensively managed farm in Quadrant A of the farm size and intensity grid. This was a three generation farming family, the grandparents being retired but living independently in one of the farm houses. The son V who ran the farm himself had three sons:

‘We are very busy with all the stock that we carry and with Mum and Dad getting on a bit and my three boys all with jobs in town that’s enough for me. I get some help from C (his wife) and the boys at harvest and lambing and that’s about it really.’ This was categorised as a Type I farm.

Farm Number 27-This was a large and extensively run farm in Quadrant B that had ventured into farmhouse bed and breakfast, an activity disclosed in the 2008 survey:
'I'm over 60 now and handling the cows on your own, possibly at two o'clock in the morning was getting too much. All the cows went on the OTMS and I have sublet some of my land, retaining the ESA premium. My two sons both work away and I can’t see them coming back to this. The wife said that she would be happy to make better use of the farmhouse with B&B. She enjoys having visitors.’ This was categorised as a Type II farm.

The loss of some of the survey sample was to be expected since the 1997 survey when the average age of the participants in the SHESA was 58 and that of the non-participants was 51. Simply by adding 11 years to the sample declared ages in 1997 those for 2008 become 69 and 62 respectively with a sizable minority over the age of 80 years.

The increase in scheme participation was also noted by (Defra, 2004) in their commissioned monitoring reports increasing to 71.4 per cent of eligible area. This appears as a further 10 cases in the re-survey sample and is largely due to the financial incentives on offer and a change in the perception of the difficulty in compliance with scheme objectives. As the SHESA was relatively new in 1997 this appeared to be a result of diffusion of knowledge about the scheme within the farming community. The increase in participation was a significant change for the SHESA as a whole, but of some concern was that only a quarter of performance indicators were met for the Stage IV ESA’s by 2003 (Ecoscope, 2003).

The loss of cattle from seven farms including four participant holdings was also a significant finding. The SHESA does not specify the need to keep cattle, yet the environmental benefits of either mixed cattle/sheep grazing or cattle only systems have been established both in terms of biodiversity and the invasion of weed grass species. However these are quite small farms, the majority being less than 50 Ha with older individuals in charge, such as the proprietor of Farm 27, who do not feel happy to continue with cattle. The 2001 outbreak of FMD alone meant the slaughter of 594,000 cattle in the UK (Defra, 2008b).

Overall stocking rates have drifted downwards slightly in the case of participants by 2.7% and 3.6% with nonparticipants, which is in line with (Defra, 2004) regional data but of more concern is the lack of migration of holdings into HLS, a lack of development of pluriactivity and engagement with schemes encouraging this and generally of confidence in the future.

Yet the evidence of business change from primary agricultural production to a more diversified enterprise mix, possibly including a degree of pluriactivity, was very limited. The perceived attractions of farm work, noted in Table 2, came from the farming lifestyle of such aspects as
‘Working with stock’ rather than leading a profitable entrepreneurial business venture. The pilot survey of four farms conducted in April 2009 found three farms operating on a Type I basis, the farmer as farmer, but with a greater level of entrepreneurial activity present than became apparent with the 2008 survey. Although this correctly listed Farm 27 as Type II, the farmer and his wife having gone into farmhouse tourism, Farm 39 had disclosed, following the 2009 pilot survey where the development window was moved back to 1986, that a member of the family had used the farm as a base for his business for some period. In a study of farmers’ entrepreneurial activities in Cambridgeshire (Carter, 1998) found that one of the most popular forms of entrepreneurial activity was renting premises on the farm to external businesses. Some Type IV activity was indicated where the farmer’s son’s business was technically independent but operated on the farm as a result of his family connection with the farm that was categorised as Type I. This suggests that although Type I farming activity was dominant in the pilot there was some farm-linked entrepreneurial activity. The influence of the family was recognised and the complexity of coping with multiple objectives that come from different members of the farming family (Gasson and Errington, 1998):

‘Decisions are taken by entrepreneurs, but the family is not an entrepreneur.’ There was a suggestion in the fieldwork that problems of product differentiation existed and that higher production costs had not resulted in higher prices for the SHESA produced and thus environmentally more benign beef and lamb. This had been an issue with wine produced in a more environmentally friendly way in Spain and the problem of informing the consumers of the said wine of the benefits of this whilst realising an improved price for the product (Cambra-Fierro, Hart and Polo-Redondo, 2008). The already deep seated need for autonomy, especially by non-participants in the SHESA will not have been improved by loss of trust in administrations due to the 2001 FMD outbreak (Scott, Christie and Midmore, 2004). This appears to have impacted upon the degree of entrepreneurs’ competitive advantage experienced by this group when at least the regulatory dimension of the institutional profile of entrepreneurship is examined (Busenitz, Gomez and Spencer, 2000).

In the pilot survey of Farm 27 the enthusiasm of the farmer’s wife was a reflection of the important role frequently played in rural businesses by women and the success of organisations such as ‘Women in Rural Enterprise’ or ‘WIRE’ has been noted (Warren-Smith and Jackson, 2004) involving many hundreds of successful rural-based and female inspired businesses.
Conclusions and Recommendations

Although the SHESA scheme had been promoted by both the EU and the UK Government as an environmental scheme Phase I of the study in 1997 found that participant farmers farmed more intensively than non-participants. It also appeared that the farmers in that area were motivated more by the intrinsic rewards of farming, the open air life, being one’s own boss, rather than the extrinsic rewards such as status or business profit.

Phase II of the study in 2008 found little evidence of the development of on-farm enterprises such as food processing or pluriactivity which might be considered disappointing as the UK Government has promoted efforts to wean farmers away from subsidies and become more independent. Phase III in 2009, but which examined the farming family activities back to 1986 again found little evidence of enterprise development, although there were some encouraging signs that other family members were becoming more enterprising and had diversified away from primary production. The work has importance amongst policymakers and those employed by agencies targeting business development and in identifying suitable scheme participants.
References


ADAS (1996) Letter from the project officer with information about the participants within the SHESA and land details.


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