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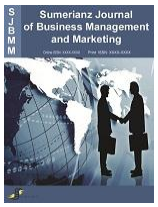


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# Creating a Business Environment for the Sustainable Development of Agri-Food SMEs and Farming Communities in Wales UK

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## Abstract

Purpose: The business environment for Agri-food SMEs in Wales has, in recent years, been seriously affected by a succession of crises in agriculture such as the effects of Chernobyl fallout on hill farming in the 1980s, BSE in the 1990s, Foot and Mouth in 2001, the horse meat scandal in 2013, and now Brexit. This has been exacerbated through the farming industry finding difficulty in responding to these crises. Due to these, and other problems, Agri-food policy makers in Wales have been forced to make a major re-evaluation of the current business environment since the year 2000. Policy making bodies have been tasked with resolving these problems and this has involved the Welsh Assembly Government. Indeed, it is recognised that there is a need to develop what can be described as a "new" business environment for the Agri-food industry. Design/methodology/approach: The qualitative approach undertaken proffers a conceptual model for creating a business environment for the sustainable development of Agri-food SMEs and farming communities in Wales. The approach has involved building a conceptual model according to philosophy, definitions and procedure. The procedure followed to build the conceptual model involved an eight phase qualitative process of analysis. Findings: This paper considers the issues and reports on possible solutions that are both innovative and sustainable towards improving Agri-food business activity in Wales. These solutions form a loop and include knowledge transfer, community food projects, farmers' markets, and best-practice techniques. Knowledge transfer is considered to be a key driver for the sustainable development of the Agri-food industry, however it is of interest to identify the sources and assess the quality of the knowledge that reaches Agri-food businesses in Wales. Community food projects are perceived to be important too, and are characterised by food production and consumption in the same locality. Of direct relevance to community projects are farmers' markets, which enable locally produced food to be bought and sold in the same area and can be enhanced through direct sales via the farm gate and/or the Internet. Other solutions include benchmarking and best practice, which in turn feed back into knowledge transfer – so completing the loop. Originality: The paper concludes by outlining a business environment model for the sustainable development of Agri-food SMEs relevant to farming communities in Wales.
**Keywords:** Agri-food; SMEs; Sustainability; Farming.

## 1. Introduction

The food and farming industry in Wales operates within the global food industry involving many different types of firms which together supply an ever increasing World population of some 7 billion people. The main forms of business in the industry include manufacturing (agrichemicals, seed, farm machinery and supplies, agricultural construction), agriculture (raising of crops, livestock and sea food), food processing (the supply of fresh products to market and the manufacture of food products) and wholesale, distribution and retail (warehousing, transportation, shops, supermarkets and catering). Euromonitor International reports the packaged food industry to be worth nearly $1.6 trillion (Euromonitor International EI, 2011) and the World Bank estimates the food and agriculture sector to be 10% of global domestic product (WB, 2011). In Wales, and the UK, the whole food industry is defined by the Food Standards Agency as being "from farming and food production, packaging and distribution, to retail and catering" (FSA, 2011). Taking into consideration this structure and the need for efficient food and agriculture production the research question arises "what sustainable business strategies can Agri-food SMEs and farming communities adopt to enhance their presence further in the global market?"

### *1.1. Background*

Due to the competitive pressures of the global market the need for a sustainable paradigm is emerging which requires the integration of economic, environmental and social elements. Here Agri-food and farming SMEs face community pressure instead of competitive forces for sustainable food production which can be seen as a future competitive advantage. It is possible to have innovative approaches in order to integrate economic, environmental and social elements through strategies to reform business procedures. A problem that is inherent in the industry is that power is biased towards retail in the value chain and this is further complicated through complex global supply chains. There is consequently the need for good relationships with retailers for effective distribution to minimise changes in supply chain costs. Interestingly, in terms of effective distribution, the largest growth engine is the

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Developing World with countries such as Brazil, China, India and Russia changing their eating habits as they become wealthier and creating greater demand for more meat and packaged foods.

In recent years the Farming industry has commanded between 2.62% and 2.29 of GDP in Wales and although historically this has shown a downward trend the industry is still seen as important especially in terms of the challenges now facing food and farming in terms of food price rises (Thomas and Sparkes, 2000; Thomas *et al.*, 2002). According to the recent Foresight report "The Future of Food and Farming", February 2011 (Foresight, 2011), food prices over the next 40 years are likely to rise considerably. Moreover, in 2009 (Defra, 2011) figures showed that Wales imported £342.1 million and exported £143.8 million of food and drink (Defra, 2011). Wales accounted for about 5% of UK agricultural output in 2008 and Welsh farmers sold an estimated 75-80% of produce through supermarkets making them dependent on this supply channel (Welsh Assembly Government, 2011). In 2009 Welsh agricultural output was some £1,043 million with three quarters of this being accounted for by beef, lamb and dairy and Wales was responsible for 22% of UK sheep meat, 4.8% of UK beef and veal and 11% of UK milk production (Welsh Assembly Government, 2011). In response to the challenges faced the Welsh Government published its new Food Strategy for Wales "Food for Wales, Food from Wales 2010-2020" report in December 2010 with aims to improve the Welsh food industry's sustainability, resilience, competitiveness and profitability (Welsh Assembly Government, 2010). The overarching theme in the strategy is to build connections and capacities. "The central idea is to build greater diversity into the food sector to create new and more sustainable relationships (or connections) between rural and urban areas, between food producers and consumers and between policy sectors. The connections that exist now will also be strengthened" (Welsh Assembly Government, 2010).

### *1.2. Qualitative Approach*

The qualitative approach undertaken proffers a conceptual model for creating a business environment for the sustainable development of Agri-food SMEs and farming communities in Wales. The approach has involved building a conceptual model according to philosophy, definitions and procedure (Jabareen, 2009). Definitions have been taken into account noting that 'every concept has components and is defined by them' (Deleuze and Guattari, 1991) and 'a conceptual model is not merely a collection of concepts but, rather, a construct in which each concept plays an integral role' (Jabareen, 2009). Moreover, a conceptual model 'lays out the key factors, constructs, or variables, and presumes relationships among them' (Miles and Huberman, 1994). The procedure followed to build a conceptual model, to create a business environment for the sustainable development of Agri-food SMEs and farming communities in Wales, involved an eight phase qualitative process of analysis (Jabareen, 2009). Phase 1 mapped the selected literature by 'scoping' (Morse and Richards, 2002) to ensure validity (Morse and Mitcham, 2002), phase 2 involved extensive reading and categorizing, phase 3 identifying and naming concepts through 'discovering' and allowing the concepts to emerge from the literature (Morse *et al.*, 2002), phase 4 deconstructing and categorizing the concepts, phase 5 integrating concepts, phase 6 synthesis and making sense, phase 7 validating the conceptual model and phase 8 rethinking the conceptual model. Although the conceptual model analysis has its limitations it offers important advantages to enhance the business environment for the sustainable development of Agri-food SMEs through flexibility (flexible conceptual terms), capacity for modification (the conceptual model can be re-conceptualised and modified) and understanding (the conceptual model helps in understanding the phenomena) (Jabareen, 2009).

## 2. Findings – Creating a Conceptual Business Model for Sustainable Development

In order to enhance the future prospects of Agri-food small and medium-sized enterprises (SMEs) and farming communities there is a need to create an environment for their sustainable development. Indeed, environmental changes have forced a major re-evaluation of Agri-food assistance measures devised by policy makers, local and regional government, to be implemented through their agencies. It is recognised that the "new" business environment for the Agri-food industry requires solutions that are both innovative and sustainable towards improving Agri-food business activity. This paper reports on possible innovative and sustainable solutions to current local Agri-food problems, which are economically, environmentally and socially complementary. The paper outlines a business environment model for the sustainable development of Agri-food SMEs relevant to farming communities in Wales involving knowledge transfer, community food projects, farmers' markets, and benchmarking and best practice. It is the proposition of this paper that Agri-food SMEs and farming communities can attain sustainable development through the creation of a "new" business environment. In order to achieve this, a business environment model is outlined involving a loop of knowledge transfer, community food projects, farmers' markets, and benchmarking and best practice.

### *2.1. Knowledge Transfer*

Knowledge transfer activities in local Agri-food systems are taking place against the background of the global market system and the strategic choice is whether to be incorporated into this system or to adapt to global dynamic change though alternative, 'non-commoditised' markets (Commins and McDonagh, 1998; van der Ploeg, 1994). It is commonly through the latter strategic path that value-adding Agri-food SMEs are attempting to grow.

Previous studies, when considering the issue of knowledge transfer in the Agri-food industry, have focused, in particular, on the dynamics of Research and Development (R&D) (Wilkinson, 1998). It appears that low levels of internal R&D among Agri-food firms are consistent with strategies devoted primarily to superficial product

innovation. As a consequence this points to a systematic long-term effort towards greater inter sectoral knowledge flows.

Knowledge and its diffusion is considered a key development factor within rural Agri-food districts. A continual process of adaptation and improvement of knowledge is one method of achieving a competitive advantage. This was highlighted by Bradley *et al.* (1995) in their study of technology and knowledge transfer in the Northern Ireland food processing sector with regard to the recognised importance of technology transfer as a major source of improvement in the competitive position of firms and industries. Within the Agri-food industry technology has been shown to be transferred from geographically close industries and this has been highlighted from examples of fruit refrigeration technologies being adopted by neighbouring ham producers (Fanfani, 1994). This demonstrates the importance of locality in promoting entrepreneurship and there is significant evidence that regional prosperity is proportional to the degree of SME existence (Sweeney, 1985). Cooke and Morgan (1998) describe six essential elements of a national system of innovation - the role and type of Research and Development (R&D), education and training, the financial system, user-producer relationships, intermediate institutions (trade associations, development agencies such as LEADER II Groups, etc.) and social capital (networks, norms and trust). Koku (1998), has drawn attention to the strategic nature of information management for innovations in national food systems.

An important over-arching agri-food strategy in Wales has been the Agri-Food Partnership. Launched in March 1999, this initiative was an attempt by both the development institutions of Wales, the Welsh Assembly Government, LEADER Groups, universities, FE colleges, farming unions and private consultants) and industry leaders to develop an integrated and coherent strategy to guide and assist the development of the Welsh Agri-food industry. The guiding principles of the strategy stated that actions within it needed to be 'focused firmly on addressing the relevant trends in market demand; be practical and realistic; and carry commitment from both the industry and relevant organisations in Wales' (Agri-Food Partnership AFP, 1999).

The Agri-Food Partnership took a sectoral approach to the strategic development process. The sectors chosen were Lamb and Beef, Dairy and Organic. These were identified on a basis of current production or, in the case of the Organic sector, on perceived future trends and potential. The initial output of the Partnership was the publication of `action plans' for each of these sectors (Welsh Organic Food Industry Working Group, 1999). Industry Task Forces for each of the three sectors co-ordinated the implementation of these action plans. They were represented by the chairpersons of the Lamb and Beef, Dairy and Organic Task Forces in the Agri-Food Partnership which were responsible for reviewing the action plans with the Welsh Assembly Government.

Coupled to the forms of knowledge transfer described the three main types of external sources involved in the diffusion of knowledge into Agri-food SMEs were:

i. public and non-profit organisations (regional/national development organisations (R/NDOs)),
ii. regional technology advice centres,
iii. and Regional and Technology Organisations (RTOs) (contract research firms, science parks and technology centres such as the Food Technology Centre at Coleg Menai).

Amongst the three types public bodies to undertake policy programmes, regional technology advice centres concentrate on providing focused assistance and technology centres provide knowledge and know-how. For Agri-food SMEs involved in local networks (Volpentesta and Ammirato, 2008) key mechanisms have included information transfer (newsletters and databases), technology transfer (R&D audits), skills transfer (training) and specialist support (financial guidance). Value for money of the mechanisms has been a key policy measure. Policy makers have needed to be careful that changes in priorities do not make an Agri-food SME withdraw from knowledge transfer activities and that policy reacts to difficult situations by providing Agri-food SMEs with incentives.

Support through local food networks has included specific support provided to individual Agri-food SMEs (assistance during the establishment of local network relationships) (Volpentesta and Ammirato, 2008) and knowledge transfer support to Agri-food SMEs in general through drivers such as the Wales Regional Technology Plan (RTP) (Welsh Development Agency WDA, 1998) (to foster technological knowledge and establish network links with external sources such as FE Colleges and Universities for the dissemination of know-how into Agri-food SMEs).

## *2.2. Community Food Projects*

Community food projects have involved food production and consumption in the same locality - local farmers selling to local shops involving publicity and promotion (Morley *et al.*, 2000). They have increasingly been recognised as an important instrument for the sustainable development of the Agri-food industry in Wales. Community food promotion has involved schemes which include the use of labelling and certification marks for local food products (Skaggs *et al.*, 1996). These projects have helped to preserve and protect local farming systems. An important mechanism for achieving this is the projection via labelling of locally identifiable foods to local consumer markets (Marsden, 1998). Potential benefits of these labels are:

- the establishment of competitive advantage to local Agri-food producers and processors
- the enhancement of premium products
- the assurance that processing activity takes place within the local community thereby benefiting the local economy (Ritson and Kuznesof, 1996).

Examples of the marketing of regional foods in the United Kingdom are 'A Taste of the South East', 'Middle England Fine Foods', 'Taste of the West', 'Heart of England Fine Foods', 'North West Fine Foods', and 'Tastes of Anglia' (Food from Britain, 2009). In Wales there are a number of localities marketing their food products in a

collective way (Lamprinopoulou and Tregear, 2006), particularly with farmers' markets, including Cardiff, Carmarthenshire and Pembrokeshire (Farmers' Markets in Wales, 2010), and nearby in England Bath, Bristol and the Forest of Dean (The Best of the Forest of Dean, 2010). The importance of local origin of a food product is thought to be significant, but likely to vary depending on the food types and locality. It has been found that product origin is extrinsic to the product itself and can, therefore, be beneficial when the product is unknown to the consumer (Skaggs *et al.*, 1996). The importance of food origin can be significant to the growth in value of marketing localities as a whole. This will serve to increase cost efficiency and foster synergistic links between products under the same 'banner'. Association of various products and characteristics with regions, however, can have a negative effect if a certain element becomes a negative association (examples of this are Chernobyl fallout affecting Welsh hill sheep farming and the BSE crisis having a deleterious effect on the Welsh beef industry). It is only by educating the public that such fears can be allayed.

The marketing of local foods on the basis of origin also allows the possibility of benefits from ethnocentrism amongst consumers. The desire for Welsh people to eat local products can be valuable to local food producers especially Agri-food SMEs. This is apparent through the existence of 'Welsh' food products in multiple retailer outlets across Wales. It is also possible to target people of Welsh origin (or with strong sympathies towards the Welsh and Wales) in other areas of the United Kingdom or overseas (Skaggs *et al.*, 1996).

There appears to be an identifiable linkage between local food products and the tradition and heritage of the local area. This was a finding from respondents to a study which investigated UK consumer perceptions of regional foods (Kuznesof *et al.*, 1997). One of the conclusions was that, in the perception of consumers, both the local customs and the physical locality contribute favourably to their definition of a regional food (Tregear, 1998). These consumers also linked regional foods to notions of 'authenticity'. A further dimension of locality that is of importance to food businesses is the nature of the consumer base. By identifying local demand feedback mechanisms between consumers and supply chain (Metapoulos *et al.*, 2007) participants can be established (patterns of innovation and development in the food chain have been studied by Cannon (1992). This can provide a reliable consumer base and build credibility with external markets (Fanfani, 1994; van der Meulen and Ventura, 1995).

Consequently, the characteristics of local demand are perhaps more important than the size of the demand. Supply chains (Metapoulos *et al.*, 2007) with a significant local demand are more able to recognise purchasing needs, particularly emergent demand which tend to take longer to transmit from more remote consumers. Additionally, companies with sophisticated and demanding local consumers are likely to benefit through the requirement to comply with their 'advanced' needs, keeping them one step ahead of external consumers and competition (Porter, 1990).

The authors have been involved with community food projects in Wales through their work with local and strategic research initiatives - 'Local Food for Local People' (Welsh Enterprise Institute WEI, 1999a), and the proposed project 'FE Colleges, SMEs and Technology Transfer Networks in the Welsh Food Industry' (Welsh Enterprise Institute WEI, 1999b). The 'Local Food for Local People' study by the Welsh Enterprise Institute aimed to increase consumption of locally grown food in the Bridgend County Borough Council area. The outline aims were to:

- encourage groups and individuals (both commercial and not for profit) to grow and produce their own food
- develop a supply infrastructure to enable produce to be available at recognised outlets within the community and to communicate this feature to the stakeholder groups
- raise awareness of the health, social, economic and environmental issues associated with food production and consumption
- encourage eco-friendly practices in the Bridgend County Borough Council area.

The objectives of the initiative that the parties involved with this project and the co-ordinators (Bridgend County Borough Council) and Community Service Volunteers (CSV) Wales were investigating included:

- supply side logistics and market attractiveness
- the likely uptake of a 'directory' style publication to publicise local foods
- the attractiveness of a 'farmers market' style outlet
- any existing 'best-practice' frameworks - both nationally and internationally.

The 'FE Colleges, SMEs and Technology Transfer Networks in the Welsh Food Industry' initiative, also undertaken by the Welsh Enterprise Institute, involved a study of the role of FE colleges in the transfer of technology within the local Agri-food SME sector in the Welsh food industry. It considered the importance of external sources of inputs, in the development of successful technological innovation, within small food firms in Wales. The focus of the project was to:

- determine the external sources of inputs into the development process including the importance of the role played by FE colleges
- the nature and importance of the inputs
- the nature of the relationships through which these innovation inputs transfer into the innovative SME in the local Agri-food industry, and
- mechanisms employed in their transfer.

The role of external actors, such as community users, suppliers and FE colleges was considered, as well as the impact of Agri-food firms and organisations linked together in patterns of co-operation and affiliation. A network of participating FE colleges was set up, by the Welsh Enterprise Institute, and each college had its own network of Agri-food SMEs.

These initiatives were particularly timely in relation to debates regarding the sustainable development of local Agri-food SMEs and the improvement of the Welsh farming environment, which was high on government agenda, due to the need to deal with policy issues such as food standards, for example.

## 2.3. Farmers' Markets

Farmers' Markets (FMs) have been defined as "food markets where farmers and producers bring their produce for sale direct to the public" (Bullock, 2000). Markets usually have rules including those that food cannot be brought in and sold, and that food should be from "local" producers. Individual markets determine the definition of local produce. Accreditation for markets in the UK is determined by the National Association of Farmers' Markets (NAFM), which exists to ensure that standards are maintained. Between 1997 and 2000 some 240 FMs were established in the UK and turnover at these markets increased (National Farmers Union NFU, 2000). Annual sales from FMs in the USA were over $1billion in 2000 (Bullock, 2000). In fact, FMs have been flourishing for more than 25 years in the USA. According to Festing (1998) 90% of Illinois' 147 FMs were sponsored by a chamber of commerce or a merchants' association with the US Department of Agriculture reporting that 85% of FMs have been economically self-sustaining. It has also been observed that "though they are not an economic development panacea, farmers' markets should be considered an important component of a comprehensive local economic development strategy" (Hilchey *et al.*, 1995).

The commercial exchange which takes place at a FM is not new, but in the 20th Century the linkages between producers and consumers was lost with the methods of food production, distribution and retailing used. As a consequence the re-establishment of direct linkages between producers and consumers was re-born with the evolution of FMs at the start of the 21st Century. The direct contact between producers and consumers is pivotal to the success of FMs with a basis of integrity and transparency for food provision. As a consequence the South East Wales Association of Farmers' Markets (SEWAFM) was created with an understanding that if FMs are to have a significant and sustained future they need to be viewed within the wider context of the development of a sustainable local food economy. The aim of SEWAFM was that the member markets become examples of good practice since the Association promotes and facilitates the highest standards within the region and supports the endeavours of individual members to these ends.

The functions of SEWAFM were:

i. co-ordination of FMs in the region
ii. to create and maintain a database of producers
iii. accreditation
iv. training
v. promotion
vi. supply
vii. development of complementary direct marketing structures
viii. establish and maintain a knowledge bank
ix. develop links with other regions
x. become a focus for dialogue and co-operation
xi. provide a conduit for funding.

The functions have been adhered to through membership, following application, by the markets involved in the area and markets agree to abide by the criteria based on those defined by the National Association of Farmers' Markets (NAFM), as listed below:

a) Local produce – only produce from the defined area is eligible.
b) Own produce – all produce to be grown, reared, caught, brewed, pickled, baked, smoked or processed by the stall holder.
c) Principal producer – the stall must be attended by the producer or a representative directly involved in the production process.
d) Policy and information – information should be available to customers at each market about the rules of the market and the production methods of the producers. The market should also publicise the availability of this information.
e) Other rules – markets may establish other criteria in addition to the above provided they do not conflict with them.

Members agreed to abide by, and support, the decisions of the SEWAFM committee, which ran the Association, and it was agreed that markets would only use producers from an accredited list. The Association was a constituted voluntary body of representatives from FMs, unitary authorities (principally economic development and Agenda 21), farmers' unions and the then Welsh Development Agency (WDA), drawn from the South East region of Wales. A Web site was developed following the identification of a need by SEWAFM to link together current and prospective farmers, FMs and their customers in the South East Wales region. The objective of the site was to provide information on farmers' products, new produce and developments, events and issues of importance to farmers and their markets. In order to do this the Web site provided a page for each farmer to sell his/her produce and a facility for customers to search for the products they wanted at the right price.

## 2.4. Benchmarking and Best Practice

Typical areas for "bench-marking" and "best-practice" are knowledge transfer and skills (determining an Agri-food SME's needs by auditing and drawing-up agreements and contracts), technological expertise and know-how

(including standards and regulatory issues), service provision (assembling the provision of services), and management and organisation (public relations) (Commission of the European Communities CEC, 1998).

Good practice for the successful operation of a network (such as farmers' markets) is the realisation by Agri-food SMEs that it is not only an alliance of enterprises but also a partnership of entrepreneurs. (Entrepreneurs will act as gatekeepers and will have an important role to play in the operation of networks) (Thomas, 1999). "Best-practice" procedures disseminated through local networks (Volpentesta and Ammirato, 2008) include minimum quality standards for management and product quality and the sourcing of external funds. Working against this is the SME's dislike of revealing confidential activities and specific performance data. Procedures usually become less formal over time due to ideal size attainment and growth realisation.

Indicators of the successful local communication (Donnelly, 2009) tools (newsletters, Web sites, etc.) and good relationship management between Agri-food SMEs will form the basis of good practice for the operation of a local network (Volpentesta and Ammirato, 2008). This is not easy to attain since the process of knowledge transfer can be long and without success, the results of a local network are difficult to define and there may be discrepancies and disagreements between the Agri-food SMEs. "Low" activity may arise due to conflicts in a local network. When these are efficiently managed and resolved they provide opportunities for the Agri-food SMEs to broaden their experience and widen their understanding of other Agri-food SMEs' views. When they are not conflict may lead to "low" activity. Conflict management and identification form part of successful "best-practice". Typical examples of "low" activity will be misunderstanding between Agri-food SMEs, different objectives and motives and under-performance of an Agri-food SME.

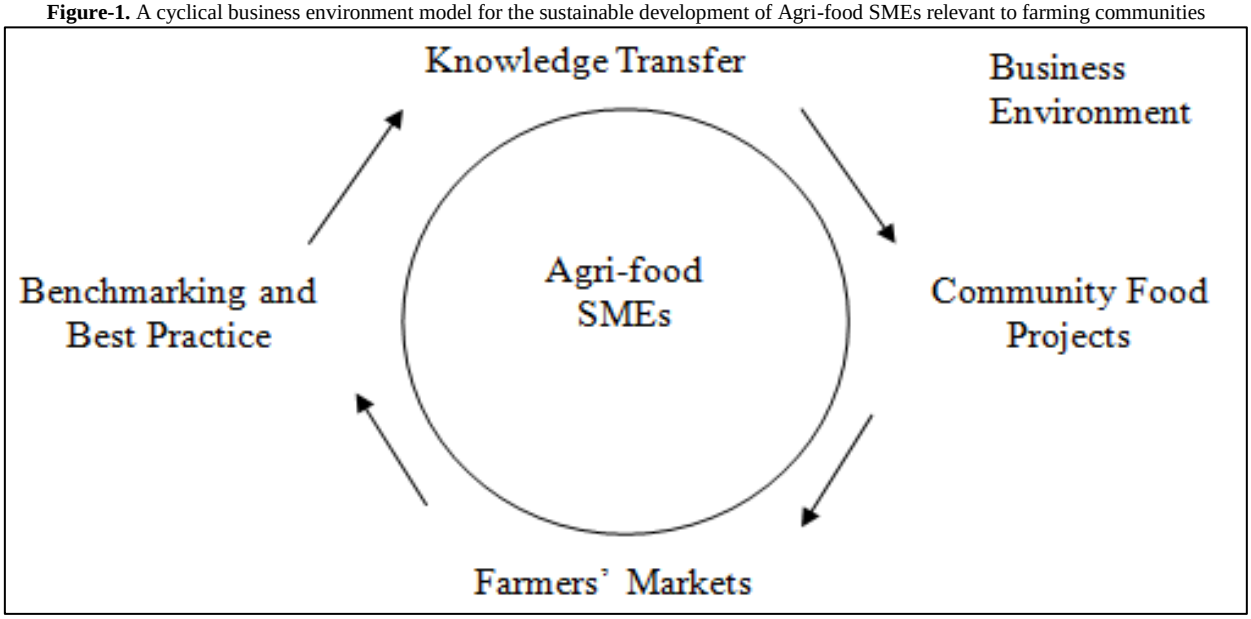
## 4. Conclusions

There is considerable scope for the sustainable development of local Agri-food SMEs, to improve quality and lower costs, by adopting "best practice". Knowledge transfer, training, information and advisory services if brought together in a coherent framework will lead to the improvement of the farming environment. At the local community level there are clear benefits for the use of branding by Agri-food SMEs to publicise local foods not only to local people but also to people of local origin or with strong sympathies towards local food products. This can be achieved through vehicles like community projects, information and communications technology (ICT) (Cetin *et al.*, 2004) and the Internet (Simmons *et al.*, 2007).

The focus on examining "best practice", where there is benefit to Agri-food SMEs, can result in effective "bench marking" of significance to the farming environment. Bench marking can be undertaken for Agri-food SMEs' innovative practice against the best in the "class" and by doing this they can improve their competitive positions through awareness and the greater use of bench marking techniques.

In answer to the research question "what sustainable business strategies can Agri-food SMEs and farming communities adopt to enhance their presence further in the global market?" it is the contention of this paper that solutions such as knowledge transfer, community food projects, farmers' markets, and best practice techniques can be brought together. By doing this it is possible to evolve a business environment model, as outlined in Figure 1, to enable the sustainable development of Agri-food SMEs relevant to farming communities.

**Figure-1.** A cyclical business environment model for the sustainable development of Agri-food SMEs relevant to farming communities




In order to test this model there is a need for evidence that knowledge transfer takes place by "talking to consumers". Further research will need to consider the consumer knowledge aspect of the model. This is important since the knowledge aspect provides a link to other studies that are being carried out to consider environmental business support and information sources for environmental purchasers. This will enable an explanation of the current knowledge base and show why it needs to be revised, especially with regard to the challenges facing the Agri-food industry arising from Brexit (BBC, 2019).

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