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| Institution: Ulster University | | |
| Unit of Assessment: Business and Management Studies (17) | | |
| Title of case study: ICS 3: Supporting Innovation Networks in Small Agri-Food Businesses | | |
| Period when the underpinning research was undertaken: 2004 - 2016 | | |
| Details of staff conducting the underpinning research from the submitting unit: | | |
| Name(s): | Role(s) (e.g. job title): | Period(s) employed by submitting HEI: |
| Professor Barry Quinn | Professor of Retail Marketing | 1995 - present |
| Professor Rodney McAdam | Professor of Innovation Management | 1999 - present |
| Dr Adele Dunn | Senior Lecturer | 1994 - 2020 |
| Dr Lynsey McKitterick | Research Associate | 2012 - 2014 |
| Period when the claimed impact occurred: 2014 - 2020 | | |
| Is this case study continued from a case study submitted in 2014? N | | |
| 1. Summary of the impact <p>The findings and recommendations from our research into collaboration and adoption of innovation in small agri-food businesses have directly impacted on the content and development of food policy and strategy within Northern Ireland and across Europe. Our research recommendations have been adopted by policy makers in Bulgaria and Norway, leading to new measures in regional development strategies that have directly enhanced the innovation capacity of micro size agri-food producers (i.e. less than 10 employees) (I1). Within Northern Ireland our research has directly led to the inclusion of measures on inter-firm cooperation into the Department of Agriculture, Environment and Rural Affairs (DAERA) Rural Development Programme (I2). Recommendations for a more co-ordinated multi-actor approach have been embedded within Northern Ireland's Food Strategy Framework and our research has directly led to the formulation of a "Model Local Food Policy" for Northern Ireland councils (I3).</p> | | |
| 2. Underpinning Research <p>The case study refers to a body of related research projects since the early 2000s employing both qualitative and quantitative methodologies to address innovation and networks in small businesses and more recently those within the agri-food sector.</p> <p>The valuable contribution that small enterprises (producers) make within rural and peripheral regions to local food production has been widely acknowledged. The food sector generally is associated with incremental forms of innovation (for example product adaptations rather than new products to the market) and characterised by barriers to innovation, which include limited resources for R&D, and a lack of engagement with support agencies. Growing attention has been paid in the rural studies literature to "alternative food networks" and "short supply chains", where the production and consumption of food are more closely connected, for instance through farmers' markets and other sales channels outside the conventional supermarket model. The importance of network building within this context has been highlighted: networks involving government support agencies and third level institutions are critical to sustainable rural development. However there has been relatively little research into how food producers engage with, and benefit from, networks for innovation and particularly the nature of relations between producers and support agencies; our research projects addressed this gap. The overall aim of the research was to explore how small firms innovate and how innovation may be supported by government and other public agency networks, in an agri-food context. Thus the research had a strong industry and practitioner focus.</p> | | |

Early work by McAdam (2004) identified the need for network development in order to enhance innovative practice within small firms in peripheral locations such as Northern Ireland (**R1**). This theme was later developed by McKitterick, Quinn, McAdam and Dunn (2016) in their research into innovation network development in the context of small food enterprises (**R6**).

McAdam (2013) argued that developing radical innovation in terms of new products/services within small firms in peripheral regions would need further policy and support intervention. This is due to innate SME limitations, such as lack of resources and skills, which are further limited by locational factors (**R2**). Nonetheless, a further study by McKitterick, Quinn, McAdam, and Dunn (2016) challenged existing assumptions on the nature of innovation in micro size agri-food businesses by identifying radical forms of innovation in practice, for instance new products in categories such as craft cider, baked goods and cheeses (**R6**). This study found that relationships with informal networks such as family and friends, international sources and other businesses, rather than formal Government support networks, were instrumental in delivering innovation outputs in the form of new products. Informal business connections between micro food producers can emerge out of formal business support programmes and can be instigated by the participants or the business support advisors. While the research raised questions about the effectiveness of Government support for regional innovation, insight was provided into the critical role played by Government in fostering social capital and knowledge exchange and in acting as a bridge to informal networks.

A theme across a number of the underpinning research studies is the policy challenge in providing tailored and targeted support rather than generalised training and development (**R1, R3, R4, R5, R6**). McAdam and Dunn (2014) identified the need to target support programmes according to the life cycle stage of the agri-food SME network (**R3** and **R5**). Quinn, McKitterick, McAdam and Dunn (2014) recommended that tailored support would be needed to address the specialist needs of specific food categories such as artisan cheese (**R4**).

3. References to the research Outputs can be provided by Ulster University on request.

R1 - McAdam, R., McConvery, T. and Armstrong, G. (2004). Barriers to innovation within small firms in a peripheral location, *International Journal of Entrepreneurial Behavior & Research*, 10(3), 206–221.

R2 - Harris, R., McAdam, R., McCausland, I. and Reid, R. (2013). Levels of innovation within SMEs in peripheral regions: the role of business improvement initiatives, *Journal of Small Business and Enterprise Development*, 20(1), 102-124.

R3 -McAdam, M., McAdam, R., Dunn, A. and McCall, C. (2014). Development of small and medium-sized enterprise horizontal innovation networks: UK agri-food sector study, *International Small Business Journal*, 32, 830-853.

R4 - Quinn, B., McKitterick, L. and McAdam, R. (2014). Barriers to micro food enterprise engagement in business support programmes, *International Journal of Entrepreneurship and Innovation*, 15(3), 205-217.

R5 - McAdam M., McAdam, R., Dunn, A. and McCall, C. (2015). regional horizontal networks within the SME agri-food sector: an innovation and social network perspective, *Regional Studies*, 50(8), 1316-1329.

R6 - McKitterick, L., Quinn, B., McAdam, R. and Dunn, A. (2016). Innovation networks and the institutional actor-producer relationship in rural areas: the context of artisan food production", *Journal of Rural Studies*, 48(C), 41-52.

The above journal articles have been subject to blind peer review practice by internationally-based editorial boards.

Part of the research (**R4, R6**) was supported by an externally funded research award: INTERREG IVC Territorial Co-operation Programme (2012–2014) "LOCFOOD (Local Food as an Engine for Local Business)" project (1281R4), March 2012 – December 2014, Value EUR168,954.24 (income to Ulster University 03-2012) awarded to Quinn and Dunn.

4. Details of the impact

A summary of the evidence of impacts and indicators is provided in Table 1 at the end of this section. In Table 1, and in the text that follows, case letters and numbers in bold refer to evidence in Section 5. The **reach** of the impacts was evident through the direct influence our research has had on the development of economic policy at local, regional and international levels. The **significance** of the impacts, or how much difference our research has made to beneficiaries, is now outlined.

I1 – European Regional Development Strategies

Our research insights have had a significant impact upon policy development and stakeholder engagement across European regions, leading to changes in products and processes. Our earlier research on innovation in small firms (**R1** and **R2**) informed our work with European local authority partners through the INTERREG IVC LOCFOOD project (2012-2014). From this project we identified best practices across 12 European regions: Northern Ireland; Valencia (Spain); Sofia (Bulgaria); Nordland (Norway); Litija and Kranj (Slovenia); Canton of Jura (Switzerland); Örebro and Västerbotten (Sweden); West Macedonia (Greece); Marche and Rimini (Italy) (**C10**). These best practices were exchanged at a conference and series of policy-maker workshops we co-organised (with Down District Council) at Ballynahinch (Northern Ireland) in June 2014 to engage directly with policy makers at local and regional government levels (**C3**, **C10**). The conference (entitled “Making Small Producers Part of the Bigger Picture”) was attended by 64 industry stakeholders including politicians, local authority representatives (from Northern Ireland, Norway, Greece, Slovenia, and Sweden), food businesses, trade associations and policy makers from Northern Ireland’s government departments (**C10**). Leading on from this conference, the research findings and recommendations from the LOCFOOD project (**R4** and **R6**) have had a transformative impact upon policy development and stakeholder engagement. As examples, two of the regions, Sofia (Bulgaria) and Nordland (Norway), are presented in more detail.

We provided an evidence base for the Euro Perspectives Foundation (EPF) to support its policy development role for innovation and economic development within Sofia and at the national level more widely. Within the Sofia region our recommendations to EPF from the research and the best practice conference and workshops (**C10**) directly led to:

- the development of a short supply chain business model for small food producers through the establishment of farmers’ markets in Sofia (**C1**).
- the development of measures on innovation in the food chain as part of the Regional Development Strategy (2014-2020) (**C1**, **C6**).
- new product development and business development opportunities for micro size food producers (**C1**, **C6**).

By 2017, the Bulgarian short supply chain business (farmers’ markets) model for small food producers provided market access and increased sales for 25 small food businesses through direct access to consumers (**C1**). Within the same timeframe, our research findings informed the development of measures on innovation in the food chain within Sofia’s regional development strategy (“District Strategy for Development of Sofia Region 2014-2020”). This led directly to transformational changes through the introduction of new products/processes in 42 small food businesses (**C1**, **C6**), including for example the organic production of goji berries.

In addition, in Norway we collaborated with Nordland County Council (NCC), the second largest of Norway’s 19 counties. The research recommendations contributed to the development of a new regional strategy for local food within Nordland (“Strategy for Tourism and Experience Industries in Nordland 2017-2021”) (**C2**, **C7**). NCC’s Deputy Director of Economic Development stated that: “*The direction and knowledge provided by Professor Quinn and his colleagues at Ulster University contributed vital input to NCC regional plans*” (**C2**). As a direct result of our research, NCC adopted our recommendation that a single organisation should co-ordinate and manage information across the supply chain to improve communication and develop a better understanding of the industry: “*One of the best examples of initiatives we see as a result from the LOCFOOD project in Nordland is a stronger connection between the three main public*

organisation(s) – Nordland County Council, Innovation Norway and the County Governor of Nordland... The need for a joint working group has proven to be of vital importance in this process” (email correspondence with NCC’s Industry and Development Manager, **C7**). The direct impact of our research recommendations in Norway is also evident at firm level in that the research provided direction for project support to approximately 100 businesses within the Nordland region (**C2**). Therefore, within both regions our research findings have directly led to the development of projects to stimulate the local food sector and have stimulated stakeholder activity. As such the research has had a significant impact on the development of European regional food strategies.

I2 – Northern Ireland Rural Development Programme

There has been a clear impact at a regional level through government (DAERA) support for micro size food producers where, specifically, our research evidence (**R3, R4, R5, R6**) informed the development of the 2014-2020 Rural Development Programme (RDP) and the Agri-food Co-operation Scheme (**C3, C4, C8**). In particular **R5** and **R6** identified the need for intermediary organisations such as regional government agencies to stimulate innovation and assist collaboration between small (micro size) food businesses (**C3**). Critically, at the “Making Small Producers Part of the Bigger Picture” conference and workshops in June 2014, the LOCFOOD project (2012-2014), led by Professor Quinn, provided examples of best practices of cooperative activity in 11 other European regions that subsequently supported the establishment and strengthening of supply chains through collaboration (**C4**). The conference was attended by DAERA policy makers who took part in the policy development workshops (**C10**). The best practices exchanged at the conference (**C10**) informed DAERA policy makers on their development of the Rural Development Programme, and specifically the content of a new policy measure on Agri-Food Co-operation (Measure 16 - Co-operation, sub measures 16.3 and 16.4, **C8**). The research was key in identifying micro firm cooperation as an area requiring support “as previously there was little evidence in this area and the best practices have helped in defining the types of projects that might be delivered” (email correspondence with DAERA Agri-Food Policy Advisor, **C8**). This has been supported by a testimonial from DAERA’s Assistant Director, Sustainable Agri-Food Policy where she states that our research expertise has been utilised to provide “a valuable source of evidence in support of the policy development process, both in defining the need for enhanced cooperation among micro businesses and identifying the benefits of co-operation and shared resources. In addition, it has provided examples of co-operative activity in other regions that has supported the establishment and strengthening of supply chains through collaboration” (**C4**).

I3 - Local Food Policies

Within Northern Ireland, the findings from the LOCFOOD project have informed local council policy on the development of the local food sector (**R4, R6**). The exchange of international best practice from the “Making Small Producers Part of the Bigger Picture” conference and policy-maker workshops in June 2014 (**C3, C10**) identified key issues in regard to improving the policy environment for supporting the growth of artisan and micro size food producers in Northern Ireland. This was viewed by the Economic Development Manager at Newry, Mourne and Down District Council as “a particularly valuable exercise in helping to build local momentum and securing central government support for 2016 as Northern Ireland Year of Food and Drink”, and one which provided a major platform for putting in place further policy to assist the agri-food industry (**C3**). The research led to the formulation of a “Model Local Food Policy” for Northern Ireland councils in 2014 (**C9**), which assisted local councils in “taking an active role in the 2016 Northern Ireland Year of Food and Drink (initiative), providing identification of mechanisms for improved support for the local food sector, e.g. business development; tourism; local markets; procurement etc.” (**C3**). Elements of the “Model Local Food Policy” have been adopted by Newry, Mourne and Down District Council (i.e. aligning support for artisan and micro businesses with tourism policy by ensuring that local food provision/sales opportunities are a key element of council events) (**C3**). From 2018 through to 2020, this evidence (**R3, R4, R5, R6**) has formed the basis for policy recommendations to DAERA on the development of a Northern Ireland Food Strategy Framework (**C5** and **C9**). In particular, the research findings from the LOCFOOD

project (R4 and R6) identified the lack of a co-ordinated approach to communication across the public sector regarding the support that is available for food producers and, crucially, how small food producers may access that support. According to the Head of Future Food Policy at DAERA, the subsequent recommendation for a more co-ordinated and integrated multi-actor approach has been embedded within the policy and is “*at the core of what the Food Strategy Framework is seeking to address*” (C5).

Table 1: Supporting Innovation Networks in Small Agri-Food Businesses – Research Impacts

| Key Research Areas | Impacts and Dates | Evidence | Impact Indicators |
|---|---|---|---|
| Three key inter-related, cross-cutting research areas underpinned the impact: | I1: Change to European regional development strategies (2014-to date) | -Testimonials from Euro Perspectives Foundation (Bulgaria) and Nordland County Council (Norway) (C1, C2) -Policy workshops (C10) | -New regional strategies in Bulgaria/Norway (C6, C7) -New products and processes (42 firms), sales (25 firms) and project support (100 firms) (C1, C2) |
| -Characteristics of innovation and barriers in small businesses (R1, R2) | | | |
| -Innovation in small agri-food businesses (R4, R6) | I2: Change to Northern Ireland Rural Development Programme (2014-2016) | -Testimonials from DAERA (C4 and C8) -Policy workshops (C10) | -New policy measure (Rural Development Programme) (C4, C8) |
| -Agri-food networks and collaboration (R3, R5, R6) | I3: Development of local food policy (2014-2020) | -Testimonial from Newry, Mourne and Down District Council (C3) - Policy workshops (C10) -Testimonial from DAERA Future Food Policy Branch (C5) -Future Food Policy Report (C9) | -Development of a Northern Ireland Food Strategy Framework (C5) -Model Local Food Policy adopted by Newry, Mourne and Down District Council (C3) |

5. Sources to corroborate the impact

C1 = Euro Perspectives Foundation Factual Statement, Chair of Management Board.

C2 = Nordland County Council, Norway: Factual Statement, Deputy Director of Economic Development.

C3 = Newry, Mourne and Down Council Factual Statement, Economic Development Manager.

C4 = Department of Agriculture, Environment and Rural Affairs (DAERA) Factual Statement, Assistant Director Sustainable Agri-Food Policy.

C5 = Department of Agriculture, Environment and Rural Affairs (DAERA) Factual Statement, Head of Future Food Policy.

C6 = District Strategy for Development of Sofia Region (2014-2020) (see pages 28-29).

C7 = Nordland County Council, Norway: Strategy for the Experience-based Tourism Sector in Nordland; Email correspondence with Nordland County Council (4 January 2021).

C8 = 2014-2020 Rural Development Programme for Northern Ireland (DAERA): Programme Content (see pages 874-875); Email correspondence with DAERA (2 September 2015).

C9 = Local Food Policy Documents: Model Local Food Policy; Future Food Policy Strategic Insight Lab Report.

C10 = International Best Practice: Good Practice Guide; Conference Programme; Policy Maker Workshops.