

Co-operation among Irish beef farmers: current perspectives and future prospects in the context of new Producer Organisation (PO) legislation

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Abstract

Irish beef farms have experienced poor viability longitudinally, with officially acknowledged ‘crisis’ levels in 2013. In response, beef Producer Organisation (PO) legislation was introduced. Through the lens of international evidence in the literature about how POs function, this paper presents an analysis of Irish stakeholders’ views in the context of a public consultation process. While stakeholders indicate the need for individual POs to collaborate, little emphasis is placed on other factors necessary for success: collaboration with other chain actors; and market differentiation of products. Stakeholders identified primary threats as poor engagement on the part of both farmers and processors/purchasers.

Keywords: Ireland, beef farms, Producer Organisations (POs), product differentiation, co-operatives, values-based supply chain

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1.0 Introduction

The Irish beef sector accounts for almost 40% of total Gross Agricultural Output (GAO), which was €6.92 billion in 2016 (Bord Bia, 2016). It is a highly export oriented sector, with exports accounting for approximately 90% of total output (Bord Bia, 2018). Furthermore, it is the largest agricultural sector, with over 100,000 of the 139,000 total farms in Ireland having a cattle enterprise (DAFM, 2015). Despite the importance of the beef sector in terms of its size and value to the Irish economy, at farm-level the sector struggles with poor viability¹ (Burke and Roche, 1999; Connolly *et al.*, 2003; Hennessy and Moran, 2015). For instance, in 2016 an average of only 26.3% of all beef farms were categorised as economically viable (NFS, 2016). The beef sector experiences poor market returns with the majority of beef farms highly reliant on EU subsidies and off-farm employment (Dillon *et al.*, 2017). By comparison, the Irish dairy sector, while a substantially smaller sector in terms of the number of farms involved, is recognised as one of the most profitable sectors at farm-level. While there are multiple explanatory factors explaining the dairy and beef sectors, one of the significant differences relates to the institutional characteristics of their respective supply chains.

Since the late 19th century, farmer owned co-operatives have formed an integral part of the Irish dairy sector and are considered vital to the stability and growth of the sector (Murtagh and Ward, 2011). However, in the beef sector, farmers remain largely unorganised with the notable exception of the co-operative ‘mart’ centres whose primary functions are to provide a transparent method of selling livestock and securing payment (ICOS, 2017). The marts, by contrast to dairy sector co-operatives, undertake no processing or coordinated sales activities. The poor economic viability of the majority of beef farmers is often attributed to asymmetries of power within the beef supply chain that tend to favour processors and retailers (Renwick, 2015). The Producer Organisation (PO) model has been proffered as a way to “rebalance the supply chain by strengthening the hand of producers” (Minister for Agriculture, Food and the Marine quoted in Cadogan, 2016). The PO is simply defined as “a legally constituted group of farmers” (EU Commission, 2017) and is designed to support farmers to achieve collective scale and bargaining power within the food supply chain (Penrose-Buckley, 2007; Falowski and Cianin, 2016).

¹ Viability is defined as providing the average agricultural wage for family labour in addition to providing a 5% return on non-land assets (Frawley and Commins, 1996)

Two events in 2013 combined to provide the catalyst for the introduction of beef PO legislation in Ireland. Firstly, at the EU level, EU Regulation 1308/2013 provided for legal recognition of POs² in the beef sector at the discretion of individual member states. Secondly, the Irish ‘beef crisis’³ in 2013 led to the establishment of the Beef Forum⁴ which was initiated in April 2014 by the Department of Agriculture, Food and the Marine (DAFM). The Dowling Report, which was developed under the competency of the Beef Forum, recommended that the role of POs within the Irish beef industry be examined as a strategy to rebalance power in the supply chain and enhance farm-level viability (DAFM, 2014). The implementation of beef PO legislation in Ireland allows beef farmers to organise for the first time in order to negotiate collectively with meat factories for better terms and prices for their cattle, without breaching competition rules (Hennessy, 2016; European Commission, 2017). The beef PO legislation is a significant development in enabling collective action among Irish beef farmers. However, the perspectives and attitudes of Irish beef industry stakeholders will ultimately shape engagement with the PO model and, consequently, the impact of the legislation.

Following an overview of the Irish beef sector and a review of state of the art in the formation and operation of POs, this paper presents a straightforward analysis of current perspectives and future prospects for the establishment of beef POs in Ireland. The analysis is based on qualitative interviews undertaken with key informants in the Irish beef industry in 2016 and 2017 and the full collection of stakeholder submissions made to the DAFM during the 2014 beef PO legislation public consultation process. Following the topics used by DAFM in eliciting stakeholders views in a public consultation process, we focus on: stakeholders’ views on how POs should be formed and operated: the size (membership/throughput) that POs ought to be; the structures and governance appropriate for POs; the main functions (marketing, on-farm efficiencies, climate change mitigation *inter alia*) POs ought to assume; and the nature of POs’ roles in contractual negotiations. We discuss Irish stakeholders’ views

² POs were first introduced in the EU in 1972 (Eastham, 2014) and organised mostly in the fruit and vegetable sector. PO legislation was extended to the dairy sector in 2011 and beef in 2013.

³ Renwick (2015) attributes the beef crisis of 2013 to a number of factors including production driven systems; export blockades; power imbalances within the chain; poor flow of information across the chain; the horsemeat scandal; processors’ cattle specifications (weight targets and carcass conformation). A lack of transparency and communication exists between different actors in the chain, generating mistrust and suspicions of profiteering further down the chain (Renwick, 2015, p.21).

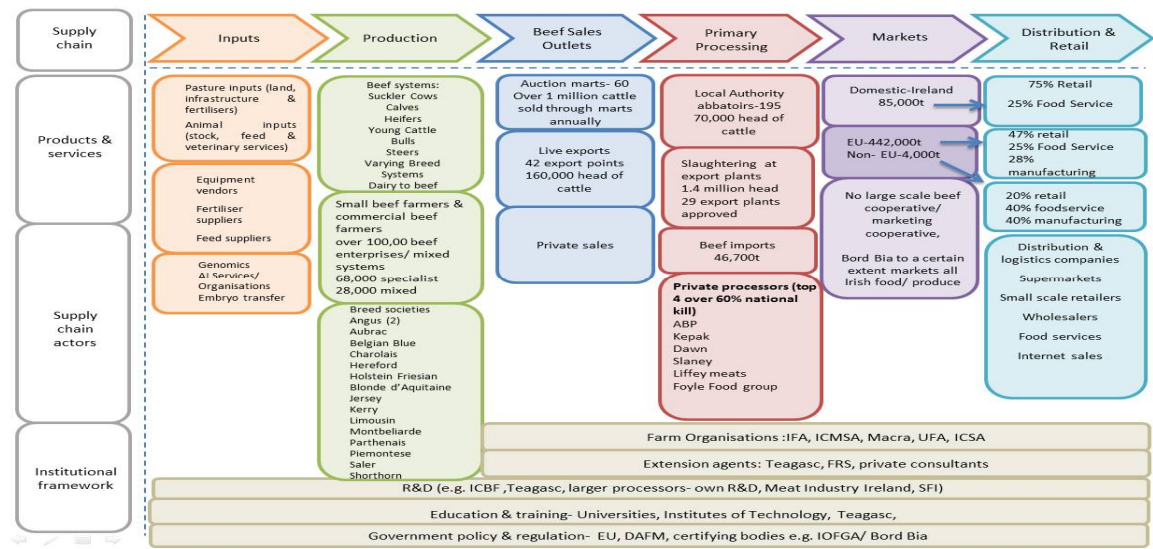
⁴ The Beef Forum was initiated by the DAFM in April 2014 to respond to the 2013 ‘beef crisis’. The Beef Forum was essentially a series of roundtable talks involving industry stakeholders, identifying potential solutions for the sector.

findings through the lens of lessons learned from the existing literature on how POs operate internationally. After a brief description of the Irish beef sector in section two, we review the international literature on POs and associated cooperative structures in section three. We then present our methods, findings and discussion sections in sections four, five and six.

2.0 The Irish beef sector

Approximately 500,000 tonnes of beef are produced annually in Ireland and in 2016 this level reached 588,000 tonnes with 535,000 tonnes exported (Bord Bia, 2018). Bord Bia (2018) estimates Ireland’s beef self-sufficiency rate at 650% and therefore the sector is highly reliant on exports. The Irish beef supply chain is characterised by diverse actors spanning input-suppliers, farmers, and numerous sales outlets, processing, distribution and retailing outlets. Figure 1 illustrates the complexity of the Irish beef supply chain and the heterogeneity of beef production systems at farm-level (Finneran and Crosson, 2013). There is wide-ranging heterogeneity in the Irish beef herd in terms of the systems (for example cattle rearing, cattle finishing), types of beef animals (ranging from suckler cows, calves, heifers, young cattle, bulls and steers) and breed variety (see Figure 1) (Hocquette and Chatellier, 2011; Finneran and Crosson, 2013).

Figure 1: The Irish beef supply chain



Source: adapted from Renwick, 2015 and Heery *et al.*, 2016

Some 100,000 farmers in Ireland are involved in beef production, with just 32 major export-approved privately owned slaughtering facilities (DAFM, 2015). While there are a further 195 low-volume slaughterhouses (DAFM, 2015), 32 are involved in the processing of all

exports (accounting for 90% of output). This points to a high level of concentration in the processing sector and in 2015, four processors accounted for 65% of the total Irish cattle kill (Renwick, 2015). Allegations of ‘price fixing’ and ‘beef cartels’ in the Irish meat-processing sector have circulated in the industry longitudinally but these claims have not been substantiated (O’Sullivan, 2000; Shannan, 2000). Unlike the dairy sector, there are no co-operatives that have processing functions in the beef sector. There is, however, a well-established network of marts. Marts have been operating for a half a century in Ireland, having replaced livestock fairs that had been in place for seven centuries before then (Haughton, 1955 cited in Curtin and Varley, 1982). The Irish Co-operative Organisation Society (ICOS) reports that there are currently over 60 co-operative marts in Ireland, which have the primary function of providing a ‘transparent method of selling and guaranteeing payment for livestock’ (ICOS, 2018). In addition to mart co-operatives, there are over 40 breed societies that operate as co-operatives (ICOS, 2018). Hennebry *et al.* (2002) undertook a study of mart co-operatives in Ireland and found that most are loss making. Non-mart activities, such as real estate, were found to account for 90-100% of marts engaged in non-mart activities, including the four largest Irish mart co-operatives (Hennebry *et al.* 2012, p.13). Differentiating between horizontal and vertical integration, Hennebry *et al.* (2002) found from interviews conducted with senior executives of marts that they favoured horizontal integration by merger, but their view was that finding partners was likely to be difficult as board members of individual marts were unlikely to cede control. The authors’ analysis furthermore found that vertical integration, by undertaking downstream activities such as processing, was not favoured by marts, though no specific reason for this was identified. The most desirable strategy among senior executives was diversification of marts into other areas, which has accelerated over the past two decades, with many marts retailing agricultural supplies. Consistent with the findings of Hennebry *et al.* (2002) no mart undertakes processing activities today.

2. Producer Organisations

Power imbalances in the beef supply chain, identified as largely responsible for the loss-making status of Irish beef farms, go largely unaddressed by current institutional conditions in Ireland (Renwick, 2015; Meikle, 2018). It is in this context that POs were proposed as an organisational method to disrupt and rebalance negotiating power between producers and

processors. POs are legal entities, governed by EU regulation 1308/2013 and facilitate the types of horizontal and vertical integration strategies analysed by Hennebry *et al.* (2002). POs are not confined to agriculture and also operate in the fisheries sector, where there are currently over 200 POs operating EU-wide, governed separately by EU regulation 1419/2013. However, policy recognition and support of POs across the various agriculture and aquaculture sectors is driven by the same goals, as described by the European Commission,

“Producer organisations (whether or not organised in the form of co-operatives) and their associations are important players which contribute to strengthening the position of farmers and growers in the food supply chain versus other downstream actors by carrying out a wide array of activities on behalf of their members. By working more closely, producers will be able to achieve economics of scales and synergies to process and market the products of their members.” (Europa, 2018)

While there are over 22,000 agricultural co-operatives operating across the EU (Copa Cogeca, 2015), the presence of POs tends to vary across countries and sectors (Falkowski and Ciaian, 2016). Approximately half of the value of all marketable vegetables and fruit produced in the EU are marketed through POs (European Commission, 2017, p.6) and in Ireland 20% of fruit and vegetables are marketed through POs (DAFM, 2018). POs in the EU operate across a range of sectors including: cereals, sugar, pork, sheep meat, fruits and vegetables, olive oil, dairy, wine and beef, although the majority have tended to operate in the fruit and vegetable sector in the most part because fruit and vegetable POs were among the first to be legislated for (Van Herck, 2014). Member states must mandatorily recognise POs if they meet sector-specific recognition criteria for the following sectors: fruit and vegetables, olive oil and table olives, silkworm, hops, milk and milk products’ (European Commission, 2018). There is a lack of EU-level data on the number of POs operating EU-wide and following a study of IBOs (Arcadia International, 2016) a study has been recently commissioned by the EU to profile POs and to present an ‘analysis of the best ways for producer organisations (POs) to be formed, carry out their activities and be supported’ (Arcadia International, forthcoming 2019).

EU regulation 1308/2013 stipulates that POs must comply with certain criteria. Derogation from competition rules is permitted on the basis that POs should ‘provide for the integration of activities other than joint sales and this integration should be likely to create efficiencies

significant enough to offset the possible negative [market] effects of joint selling' (van Herck, 2014, 4). POs must be producer led; produce a specific product as provided for within the regulation; form a legal entity or a clearly defined part of a legal entity; have a minimum number of members or marketable produce; provide sufficient evidence that it can/ has carried out activities; and should be established in order to pursue at least one of the specific objectives outlined in the regulation (CMO Article 152⁵; European Commission, 2018):

- (i) Joint distribution, including joint selling platform or joint transportation;
- (ii) Joint promotion;
- (iii) Joint organising of quality control;
- (iv) Joint use of equipment or storage facilities;
- (v) Joint management of waste directly related to the production of live cattle;
- (vi) Joint procurement of inputs.

Van Herck (2014) identifies potential benefits arising from POs for producers. These include strengthening of farmers' bargaining power upstream and downstream; reduction of risk; access to new marketing channels as a result of pooling output; economies of scale allowing investments in services; reduction in transaction costs; information exchange within the PO supporting use of new techniques and technologies; higher incomes; improves social cohesion, partnership and trust; development of skills to resolve conflicts (van Herck, 2014, p. 4-5). Policy benefits for farmers arising from the establishment of POs include research and development supports specific to sector (European Commission, 2018); funding supports through the EAFRD (e.g. Article 27 of EU Rural Development Regulation (1305/2013); certain exemptions from competition rules; and, specifically, the creation of favourable rules where products differentiated according to PGI (see Articles 150 & 172 of 1308/2013) (European Commission, 2018).

3.1 Associations of POs and Interbranch Organisations

EU regulations that govern the operation of POs also provide for the establishment of Associations of POs (APOs), which are formal collaborative associations of multiple POs horizontally. Furthermore, vertical collaborations between different actors in the supply chain, take the form of Interbranch Organisations (IBOs) (Article 157 of EU Regulation 1308/2013). Articles 32 and 33 of Regulation 2017/892 regulate Transnational POs and Transnational Associations of POs, supporting cooperation across international boundaries. All such national and international collaborations between individual POs are especially critical for their success, mainly because of the difficulties experienced otherwise in achieving scale and sufficient representativeness of farmers and volume of product in the marketplace (European Commission, 2017). However, while individual, independent POs cooperating via federated-type structures may maintain aspects of their flexibility and autonomy (Lyson *et al.*, 2008), it is important to note van Herck's (2014) observation that while the economic performance of a PO may be positively correlated with its size, 'larger POs could also be associated with structural complexity and reduced flexibility'.

In this context, IBOs are 'vertically integrated organisations which comprise producers and at least one member of the processing or trading part of the supply chain', with the primary aim of providing 'a means of allowing dialogue between actors in the supply chain, and in promoting best practices and market transparency' (European Commission, 2017). IBOs are particularly crucial for the success of POs and currently, there are 128 IBOs operating in the agriculture sector EU-wide. Ten of these are categorised as beef and veal POs (European Commission, 2018). For example, the Provacuno IBO represents 85% of Spain's beef industry (542,000 tonnes annually, comparable to Ireland's annual beef production) and produces, processes and markets *Beef from Spain*. The Provacuno IBO has a membership of five regionally organised beef farmer-owned POs, each with their individual brand, and six processors/traders partners (Provacuno, 2018). Coordinating collaboration between POs and between POs and processors, the IBO undertakes functions such as 'defending the interests of the beef industry from production, throughout processing to trading' and 'preserving the functional efficiency of the beef value chain' (Provacuno, 2018).

While there are numerous examples of POs, APOs and IBOs operating in various sectors across Europe, it is also the case that concerns are cited in the literature. Eastham (2014, p.51) warns that the promotion of co-operation through POs tends to over-focus on supply related

issues without due consideration for demand related problems. Where POs are limited in size and alternatives for buyers exist, POs are vulnerable to pressure placed on them by buyers (Eastham, 2014). POs vary in form depending on the institutional context and product, which results in diverse objectives, economic dimensions, legal status and internal structures (Bijman, 2007, p.259). Critically, however, POs should be set up on the initiative of producers and should aim to increase the economic performance of members by tailoring production and sales to market demand (Chlebicka, 2015; Falkowski and Ciaian, 2016). Policy promotion of POs highlights the benefits gained by farmers as a result of working together to improve efficiency and consolidate supply (Eastham, 2014). Ownership and decision-making are, however, at the discretion of the membership. Typically, POs are organised as agricultural co-operatives and the co-operative model represents one of the main legal entities recognised as suitable for a PO under the EU PO Regulations. Co-operatives are flexible, adaptable business models (Birchall and Ketilson, 2009; McCarthy *et al.*, 2010) and are user-owned, user-controlled and user-benefit organisations, making them appealing structures for the establishment of POs (Bijman *et al.*, 2012; Chlebicka, 2015). Internationally, the literature indicates that the existence of social capital, particularly trust between producers as a result of informal co-operation, is a significant factor in positively influencing the decision to join or establish a PO (Chlebicka, 2015; European Commission, 2018).

Where IBOs are concerned, interviews with key informants in Ireland indicated difficulties experienced by IBO members, particularly primary producers (Macken-Walsh and Brosnan, 2012). Retailers can dominate how IBOs operate, particularly in relation to stipulating to producers' production processes as well as product standards and characteristics (see also European Commission, 2017). Key informants in Ireland had the view that IBOs are facilitating an ongoing shift in monitoring responsibilities of production and product standards away from statutory agencies to private retail conglomerates driven by corporate mandates (Macken-Walsh and Brosnan, 2012). POs have been heretofore specific to the horticulture sector in Ireland, with a tomatoes/cucumber/peppers PO and a mushroom PO operating in 2018 (a strawberry PO has recently ceased operating). According to interviews conducted by Macken-Walsh and Brosnan in 2012, the POs could experience difficulties in competing with vastly larger POs/companies operating in other European and non-European countries; difficulties in operating in accordance with EU schemes; and internal cooperation-related difficulties. Key informants highlighted the need for an effective regulatory

framework that governs the production standards and operation of members. Insufficiently regulative *modus operandi* was identified as representing serious threats to the operation of POs. ‘Trust’ between members was insufficient for regulating POs, in their views (Macken-Walsh and Brosnan, 2012, 11). A characteristic of Irish horticultural growers in particular is that they can wish to retain their direct association with their product in relationships with retailers/purchasers (Macken-Walsh and Brosnan, 2012, see also European Commission, 2017). For producers with established marketing arrangements with retailers/purchasers, joining a PO entailed the replacement of such arrangements with contracts between the PO and the retailer/purchaser, thus breaking the pre-existing direct link (Macken-Walsh and Brosnan, 2012). The experiences of Irish fruit and vegetable POs provide cautionary lessons in relation to the need for POs to be flexible in maintaining linkages between producers and products in a marketplace where proximity between producers and consumers is increasingly sought after (Macken-Walsh *et al.*, 2017; Regan *et al.*, 2018).

Revealing the intricacies of coordinated beef production and marketing, Hooks *et al.* (2017a, 2017b) present a study of US beef co-operative and the nature of contractual arrangements between the co-operative, processors and retailers. The authors found that a beef cooperative’s integration to a values-based supply chain⁶ (VBSC) involving contractual arrangements vertically between across-chain actors (e.g. the co-operative, processors and retailers) led to enhanced trust, transparency, and profits for all chain partners. By coordinating elements such as forecasting production volumes 18 months in advance and setting prices to reflect costs accumulated across the chain (e.g. those at farm-level and retail for instance packaging) has allowed for sustainable pricing methods to be applied, which incorporate a profit margin for all chain partners. The VBSC that takes the study’s focus is similar in structure to an IBO.

3.2 Adding value

There is a direct association between POs and the pursuit of high valued-added markets. PO legislation provides specifically for products differentiated according to PGI, for instance

⁶ VBSC’s are characterised by commitments and contractual arrangements between chain actors, supporting fair distribution of profits, and business agreements of appropriate extended duration (Stevenson *et al.*, 2011; Fleury *et al.*, 2016). Furthermore, VBSCs produce differentiated, premium products which embody social, cultural and economic values and, typically, credence attributes such as organic, high animal welfare or hormone-free.

(Articles 150 & 172 of EC Regulation 1308/2013; European Commission, 2018). Berdegue (2008) and Hellin et al. (2009), among others, argue that POs are more successful when they produce value-added rather than undifferentiated commodity goods. To enhance competitive advantage, Beverland (2007) states that producers need to focus on quality enhancing attributes that are difficult to replicate. By enhancing product quality, not only are producers able to command premium prices, but also they can compete on quality and not solely on the price ‘race to the bottom’ generally associated with the commodity markets (Young and Hobbs, 2002). Because most agricultural commodity prices are dictated by global supply and demand, it is crucial that POs have the ability to innovate and add value to ensure the long-term viability and sustainability of farmers (DEFRA, 2014, p.17).

The distinction between value and volume of produce is a recurring theme in agricultural development debates. At farm-level, arguments that increases in scale are positively associated with improvements in farm viability are tenuous at best. In an Irish study of the beef sector, Tsakiridis *et al.* (2016) found that there are few, if any, returns to increasing the scale of beef farms as a means towards improving farm viability. On the other hand, increasing attention is paid to the economic potential arising from adding value to produce rather than increasing its volume. Quality attributes are increasingly sought after by consumers (Regan *et al.*, 2018) and in this context policy-oriented documents promote the production of food. “*that is demonstrably superior from multiple (quality, safety, health and environment) perspectives*” (Purvis *et al.*, 2012, p.39; see also Bell and Shelman, 2010; Monaghan *et al.*, 2015). Ireland’s most recent agriculture development blueprint *Food Wise 2025* explicitly emphasises the need to build on increasing value over volume and targeting higher value-added markets as a means of increasing economic returns (p.35).

Marketing differentiated farm produce through Short Food Supply Chains⁷ (SFSCs) is identified by EU policy an area of development opportunity on the basis that ‘high consumer expectations (e.g. traceability, food safety/health, animal welfare, environment protection) coupled with high EU standards offers opportunities for high-value markets’ (EC, 2017, 8). Approximately 15% of EU farms sell more than half of their produce directly to consumers and most of these are smaller farms under between 1 and 8 Economic Size Units (ESUs) (EC,

⁷ Characterised by enhanced proximity between consumers and producers

2017, 8). Integration of farms to SFSCs varies across the EU, ranging from an estimated .4% in Ireland (Meredith, 2009) and less than 5% in Malta, Austria and Spain to 25% in Greece and 21% in France (EC, 2017, 8). Half of French farmers producing vegetables and honey are integrated to SFSCs, selling directly to consumers (European Commission, 2017).

Acquisition of officially recognised unique status for food products is an approach used EU-wide to add value. The EC officially recognises products with proven protected designation of origin (PDO), protected geographical indication (PGI), and traditional specialties guaranteed (TSG). While in Ireland, there are just seven registered PGI/PDO products, one of which is a fresh meat (lamb) product, there are currently 163 registered PDO/PGI/TSG products under the category of ‘fresh meat and offal’ Europe-wide (11% of all designated products registered) (Europa DOOR, 2018). In Spain, for instance, almost 6% of beef marketed through the Provacuno IBO has PGI designation, and 3% is marketed as organic (Provacuno, 2018). An effort was made in the past to have grass-fed Irish beef recognised as having unique designation, which was unsuccessful. However, that is not to say that designation of more specific Irish beef products is not possible and the establishment of co-operatives to market PGI meat products is an area of potential identified specifically by ICOS (2018)⁸. Differentiating Irish produce, particularly meat as one of Ireland’s largest sectors, represents untapped potential in an evolving market where quality attributes are increasingly sought after by consumers (Cotter, 2016; European Commission, 2017, 8; Regan *et al.*, 2018).

That Ireland is ‘green’ and ‘small not multinational’ is a valuable market differentiator according to marketing experts but Irish industry actors can be unaware of the strategic value of this differentiator (Bell and Shelman, 2008; Bell and Shelman, personal communication, 2015). However, Quality Assurance (QA) accreditation has been an important strategy in promoting Irish beef produce (Bord Bia, 2018). The QA scheme operated by Bord Bia verifies that beef is produced sustainably on certified farms by enhancing elements of food safety, animal welfare, traceability, and environmental protection (Bord Bia, 2017). The ‘Sustainable Beef and Lamb Assurance Scheme’ (SBLAS) counts 52,000 beef farmers as participants (Moran, 2016). The Origin Green scheme is also of growing importance in the

⁸ Conneely and Mahon (2013) described the Irish institutional context for the incentivising and support of groups pursuing PGI designation as largely unfavourable.

marketing of Irish Produce. The Origin Green sustainability report for 2016 (Bord Bia, 2016, p.14) confirms that since 2011, 117,000 carbon assessments have taken place on over 49,000 participating Irish beef farms. Currently, over 95% of beef products and 85% of dairy products are accredited by Origin Green (Origin Green, 2018). Representing the 15,000 Irish dairy farmers participating in the Origin Green initiative are some private, typically small scale, dairy processing companies; and several large farmer-owned cooperatives such as Glanbia, Lakeland Dairies, Aurivo, and Carbery. By contrast, Origin Green represents just one beef farmer who sells directly to the market. The remaining members selling beef are large privately owned processors, with no beef farmer-owned co-operative or representative organisation (Macken-Walsh, 2018). Furthermore, in a review of Origin Green, the authors observe, ‘Much of the marketing of Origin Green relates to biodiversity and the image of high nature value (HNV) farmers in places like the Burren and in our many upland areas yet the Origin Green itself does nothing to provide additional financial support to these exemplar farmers’ (An Taisce, 2016, 9). It was found that while sustainability gains have been achieved by the initiative, ‘green washing’ must be avoided (An Taisce, 2016, 5).

The smaller and more extensive farms referred to by An Taisce (2016) have been recently studied (Dillon *et al.*, 2017). Adding credence to the ‘clean, green image’ and visual aesthetic provided in particular by extensive beef and sheep farms in the Irish countryside, a recent survey of smaller farms (56% of total farmland) undertaken by Teagasc’s National Farm Survey (NFS) found that nitrogen and phosphorous balances on a per hectare basis are lower on smaller farms than larger farms, smaller farm systems are low-input; and on smaller farms a high proportion of grass is used in animal diets (Dillon *et al.*, 2017). Per hectare, smaller farms emit fewer greenhouse gas emissions, but this is dependent on their low level of (meat) output (Dillon *et al.*, 2017). These attributes, together with the inter-generational heritage of Irish family farms and their close human-ecological relationships, provide highly valuable attributes for the development of a strong farmer-owned Irish beef brand (Macken-Walsh *et al.*, 2017; Macken-Walsh, 2017). That such a brand is farmer-owned is a necessary characteristic for recognition as a genuine SFSC (Macken-Walsh *et al.*, 2017). Clearly, it is neither possible nor desirable for many small beef farmers to develop such a brand individually and collective action is recognised internationally as a solution in this context (Lyson *et al.*, 2008; Macken-Walsh *et al.*, 2017).

While there are several beef POs in the EU and many add value to at least a proportion of their produce, in the United States, there is a particularly luminary example, of a beef cooperative, similar in function to a PO, that markets beef products with the same differentiating characteristics as Irish grass-fed beef currently marketed in the US. The cooperative was integrated to a VBSC, which is consistent with the structure and objectives of POs and APOs, but IBOs in particular. Hooks *et al.* (2017a), in a study of the US beef cooperative reported how integration to a VBSC with chain partners (processors and retailers) led to enhanced trust and transparency between chain partners. Also, producing premium beef products and setting prices based on cost of production (to cover costs at all levels of the chain led to fairer distribution of economic returns for chain partners. The catalyst for farmers' formation of a cooperative and integration to a VBSC was increasingly poor farm-level economic viability. A small number of ranchers recognised potential to market their beef as a premium product, differentiated according to a few main attributes: a co-operative of 'local' (initially one state) ranch families; producing rancher-owned 'birth to box' 'natural' beef, i.e. pasture raised with no antibiotics, hormones or artificial ingredients. The farmers increased their viability significantly and today the cooperative, originally established in 1986, has a membership of 60 ranchers (Hooks *et al.*, 2017a).

4. Methods

The methodology used in this study relied on content analysis of all fourteen submissions made to the DAFM by Irish beef industry stakeholders during the PO consultation process in 2014 (see Table 2); and additional expert interviews (14) were conducted with key informants in the Irish beef sector in 2016 (see Table 2). Representatives of current beef producer groups⁹ (7) and representatives of meat processors (3) were interviewed. Other interviewees (4) were selected based on their associations with agricultural policy and legislation development; the meat-processing sector; the co-operative sector; and food marketing.

Table 2: Stakeholder submissions and interviews:

Stakeholder submissions (14)	Stakeholder interviews (14)
Farmer representative groups (5)	DAFM (1)
Current producer groups –various sectors (3)	Representatives of current beef groups (7)
Extensions agents (1)	Representatives of meat processors (3)

⁹ Producer groups are different to POs because they are not recognised by dedicated legislation. Producer groups may be registered as private companies or cooperatives.

Sector associations and representatives (4)	Co-operative body (1)
Statutory body (1)	National Food Board (1)
	Meat processing association (1)

A semi-structured interview approach was adopted, using open-ended questions to ascertain participants’ views in relation to the potential of beef POs, their structure, governance, role and remit. All interviews were recorded and transcribed. The transcripts together with the written submissions to DAFM were analysed thematically. Thematic analysis utilises a systematic approach involving identifying and coding key themes arising in the data (Boyatzis, 1998; Marshall and Rossman, 1999). Reflecting the interviewing strategy employed, themes arising in the data mainly corresponded to the topics on which the questions used in the DAFM PO consultation process were based (see Table 3).

Table 3: Questions used by the DAFM’s Beef PO Consultation Process

<div>1. What should be the minimum <i>number of members</i> in a PO? Should there also be an upper limit fixed on the number of members involved?</div> <div>2. What are your views on the <i>structure and governance</i> of producer organisations? This includes commercial entities versus non-commercial groups, leadership structures, boards of directors, governance etc.</div> <div>3. What do you see as the main <i>role of producer organisations</i> (see Article 152)? Should they have a particular focus on for example, Research and Development at farm level, initiatives in the field of marketing and promotion, focus on on-farm efficiencies, progress sustainable farming techniques, climate change mitigation and other aims set down in Regulation 1308/2013 Article 152?</div> <div>4. Do you see a role for POs becoming involved in <i>contractual negotiations</i> between producers and processors?</div>

Source: DAFM (2014)

There are some limitations to this research. The research is limited to an analysis of stakeholders’ submissions to DAFM and 14 interviews. Conducting a survey of Irish beef

farmers to gain insights to their awareness of and views about beef POs was beyond the resources of this research project. However, while the number of submissions submitted to DAFM's consultation is low and represents a self-selecting cohort, the number and content of the submissions is also indicative of the breadth and nature of Irish stakeholders' current interests in POs. The selection of interviewees was conducted purposively as a method of verifying the information contained in the submissions, gauging the representativeness of the views presented therein. There was overall consistency between the views presented in the submissions and the views elicited in the interviews, with no significant divergences.

4.1. Size of producer organisations: membership, volume of production and market share

This section presents the analysis of findings from the submissions and interviews. The findings are presented under the headings used to structure the DAFM submissions including the size of POs; their structure and governance; their role and more specifically their role in contractual negotiations (Table 3).

There were varying views among stakeholders in relation to the number of members a PO ought to have. While two submissions suggested there should be no minimum membership, others suggested specific minimum membership numbers ranging from as low as 2 to as high as 50 members, and others suggested there should be no upper limit on membership as long as the organisation remained representative and in the control of members. Other stakeholders suggested that thresholds of output would be a more appropriate approach to determine size than numbers of members. One submission, for example, proposed that it should be based on *"tonnage or volume produced rather than the number of members"*. One representative of an existing beef producer group highlighted that market share was a more substantive way of determining the appropriate threshold for membership and output of a beef PO, stating:

"If [a] group want to set up they need to have at least 25% of the market share in order to kick start it...in order to have some clout".

Currently the legislation stipulates that, in order to be exempt from competition law, a single beef PO's output must not exceed 15% of total national production. However, one submission highlighted that, considering only 10% is consumed domestically, one PO could potentially satisfy total domestic consumption and still account for less than 15% of national production. There were no references in the submissions to production thresholds of APOs or IBOs, possibly indicating a lack of awareness.

4.2. Structure and governance

Most of the submissions stated that POs should function as commercial entities while other submissions believed that *“It should be agreed by the farmers involved”*. The co-operative model was identified by the submissions (7) and interviews as offering a suitable organisational structure for POs. The co-operative is recognised as a familiar and readily adaptable component of the institutional framework of Irish agriculture, with one interviewee presenting it as *“the best and most appropriate form that would provide the leadership structures, board of directors, governance and democratic accountability to PO members”*.

One producer group representative interviewed had the view that, if farmers had a say all the time, it could make negotiations with their partnering processors laborious. It was also suggested in one submission that professionals in marketing, distribution and co-ordination should be contracted by POs if needed but *“a non-executive farmer/producer/manager could provide day to day running of the group under the authority of the committee with secretarial assistance”*.

The issue of the geographic representativeness of POs was also questioned, with one submission noting that:

“Certain geographic parameters should be set for POs to avoid disparate combination of PO members (spread across the country) which would make effective operation and cohesion of the group more difficult”.

The need for a clearly defined set of rules emerged strongly from the findings as being pivotal to ensure group commitment, trust, cohesion and loyalty:

“Clarity needed on whether or not members of a PO can negotiate individual deals while also at the same time being a member of a PO which is involved in negotiations on behalf of a group of suppliers, regarding a defined supply of cattle...there should also be rules in relation to the minimum period of membership to ensure that the structural validity of the PO is not compromised”.

One existing beef producer group representative pointed out that, while the processors represent one potential barrier to PO development, the farmers themselves could potentially undermine the model through lack of commitment:

“You know either the meat factories will break it up, or they will break it up themselves by not really adhering to it”.

There is a view that, even if processors do engage, POs could be destabilised by processors offering some members premiums:

“It’s going to be very easy to undermine a beef producer group because of a factory deciding...to offer one or two of the group an extra 10 cents a kilo, and that’s all it will take...holding the group together is going to be very difficult... especially because it’s in a start-up phase”.

There are also views that while the aim of POs is to bring smaller producers together to create economies of scale and enhance bargaining power, there is a chance that bigger producers may in fact benefit more. Such unintended consequences have transpired in other sectors, for example, in the Irish mushroom industry, where the number of smaller suppliers (producing non differentiated commodity products) declined while the larger suppliers continued to grow due to their ability to increase in scale and to maintain and meet buyers growing demands. This led to consolidation within the mushroom industry.

4.2.1 Existing vehicles for PO development

There was recognition in the submissions and interviews that pre-existing networks, most particularly discussion groups (including those supported/established under the BTAP¹⁰ and KT Groups) could provide a forum for establishing POs:

“POs offer the potential for horizontal co-operation between farmer members of POs and also vertical co-operation between POs, marts and processors. The horizontal co-operation could potentially be harnessed through the existing BTAP discussion group infrastructure as a preliminary conduit”.

POs will be able to draw down up to €3,000 worth of advisory and consultative services under the Rural Development Programme in order to become established (Hubert, 2017). However, policy-driven and funding-led incentives were observed as having negative implications. One producer group representative, for example, observed that financial

¹⁰ The BTAP (Beef Technology Adoption Programme) funds beef farmers to come together for group discussion on the areas of financial management, grassland management, herd health, animal breeding / welfare and producing animals to market specifications. The scheme has now been replaced by Knowledge Transfer (KT) Groups.

incentives offered to farmers to become involved in discussion groups led to opportunistic behaviour and negatively impacted the dynamic of pre-existing discussion groups:

“We had working discussion groups already and then a scheme came out to try and encourage people and you got a very, very diverse range of people joining those discussion groups from people with loads of ability to people with no ability all in the one group. The same thing...could potentially happen with these POs...everybody will sign up to them...what criteria do you set for joining them, how do you manage it, what are the requirements for being in it...producer groups that came about organically, came about because a desire already existed”.

The issue of beef POs potentially undermining the only co-operative structure, the mart structure, in the Irish beef sector also arose. Currently, the livestock mart provides an arena or spot market for selling cattle, and *“at the present time the amount of finished cattle being sold through marts has declined and could further decline if POs become established”*. Considering that beef POs will be established with the specific aim of negotiating with processors, the livestock mart system could become obsolete. However, some submissions and interviewees alluded to the potential of livestock marts and beef POs operating in concert. It was suggested that livestock marts could, in fact, form beef POs, and could potentially organise into an IBO considering they are widespread and are set up administratively and organisationally to function as POs:

“One group of 30 farmers...will not hold sway and will not have the clout to create a group for themselves...they will have to be linked with [other groups]. It will have to be co-ordinated as one joint effort nationally”.

4.3 Role of producer organisations

Over half (8) of all submissions noted that the main role of POs should be negotiating with processors on price and considered this as their main “raison d’être”. This perspective also emerged from interviewee narratives, with one stating:

“You can now negotiate on price whereas before you couldn’t... they [can] come together, try and hammer out a price because it’s now legal. If they tried to do that before the legislation, they could all be in court”.

Other submissions pointed to the fact that there is scope for POs to undertake roles other than price negotiations, such as the range of roles identified in the EU regulation. One submission

outlined that POs should not be “*set up solely to focus on selling output*”. Other aspects that emerged as fundamental included all year-round supply; on-farm efficiency; and adhering to and responding to market demands. Submissions (3) noted that there are already “*a number of organisations such as Teagasc, Bord Bia etc. that have expertise and programs in [these] areas*”.

Just two submissions identified the potential of POs in adding value to beef produce by using:

“Our world advantage of grass-based beef production and image...the national herd... currently consists of over 1 million suckler cows and their progeny constitutes the bulk of our marketable image of grass fed Origin Green beef”.

The National Food Board representative concurred with this point noting that:

“If you are a very strong farmer owned PO but are not...offering what the consumer wants...if it's not giving a significant advantage over what's out there...it's not going to be successful”.

Many of the current beef producer groups operate with some element of value added to their product, i.e. breed based or organic. One beef producer group had previously considered pursuing the route of product differentiation but did not proceed based on associated costs involved and lack of skills. Other groups interviewed are not planning to add value or brand their products due to limited resources and skills, as it “*involves a whole other layer of management. I mean there is a sales element to that and other expertise that we don't have*”. Even in the creation of a branded value-added product, there is a need in the premium markets to remain progressive and constantly re-assess products. In the experience of one producer group representative:

“What we were providing within a few years became standard for the industry and now we need to look for the next differentiation”.

Therefore, POs taking a value-added approach need to be cognisant of not only changing consumer demands in value-added market segments and being more innovative but also focused on the challenges of maintaining premiumised differentiation from the output of commodity beef chains, where standards are continually being raised.

4.4 POs and Contractual negotiations

While the potential scope of beef POs spans several purposes, the role most commonly identified by stakeholders related to the establishment of collective sales contracts between farmers and processors. By utilising sales contracting, both processors and farmers could reap the security and advantages of co-ordinating cattle supply that would meet market specifications at *“the right...times of the year when they would be most in demand”*. For processors to engage in sales contract negotiations with POs, it was stated by processors that they would need to see the ability of the PO to respond to market and industry demands, as well as consumer demands by supplying:

“A critical mass, a minimum number of people in a producer group and, as importantly, a minimum number of cattle and you’d need to see when they are going to come through. Because obviously seasonality plays a role, so you don’t want to...see them all coming in September for example. So, there would be quite a bit of work to be done to get the right mix within a group to match the market requirements”.

Only one submission noted that POs should be able to partner with all ‘agents’ in the chain rather than just processors, noting that the PO should be able to *“strengthen the ‘power’ of farmers (producers) in the supply chain relative to economic agents upstream and downstream from the farm gate”*. IBOs, as well as POs, have been legislated for in Ireland and it is clear from myriad existing policy schemes such as Origin Green that collaborative schemes and partnerships are already functioning in Irish and international markets between actors who choose to work together.

The submissions and interviews suggest that one of the biggest challenges for prospective POs is entering into agreements with processors. More than half of interviewees (8) held the pessimistic view that for as long as processors can access cattle supplies outside of POs, there will be little incentive to enter into negotiations for sales contracts. While one of the processors interviewed already works with producer groups, other processors were questioned on their openness to working with these new beef POs, with one stating:

“We probably would be open to them but like...through the years we’d have a good relationship built up with farmers that are continuously supplying us...so we wouldn’t really see the need for a producer group because...in our opinion from what we would have seen in the past...is that all it would have led to is an extra cost really”.

Another processor stated that they could not commit to partnering with POs and entering into sales contracts as the market was constantly changing. While processors may not have seen the need to engage with such POs in the immediate term, however, many were not dismissing engagement as a future option. The market situation and cattle supply issues appear to be the main factors determining processor engagement.

The use of contracts was perceived as pivotal to the success of prospective beef POs but developing such contracts would require more market price transparency. While prices paid to producers are reported by the DAFM, and retailer prices are reported, there is “*no reporting of wholesale prices in the trade*”. In the US, for example, beef trade prices are reported at the farmer, wholesale and retail level on a daily basis, which facilitates transparency and enables informed contracting.

5.0 Discussion & Conclusion

While PO legislation for Ireland’s beef sector is new, that is not to say that the country’s livestock sector and the emergence of collective action in particular has not been analysed in the literature longitudinally (O’Donovan, 1940; Kennedy, 1978; Curtin and Varley, 1982; Jones, 1997; Ó Fathartaigh, 2015). While a separate paper is required to assess lessons of the past for navigating current challenges, we are aware that much of what we report about the contemporary scene would, from a historical perspective, represent a case of ‘*plus ça change, ne change rien*’. While this is so, it is timely to reflect on whether features of agricultural cooperation for the 21st century (Teagasc, 2012) offer a resilience strategy in what commentators describe as seriously threatening times for suckler farmers (McCarthy, 2018).

Legislation of the EU regulation in Ireland not only offers opportunities for the establishment of farmer-driven collective organisations of Irish beef farmers but for these organisations to collaborate with other segments of the chain e.g. processing and retailing. The ultimate goal of such endeavours would be for farmers to become ‘part owners’ of the supply chain and enhance their viability (Kirschenmann *et al.*, 2008; Hooks *et al.*, 2017c). However, the operationalisation of new PO institutions poses challenges for all beef industry stakeholders who are accustomed to the existing supply chain and its existing power relations. Challenges have been cited in media discussions of prospective beef POs in Ireland, citing challenges experienced by horticultural POs in the past. In the farming media, Young (2014) reported that ‘POs could have the same transformative effective on the beef industry as the coops had

in the dairy sector in the 1920s and 1930' but 'there will be resistance to a change in the status quo'.

According to international evidence, PO legislation offers many potential functions and benefits to Irish beef farmers, including collective bargaining, joint promotion, co-ordinating joint purchasing of inputs including equipment and storage, and the joint management of waste directly related to the production of live cattle e.g. exporting slurry. As outlined by Van Herck (2014) benefits include the creation of economies of scale thereby strengthening farmers' bargaining power; reduction of risk and transaction costs; enhanced profits; and access to new markets among other benefits. The tradition of the co-operative model in the dairy sector, and grass roots movements including marts and discussion groups, provide a backdrop for the successful establishment of beef POs. The livestock mart system was identified in stakeholder submissions as having the potential to facilitate POs, or even Associations of POs, due to their co-operative structure and national reach. The potential roles of marts to engage and the practicalities of such arrangements require further exploration. Indeed, the horizontal and vertical forms of cooperation have been recommended measures to safeguard the viability of marts in particular for almost two decades (Hennebry, 2002). Furthermore, discussion groups may provide a forum to stimulate the establishment of POs.

However, submissions made to the DAFM during the consultation phase identified potential stumbling blocks to the establishment of POs, specifically poor member commitment and processor engagement. In the context of Ireland's successive beef 'crises', the main goal associated with POs is a rebalancing of power in the supply chain and to improve the bargaining power of farmers in dealing with other chain actors, particularly processors. Stakeholders indicate that this will represent a major challenge. Many believe that only increased consumer demand for beef will make processors willing to engage with POs. Other stakeholders suggested that a sufficient proportion of beef output and farmers must be represented by POs because, otherwise, processors will not need to engage with POs. Such views are consistent with international experience, which highlights the need for POs to represent a critical proportion of total produce available in the market.

A nationally co-ordinated approach is favoured by some stakeholders, which would require co-ordination from the outset. Such a coordinated approach is taken internationally in the form Associations of Producer Organisations and also Interbranch Organisations, which

include collaborative arrangements with other actors in the chain such as processors¹¹. The literature indicates that a coordinated approach is a successful route for the development of POs, rather than fostering the establishment of individual, smaller and potentially competing POs. A similar federated model is advocated by the AotM model, providing benefits of a local co-operative while linked horizontally to other co-operatives for solidarity and scale. Therefore, local identities and ownership, which are important attributes in the value-added market, are retained while operating in a co-ordinated national movement (Macken-Walsh, 2011; Macken-Walsh and Dunne, 2010). The preservation of localised regional structures while also drawing support from horizontal and vertical forms of integration is likely to be important to livestock marts in particular, as was highlighted by Hennebry *et al.* (2002).

While adding value to products is identified in the literature as enhancing profitability of POs and member farms, there was poor awareness of this in submissions. Some beef producer group representatives cited lack of expertise in sales and marketing as a reason for not adding value to their products. However, Irish beef (sold by processors) is already promoted by schemes such as Origin Green as differentiated according to sustainability attributes and beef branded as grass-fed is already considered a sufficiently premiumised product in the market place. Attributes of smaller-scale Irish beef farms in particular, which are largely unprofitable yet attractive to consumers from socio-cultural and environment perspectives, could be valorised by using branding and marketing strategies on the part of a collective of farms. Smaller farms, those currently operating 56% of total Irish farmland, have particularly favourable characteristics (Dillon *et al.*, 2017; Macken-Walsh, 2017).

Knowledge gaps were evident in submissions and particularly among interviewees. Interviewees such as representatives of current beef groups indicated that they knew little about the policy and many were unsure as to what it could offer them. While a nationally coordinated approach was referred to in submissions and s interviews, there were no references to APOs or IBOs. IBO functions have clear application in the Irish beef context, and the absence of references to IBOs in stakeholder could conceivably at least partially be explained by the consultation process text drawing attention to a certain selection of Articles

¹¹ Recently proposed EU legislation to protect primary producers in particular against unfair trading practices will serve to further enhance the collaborative arrangements between chain actors (COM, 2018). Furthermore, policy support of the ‘collaborative economy’ is another area of EU activity that should be considered in the context of creating imaginative ways of bring consumers into contact with primary producers (COM, 2016). Examples such as ‘Crowd Cow’ in the United States is one such example.

of the EU Regulation 1308/2013 (152-156 & 170), which include Associations of Producer Organisations but make no reference to Interbranch Organisations.

Furthermore, PO legislation has not received widespread attention in the farming media nor has it been highlighted prominently by farming organisations to date. This may change, however, with the implementation of two measures in 2018 to support the establishment of POs, which provide advisory services to the value of €3000 to up to 100 individual groups. The advisory services will assist prospective POs to establish themselves legally and operationally, for instance in coordinating beef production. While the focus is currently on establishing individual POs, the longer-term vision for the establishment of APOs and IBOs must be maintained. A crucial lesson from international experience is that POs operating alone may languish. Furthermore, the establishment of individual POs may appear all the more attractive to beef farmers where supports and favourable contractual arrangements are from APOs and IBOs are available. Otherwise, if supports such as those provided by APOs and IBOs are likely to be unavailable, farmers may justifiably judge with scepticism the future sustainability of POs.

References

Arcadia International (2016) Study on Agricultural Interbranch Organisations in the EU.

Available at: <https://ec.europa.eu/agriculture/sites/agriculture/files/external-studies/2016-interbranch-organisations/fullrep.pdf> [Accessed: 24.03.18]

Arcadia International (forthcoming, 2019) Analysis of the best ways for producer organisations (POs) to be formed, carry out their activities and be supported. Europa.

Bell, D.E. and Shelman, M. (2010) Pathways for Growth Building Ireland's largest indigenous industry. Available at:

<http://www.bordbia.ie/industry/manufacturers/insight/publications/CorporatePublications/Documents/Pathways%20for%20Growth%20Report.pdf>. [Accessed 06/12/16].

Berdgué, J.A. (2008) Cooperating to compete easier said than done: available in Producer Organisations and value chains; available at:

http://www.learning4development.org/uploads/3/3/8/9/3389888/cap34_0708_po_eng.pdf. [Accessed 26/02/17].

- Beverland, M. (2007) Can co-operatives brand? Exploring the interplay between co-operative structure and sustained brand marketing success. *Food Policy*, 32,4, pp.480-495.
- Bijman, J. (2007) The role of producer organisations in quality-oriented agro-food chains; an economic organisation perspective. *Governance for Quality in Tropical Food Chains*, pp.257-278.
- Bijman, J., Iliopoulos, C., Poppe, K.J., Gijselinckx, C., Hagedorn, K., Hanisch, M., Hendrikse, G.W.J., Köhl, R., Ollila, P., Pyykkönen, P. and van der Slangen, G. (2012) Support for Farmers' Cooperatives, Wageningen: Wageningen UR.
- Birchall, J. and Ketilson, L.H. (2009) Resilience of the co-operative business model in times of crisis. International Labour Organization (ILO), Geneva.
- Bord Bia (2017) Dublin. Available at: <http://www.bordbia.ie/Pages/Default.aspx>. [Accessed 18/07/17].
- Bord Bia (2018) Factsheet on the Irish Agriculture and Food & Drink Sector. Available at: <http://www.bordbia.ie/industry/buyers/industryinfo/agri/pages/default.aspx> [Accessed 10/04/18].
- Bord Bia (2018b) Farm Level Sustainability: Measuring what matters at farm level. www.origingreen.ie/farms. [Accessed: 14.05.18]
- Boyatzis, R.E. (1998) Transforming qualitative information: Thematic analysis and code development. Sage, London.
- Burke, T. and Roche, M. (1999) Teagasc National Farm Survey 1999. Teagasc, Sandymount, Dublin.
- Cadogan, S. (2016) in 'Beef producer organisations will deal direct with processors' published in the Irish Examiner 7th January 2016. Available at: <http://www.irishexaminer.com/farming/news/beef-farmer-producer-organisations-will-deal-direct-with-processors-374751.html>. [Accessed 01/12/17].
- Chlebicka, A. (2015) Producer Organisations in Agriculture – Barriers and Incentives of Establishment on the Polish Case. *Procedia Economics and Finance*, 23, pp.976-981
- Copa Cogeca (2015) Agri-co-operatives in the EU: Essence, governance and keys to success. Available at: <https://ec.europa.eu/agriculture/sites/agriculture/files/agri-markets-task->

- [force/contributions/concrete/copacogecaagricoopatives_en_.pdf](#). [Accessed 14/04/17].
- COM (2016) A European agenda for the collaborative economy. Communication from the European Commission to the European Parliament, the Council, the Economic And Social Committee, and the Committee of the Regions. Brussels, 2.6.2016.
- COM (2018) Proposal for a Directive of the European Parliament and of the Council on unfair trading practices in business-to-business relationships in the food supply chain, Brussels 12.4.2018.
- Connolly, L., Kinsella, A. and Quinlan, G. (2003) Teagasc National Farm Survey 2003. Teagasc, Sandymount, Dublin.
- Conneely, R. and Mahon, M. (2015) Protected geographical indications: Institutional roles in food systems governance and rural development. *Geoforum*, 60, pp.14-21.
- Curtin, C. and Varley, T. (1982) Collusion practices in a West of Ireland livestock mart, *Ethnology*, 21, pp.349–57
- DEFRA (2014) Conditions, Attitudes and Structures of Successful POs and Cooperatives: potential role in supporting a competitive farming sector in England and Wales, January 2014. Available at: https://ec.europa.eu/agriculture/sites/agriculture/files/agri-markets-task-force/contributions/2016-05-24/ukdefracoop_en.pdf. [Accessed 04/01/2017].
- Department of Agriculture Food and the Marine (2015) Beef 2025: Background paper. Available at: https://www.agriculture.gov.ie/search?q=cache:_xcV3VeHOdIJ:www.agriculture.gov.ie/media/migration/foodindustrydevelopmenttrademarkets/2025agri-foodstrategy/Meat2025backgroundpaper.doc+meat+2025&client=agriculture_frontend&output=xml_no_dtd&proxystylesheet=agriculture_frontend&ie=UTF-8&site=agriculture_collection&access=p&oe=UTF-8. [Accessed 19/07/17].
- Department of Agriculture Food and the Marine (DAFM) (2014) The Dowling Report. Available at: <https://www.agriculture.gov.ie/media/migration/farmingsectors/beef/beeefroundtable/MichaelDowlingReport030614.pdf>. [Accessed 06/03/17].
- Department of Agriculture Food and the Marine (DAFM) (2015) Local roots global reach. Food Wise 2025, a 10-year vision for the Irish agri-food industry. Available at: <https://www.agriculture.gov.ie/media/migration/foodindustrydevelopmenttrademarkets/agri-foodandtheeconomy/foodwise2025/report/FoodWise2025.pdf>. [Accessed 04/01/17].

- Department of Agriculture Food and the Marine (DAFM) (2018) National Strategy for Sustainable Operational Programmes 2017-2022. Available at:
<https://www.agriculture.gov.ie/media/migration/farmingsectors/horticulturebeekeeping/horticultureschemes/NationalStrategySustainableOPsOct2017Dec2022050218.pdf>
 [Accessed: 02/05/18]
- Dillon, E., Moran, B. and Donnellan, T. (2017) Teagasc National Farm Survey 2016 Estimates. Agricultural Economics and Farm Surveys Department, Teagasc, Athenry Ireland.
- Eastham, J. (2014) Producer organisations – the way forward? *Journal of Co-operative Studies*, 47,3, pp.50-54.
- European Commission (2017) Brussels. Available at:
https://ec.europa.eu/commission/index_en. [Accessed 27/11/1701/17].
- European Commission (2017a) Modernising and Simplifying the CAP: Economic challenges facing EU agriculture. Available at:
https://ec.europa.eu/agriculture/sites/agriculture/files/consultations/cap-modernising/eco_background_final_en.pdf. [Accessed 10/04/2018].
- European Commission (2018) Brussels. DOOR. Available at:
<http://ec.europa.eu/agriculture/quality/door/list.html>. [Accessed 17/04/18].
- Falkowski, J. and Ciaian, P. (2016) Factors Supporting the Development of Producer Organizations and their Impacts in the Light of Ongoing Changes in Food Supply Chains. Available at:
http://publications.jrc.ec.europa.eu/repository/bitstream/JRC101617/jrc101617_jrc%20report%20_po_litrev.pdf. [Accessed 03/03/17].
- Finneran, E. and Crosson, P. (2013) Effects of scale, intensity and farm structure on the income efficiency of Irish beef farms. *International Journal of Agricultural Management*, 2, pp.226-237.
- Fleury, P., Lev, L., Brives, H., Chazoule, C. and Désolé, M. (2016) Developing Mid-Tier Supply Chains (France) and Values-Based Food Supply Chains (USA): A Comparison of Motivations, Achievements, Barriers and Limitations. *Agriculture*, 6,3, pp.36.
- Frawley, J.P. and Commings, P. (1996) The Changing Structure of Irish Farming: Trends and Prospects. Rural Economy Research Series No. 1, Sandymount.

- Guest, G., Bunce, A. and Johnson, L. (2006) How many interviews are enough? An experiment with data saturation and variability. *Field Methods*, 18, 1, pp.59-82.
- Heery, D., O'Donoghue, C., and Ó Fathartaigh, M. (2016) Pursuing Added Value in the Irish Agri - Food Sector: An Application of the Global Value Chain Methodology. *Proceedings in Food System Dynamics*, pp.161-179.
- Hellin, J., Lundy, M. and Meijer, M. (2009). Farmer organization, collective action and market access in Meso-America. *Food Policy*, 34, 1, pp.16-22.
- Hennebry, E., Pitts, E. and Harte, L. (2002) The Strategic Development of Irish Livestock Marts. Teagasc: Available at: <https://stor.teagasc.ie/bitstream/handle/11019/1235/eopr-4921.pdf;jsessionid=74C2BD4CBEBB1D37F265E43194495706?sequence=1>. [Accessed 10/04/18].
- Hennessy, A. (2016) 'IFA and ICSA fear producer groups concept offside with beef farmers' published in the Irish Farmers Journal, 4th of February 2016. Available at: <http://www.farmersjournal.ie/icsa-calls-teagasc-statistics-on-suckler-farm-viability-disgraceful-223287> [Accessed 05/03/17].
- Hennessy, T. and Moran, B. (2015) The viability of the Irish farming sector in 2015. Agricultural Economics and Farm Surveys Department, Teagasc, Ireland.
- Hocquette, J. F. and Chatellier, V. (2011) Prospects for the European beef sector over the next 30 years. *Animal Frontiers*, 1, 2, pp.20-28.
- Hooks, T., Macken-Walsh, Á., McCarthy, O. and Power, C. (2017a) The Impact of a Values-Based Supply Chain (VBSC) on Farm-Level Viability, Sustainability and Resilience: Case Study Evidence. *Sustainability*, 9,2, p.267.
- Hooks, T., McCarthy, O., Power, C. and Macken-Walsh, Á. (2017b) A Co-operative Business Approach in a Values-Based Supply Chain: A Case Study of a Beef Co-operative. *Journal of Co-operative Organization and Management*, 5, 2, pp. 65-72.
- Hooks, T., Macken-Walsh, Á., McCarthy, O. and Power, C. (2017c) Farm-level viability, sustainability and resilience: a focus on cooperative action and values-based supply chains. *Studies in Agricultural Economics*, 119, 3, pp. 123-129.

- Hubert, T. (2017) 'Creed opens tender for beef producer organisations' advisers'. Published in the Irish Farmers Journal, 28th August 2017. Available at: <https://www.farmersjournal.ie/creed-opens-tender-for-beef-producer-organisations-advisors-304092>. [Accessed 28/11/17].
- Irish Co-operative Organisation Society (ICOS) (2018) Dublin. Available at: <http://icos.ie/>. [Accessed 10/04/18].
- Jones, D.S. (1997) Land reform legislation and security of tenure in Ireland after Independence, *Eire-Ireland*, 33, 4, pp.116-143.
- Kennedy, L. (1978) Agricultural Co-operation and Irish Rural Society (1880-1914). Thesis submitted for degree of D. Phil at the University of York, United Kingdom.
- Kirschenmann, F. (2012) Agriculture of the middle; a development model. Paper presented to 'Rural Cooperation in the 21st century; unique opportunities for farm families Conference, Brooklodge, Macreddin Village, Wicklow, Ireland, August 31st 2012.
- Kirschenmann, F., Stevenson, S., Buttell, F., Lyson, T. and Duffy, M. (2008) Why worry about the agriculture of the middle. In Eds: Lyson, T.A, Stevenson, G.W. and Welsh, R., *Food and the Mid-Level Farm: Renewing an Agriculture of the Middle*, MIT, Cambridge MA, pp.3-22.
- Lyson, T. A., Stevenson, G.W. and Welsh, R. (2008) Food and the mid-level farm: Renewing an agriculture of the middle, MIT Press, Cambridge MA.
- Macken-Walsh, A. and Brosnan, K. (2012) The Potential of an Enhanced Cooperation Measure in the EAFRD (2014-2020): the case of Ireland. Dublin: Department of Agriculture, Food and the Marine.
- Macken-Walsh, A. and Dunne, L. (2010) Rural Development and Potential for an Irish 'Middle Agriculture', *Public Affairs Ireland Journal*, PAI Publications Ltd., May 2010, Issue 69.
- Macken-Walsh, A. Hegyi, A. and Sebok, A. (2017) Protocol for the Multi-Actor Approach: AgriDemo-F2F project (Horizon 2020). DOI:10.13140/RG.2.2.22648.55040
- Marshall, C. and Rossman, G.B. (1999) Designing qualitative research. (3rd ed.) Sage, Thousand Oaks, CA.

- McCarthy, J. (2018) 'Save our Sucklers Campaign', published online for the Irish Farmers Journal, 18th January 2018. Available at: <https://www.farmersjournal.ie/save-our-sucklers-campaign-339251>. [Accessed 17/04/18].
- McCarthy, O., Briscoe, R. and Ward M. (2010) People in Control: The Promise of the Co-operative Business Approach. In Eds: Hogan, J., Donnelly, P.F. and O'Rourke, B.K. *Irish Business and Society*. Gill and MacMillan, Dublin, pp.319–333.
- Meikle, S. (2018) Meat factories – a part of the problem or an excuse. Published online on www.thatsfarming.com, 12th February 2018 [Accessed 13 February 2018]
- Monaghan, M., Downey, L. and Purvis, G. (2015) Opportunities for sustainably competitive Irish agriculture: some strategic initiatives towards getting bigger. Available at: <https://www.grantthornton.ie/globalassets/1.-member-firms/ireland/insights/publications/agri-food-strategy-group-report--2015.pdf>. [Accessed 05/03/17].
- Moran, C. (2016) 'Further consolidation in Irish beef processing as Kepak acquires Munster processor' published in the Independent, 16th of November 2016. Available at: <http://www.independent.ie/business/farming/beef/further-consolidation-in-irish-beef-processing-as-kepak-acquires-munster-processor-35221401.html>. [Accessed 19/07/17].
- Murtagh, A. and Ward, M. (2011) Structure and Culture: The Evolution of Irish Agricultural Cooperation. *Journal of Rural Cooperation*, 39, 2, pp.151.
- O'Donovan, J. (1940) The Economic History of Livestock in Ireland, Cork University Press, Cork, Ireland.
- O'Fahartaigh, M. (2015) Irish Agriculture Nationalised. Institute of Public Administration, Ballsbridge, Dublin 4.
- O'Sullivan, R. (2000) 'Competition Authority is criticised for silence', published online in the Irish Times, 19th January 2000. Available at: <http://www.irishtimes.com/news/competition-authority-is-criticised-for-silence-1.235430>. [Accessed 19/07/17].
- Penrose-Buckley, C. (2007) Producer Organisations: A Guide to Developing Collective Rural Enterprises, Oxfam GB.
- Purvis, G., Downey, L., Beever, D., Doherty, M.L., Monahan, F.J., Sheridan, H. and McMahon, B.J. (2012) Development of a sustainably competitive agriculture. In eds: Lichtfouse, E. *Agroecology and strategies for Climate Change*, Springer, London and New York, p.35-67.

- Provacuno (2018) Madrid. Available at: http://www.provacuno.es/vacuno/press-documents/thematic-sheets_330_272_496_0_1_in.html. [Accessed 10/04/2018].
- Regan, Á., Henchion, M. and McIntyre, B. (2018) Ethical, moral and social dimensions in farm production practices: a segmentation study to assess Irish consumers' perceptions of meat quality. *Irish Journal of Agricultural and Food Research*, 57,1,pp. 9-14.
- Renwick, A. (2015) From blockades to supply chain integration: Challenges of Co-ordination in the Agri-food sector. A presentation to Teagasc, 24 March 2015.
- Shanahan, E. (2000) 'Report finds no evidence of beef sector cartel', published online in the *Irish Times*, 22nd September 2000. Available at: <http://www.irishtimes.com/business/report-finds-no-evidence-of-beef-sector-cartel-1.1123877>. [Accessed 19/07/17].
- Stevenson, G., Clancy, K., King, R., Lev, L., Ostrom, M. and Smith, S. (2011) Midscale food value chains: An introduction. *Journal of Agriculture, Food Systems, and Community Development*, 1: pp.27-34
- Teagasc (2012) *Rural Cooperation in the 21st Century. Conference proceedings*: Brooklodge, Macreddin Village, Wicklow on Friday 31 August 2012. Available at: <https://www.teagasc.ie/publications/2012/rural-cooperation-in-the-21st-century-presentations.php>. [Accessed 18/04/18].
- Tsakiridis, T., Breen, J., Hanrahan, K., Wallace, M. and O'Donoghue, C. (2016) Feed substitution and economies of scale in Irish beef production systems. Oral Presentation to the Walsh Fellowship Seminar, RDS, Ballsbridge, Co. Dublin, November 10th 2016.
- Van Herck, K. (2014) Assessing efficiencies generated by agricultural producer organisations. Report compiled for the European Commission. Available at: http://ec.europa.eu/competition/publications/agricultural_producers_organisations_en.pdf. [Accessed 05/02/17].
- Young, P. (2014) 'Growing together', published online for the *Irish Farmers Journal*, 18th October 2014. Available at: http://agriaware.ie/uploads/files/week_6.pdf. [Accessed 17/04/2018].

Young, L.M. and Hobbs, J.E. (2002) Vertical linkages in agri-food supply chains: changing roles for producers, commodity groups, and government policy. *Review of Agricultural Economics*, 24, pp.428-441.