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Working Paper

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EHES Working Papers in Economic History, No. 71

Provided in Cooperation with:

European Historical Economics Society (EHES)

Suggested Citation: Henriksen, Ingrid; McLaughlin, Eoin; Sharp, Paul (2015) : Contracts and cooperation: The relative failure of the Irish dairy industry in the late nineteenth century reconsidered, EHES Working Papers in Economic History, No. 71, European Historical Economics Society (EHES), s.l.

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EHES WORKING PAPERS IN ECONOMIC HISTORY | NO. 71

Contracts and cooperation: The relative failure of the Irish
dairy industry in the late nineteenth century reconsidered

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JANUARY 2015

EHES Working Paper | No. 71 | January 2015

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Abstract

Why did the establishment of cooperative creameries in late nineteenth century Ireland fail to halt the relative decline of her dairy industry compared to other emerging producers? This paper compares the Irish experience with that of the market leader, Denmark, and shows how each adopted the cooperative organisational form, but highlights that an important difference was institutional: specifically regarding the enforcement of vertically binding contracts, which are considered to be of vital importance for the successful operation of cooperatives. We argue that this failure, combined with a strong proprietary sector which was opposed to cooperation, reinforced the already difficult conditions for dairying in Ireland due to poor social capital.

JEL classification: K12, L31, N43, N53, Q13

Keywords: Contracts, cooperation, dairying, Ireland

We express our gratitude to Ciara Pelly of the Irish Co-operative Organization Society for granting us access to the ICOS archive and to Michael Lynch, archivist of the Kerry library, for providing information relating to the McEllistram family. We would also like to thank Graeme Acheson, Graham Brownlow, Chris Colvin, Vincent Comerford, Brian Heffernan, Markus Lampe, Cormac Ó Gráda, Kevin O'Rourke, John Turner and participants at the Economic History Society conference 2013, the Adelaide FRESH meeting 2013, the North East Conference on British Studies 2013, the 2014 Irish Quantitative History Meeting, and the European Social Science History Conference in Vienna 2014 for valuable comments and suggestions. Ingrid Henriksen gratefully acknowledges financial support from the Carlsberg Foundation and Eoin McLaughlin graciously acknowledges support from the Leverhulme Foundation.

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1. Introduction

Irish dairying experienced relative decline in the late nineteenth century. After thirty years of mechanisation and twenty years of cooperation (the first Irish cooperative was established in 1889), the share of Irish butter on the British market became a fraction of what it had been during its heyday in the mid-nineteenth century. It declined from 46.6 per cent in 1860 to 11.9 per cent in 1910 (O'Rourke 2006), despite the supposed advantages of the cooperative organisational form. Thus, Solar (1990) estimates that the volume of Irish exports to Britain were stagnant², growing at -0.02 per cent p.a. from 1889-1910, even after the introduction of cooperatives. Separate trade data for Ireland begins in 1904, and as Figure 1 illustrates, the volume of exports over this period grew by 0.6 per cent per annum and the real value of Irish butter exports by 0.8 per cent per annum.

[Figure 1 about here]

The big winner on the British market was Denmark, which in contrast seems dramatically to have illustrated the advantages of embracing cooperation: Henriksen et al (2011) provide an econometric demonstration of this. The first cooperative was established in 1882, and Denmark's share of the British butter market increased from 0.6 per cent to 35.2 per cent over the same period.³ Even during the First World War, when the competition from Denmark was more or less cut off, Irish producers failed to exploit their temporary advantage (Meenan 1970).

² Ireland's exports were relatively stable: from around 500 thousand cwt in the early 1820s, to around 700 thousand cwt in the 1860s, declining to around 640 thousand cwt in early 1900s, but back up to 713 thousand cwt in 1914 (Solar 1990).

³ Australia, at 13.6 per cent, and Russia, at 11.9 per cent, were in second and third place respectively.

The relative failure of Irish dairying requires some explanation, especially given her many historical and natural advantages in dairying. We argue here that an important explanatory factor lies with the difficulties experienced by Irish cooperatives when attempting to enforce vertically binding contracts. Indeed, it is well known that the establishment of cooperative creameries, which fuelled the Danish success story, relied on the ability to enforce the supply of milk from member farmers. Cooperatives secured supply through a 'binding rule' in their statutes, usually by requiring members to deliver their entire output to the creamery for the whole of the loan period for establishing the creamery, typically ten years. The potential exit of members threatened the future profitability of a cooperative creamery, since average costs for all members would increase given the large fixed cost of the initial investment in building the creamery. Also, since members in Denmark were jointly liable for the existing debt, exit would increase the liability of those who remained. The danger was that the exit of members, by both decreasing profits and increasing liability, would make the option of leaving ever more appealing and ultimately lead to a wave of exits, which in the extreme could threaten the survival of the cooperative.

Although such vertically binding contracts were, as demonstrated by Henriksen et al (2012), not just legal but strictly enforced by the Danish courts, this was not the case in Ireland. We seek to understand this by examining a number of important institutional and cultural differences between the two countries. In terms of the institutional framework for the cooperatives, in Ireland they were characterised by limited liability,⁴ which meant that shareholders did not have such a large financial stake in the enterprise, and were thus presumably also less concerned about potential failure. Moreover, if they unilaterally left the cooperative, they were not liable for any outstanding debts. This meant that the lack of a binding rule was even more of a problem. In terms of culture, there seems to have been a long tradition of cooperation in the countryside in Denmark.

⁴ Guinnane and Martínez-Rodríguez (2010) argue that investor liability, the choice between limited versus unlimited liability, was a common legal issue faced by cooperatives throughout Europe and that even though cooperatives held mixed views on limited liability it was seen as a crucial component in the development of cooperatives.

Ireland did not, perhaps due to a relatively heterogeneous population which seems in general to have been an impediment to constructing cooperative institutions (O'Rourke 2007).

Moreover, we argue that the lack of a binding rule might have reinforced the effects of poor social capital in Ireland and, combined with sub-optimal institutional arrangements, contributed to conflicts in the countryside, and the development of a bifurcated system of cooperative and proprietary creameries. Thus, there was pernicious competition for the finite milk supply, where farmers were continually looking for opportunities to supply their milk to a rival creamery, either cooperative or proprietary, for a higher price. This competition was between cooperatives in the north of the island, and more often with incumbent proprietary creameries as well as cooperatives in the south. Thus, unlike in Denmark, the Irish cooperatives failed to outcompete the proprietary creameries, explaining how one organisational form (cooperatives) could dominate in one country yet not in another.

Our story illustrates the endogeneity of organisational choice, a choice that reflects the prevailing social, cultural, economic and institutional context of individual countries.⁵ Guinnane et al (2007, p. 691), in their study of the evolution of choice of organisational structure, argued that business people have different ways to adapt to contracting problems which are compatible with the prevailing legal regimes in which they operate. We find evidence of such adaptability as both cooperative and proprietary creameries attempted to circumvent the lack of vertically binding contracts by providing loans to suppliers with the explicit proviso that repayment be in kind (milk). However, this market based approach was second best (inefficient) compared to a vertically binding contract as borrowers were able to ignore the proviso and repay in cash when it suited them.⁶

⁵ Here we draw on Posner (2010)'s discussion on the distinction between institutional and organisational economics.

⁶ See Gibbons (2000) for a discussion of the literature on the 'mess', caused by for example conflicting interests, which may cause organisations to perform sub-optimally.

We do not claim that binding was the only reason for the relative decline of Irish dairying. Clearly, other factors, such as cow density, farm size, socio-economic divisions and religio-political conflict may also have affected the capacity of cooperatives to function as in Denmark. However, these are not mutually exclusive and there may have been interactions between the various factors, for example low cow density may have created incentives to undermine binding contracts. Yet, to assess the relative contribution of each factor is difficult as the question is not only quantitative, in terms of milk input and butter output, but it is inherently qualitative, in terms of the quality and enforcement of contracts, and also the qualitative properties of both milk supplies and the resulting outputs. Our methodology is qualitative; we look to the records of court proceedings, where Irish producers attempted to enforce similar contracts to those used in Denmark, as well as to the thoughts of contemporaries on this matter. But we also refer readers to quantitative studies (Ó Gráda 1977; O'Rourke 2007) and show how our findings, a heretofore neglected aspect of the Irish experience, may offer nuanced insights into existing research on cooperation in Ireland.

Moreover, it must be noted that comparing Ireland and Denmark purely on dairying grounds is somewhat misleading as the agricultural structure of both countries was significantly different (see e.g. Barrington 1926, pp 269-270). A greater emphasis was placed on livestock trading in Ireland and here Irish farmers held a significant share of the livestock trade, supplying 85 per cent of all British imports in the 1890s (Perren 1971). Also, Ireland's climate was different and dictated grass-fed cattle and militated against winter dairying (Ó Gráda 1994, 2006). Finally, TFP growth in Irish agriculture was a respectable 0.79-0.87 per cent per annum over the period 1890-1910 (Turner 1996, p. 138). Thus, our question is not so much about absolute failure but relative failure.

The remainder of this paper proceeds as follows. Section 2 discusses the theoretical framework on institutional economics within which we place the debate about cooperation in Ireland vis-à-vis Denmark. Section 3 surveys the literature on binding contracts in the latter, and Section 4 explains how they failed in the former. Section 5

describes the pernicious effects of this, and Section 6 links the success in Denmark and the failure in Ireland back to earlier traditions of cooperation. Section 7 concludes.

2. Towards an institutional explanation of the relative failure of Irish dairying

In common with Henriksen et al (2012), the present analysis is conducted within the framework offered by Williamson and the ‘new institutional economics’. This can be conceptualized as illustrated by Figure 2. The first three levels must function before firms can find success at the fourth level, where they simply have to profit maximize.

[Figure 2 about here]

O’Rourke (2007) suggests that the failure to cooperate in Ireland was due to a lack of social capital owing to her sectarian divisions, and thus focuses on the first level. Denmark’s homogeneous population after the loss of its German-speaking minority in the Second Schleswig-Holstein War of 1864 obviated such concerns there. Such focus on social capital is becoming increasingly common in studies of cooperatives – see e.g. Beltrán Tapia (2012) and Garrido (2014) for some recent contributions.

Garrido, as is common, links social capital to trust although, as he admits, there is no consensus as to its exact meaning. Social capital then refers to ‘norms and networks that create the necessary trust for people to cooperate to solve collective-action problems... For social capital to have significant aggregate effects, it needs to expand from the groups who have it to the rest of society...’. It is this bridge from cooperation at the micro level to a more aggregate level that has puzzled many researchers. According to Sobel (2002), however, there is no puzzle ‘if one assumes that active networks solve coordination or

collective action problems ... A small groups' gain does not come at the expense of anyone else.'

Ostrom, looking at many case studies, has concluded that large-scale cooperation can be amassed gradually from below: 'Once a group has a well-functioning set of rules, it is in a position to collaborate with other groups, eventually fostering cooperation between a large number of people. Formation of a large group at the outset, without forming smaller groups first, is more difficult.' (Economic Sciences Prize Committee 2009). This observation is, of course, not uncommon. Other comparative studies of cooperation in Ireland and Denmark have pointed out the difference in the way the two movements originated: as we will discuss they were imposed from above in the Irish case, but emerged from below (sometimes in the face of hostility from the agricultural establishment) in the case of Denmark. In fact, Danish cooperatives, beside the supportive interpretation of contract law, were also able to cooperate at higher levels of aggregation: that is, cooperatives could cooperate with one another at the local, the regional, and at the national level. Only thirteen years after the establishment of the first cooperative dairy in 1882 a large regional association was formed, and in 1899 a countrywide association of all types of rural cooperatives was founded.

Moving beyond the role of social capital, Henriksen et al (2012) look to the second and third levels, where Denmark stands out as a country where both the 'formal rules of the game' and the 'play of the game' worked in her favour: not only was it legally possible to write binding contracts, but penalties for breaking them were also enforced when evoked. Here we investigate the second and third levels for the case of Ireland, and find that binding contracts were not enforceable. In both countries the courts of law were the ultimate third party enforcers of the contractual agreements between a cooperative and the individual member, but in the Irish case the law more often than not decided against the interest of the cooperative. As Figure 2 suggests, there is a feedback from each institutional level to the previous one, so the failure at lower levels can have a negative effect on the first, thus potentially leading to a deterioration of social capital, something

which there is plenty of evidence to suggest might have been the case in Ireland, as we will demonstrate below.

3. The importance of binding vertical contracts for cooperative creameries in Denmark

As Henriksen et al (2012) make clear, the contracts made by individual cooperative creameries in Denmark, together with the support they received from the legal system, played an important role for the success of the dairy industry in that country. In particular, they argue that the entry condition for a creamery, i.e. the decision of whether or not to establish it in the first place, depended on its expected viability – and this depended on whether the milk supply of members could be enforced (Henriksen et al 2012, p. 203).

Henriksen et al state that a typical contract would commit each member to ‘(a) supply all his milk not used in his own household to the cooperative; (b) for a given period of time, typically the length of the loan period, and (c) without adulteration; (d) observe certain specified standards of cleanliness; (e) observe certain standards of feeding the cows; (f) share in the profits according to a specific formula, typically the amount of milk delivered in the year; but also (g) share in any losses which might arise and any outstanding debt, both according to a formula.’ They also explain that in many cases, fines for breach of items (a) through (e) were put in writing (Henriksen et al 2012, p. 200). Paragraph (a), the binding rule, is described by them as the most important. They explain that exit by a member threatened the survival of the creameries in three different ways: first, by increasing average costs, given the large fixed costs of establishing a creamery; second, since members were jointly liable for the loan to establish a creamery, exit would increase the liability of those who remained; and third, it affected the feasibility of transport routes between members and dairies. Thus, all but two creameries in their sample of 49 for which they have complete records of the statutes from establishment regulated exit (Henriksen et al 2012, pp. 202-3).

An indicator of their importance is that such contracts were prevalent from the beginning of the cooperative movement in Denmark. Unfortunately, the earliest statutes seem to be lost, so we do not, for example, have any citation from the first cooperative creamery, Hjedding (founded in 1882), which is normally held to be the paradigm of statutes. But many examples from 1886 on are saved for posterity. Moreover, Bjørn (1982 p. 45) records a case from Funen in 1883-84 in which a share creamery (an early variant of a cooperative) Kaslunde, had made losses because it had *neglected* to bind its suppliers.

In the examples we have looked at, the obligation to supply until the loan is paid off is usually implicit in the first paragraph of the statutes, where the purpose of the cooperative is stated. One of many examples is from Beder, Eastern Jutland, in 1886:

§ 1. "We, the undersigned citizens of Beder and surrounding villages hereby commit ourselves for a period of no less than five years to supply all the milk that our cows give to the cooperative creamery of Beder, with the exception of the milk consumed in the household or given to the poor, or sold to children or to sick people..."

(Beder-Malling Lokalhistoriske Arkiv)

Another, very explicit as well as strict, example of binding is found in Bjørn (1982 p. 90) from Vemmelev, Western Zealand, in 1885:

§ 7 "If a member wishes to exit after 8 years [cf. in this case the period of the loan] or if he sells his farm he is offered a compensation of 1/3 of his share in the creamery after valuation by impersonal men, elected by the general assembly..."

In this case there was a punishment even for withdrawing *after* the payment of the loan.

As to how the Danish courts handled conflicts on exits, an interesting example is recorded by *Mælkeritidende* (a journal for professional dairymen) in 1909, regarding a delivery stop by a large landowner, referred to as I.T., who as a member of the cooperative had committed himself to supply milk from 40 cows to a creamery which in total received milk from 484 cows. Losing almost 10 per cent of the milk was serious for a creamery of this size and it is not surprising that the cooperative attempted to force I.T. to resume supply and also to pay compensation.⁷ Fritz Bülow, Advocate of the High Court, was the arbitrator and found that although the statutes did not expressly forbid somebody from withdrawing it was clear from them that this was the intention. Hence he found that I.T. was in breach and followed the requested restitution, namely performance. The argument for requiring performance under the agreement was that determining the monetary loss was very difficult. In particular,

‘if a member ceases to deliver his milk to the creamery, the effect may be negligible, ... especially if the member is small, however if more members follow suit, at some point in time the effect on the cooperative may become fatal...and the damage is, of course, not caused by the last member to leave the creamery for which reason he cannot be held responsible for the loss. It will probably be too late to look to the members who left early since the legal question in their cases may have been settled long before.’

Mælkeritidende (1909, p. 540)

As argued by Henriksen et al (2012), such support from the judiciary proved vital for the Danish success. Moreover, this might explain why cooperatives were later able to cooperate at higher levels of aggregation, as discussed above. As we will see, contemporary observers of the Irish creamery sector repeatedly returned to the problem of a lack of loyalty among suppliers. Even cooperatives would seek to lure members away

⁷ This case also gives us an insight into the possibility of opportunistic behaviour by a large member. What prompted the refusal to supply in this case was the announcement of a change in the statutes of the cooperative. An adoption of a one-member-one-vote principle would adversely affect members with large herds.

from other cooperatives in order to bolster their own volumes and obtain the ensuing economies of scale. In general, the fear that fellow members may cheat by renegeing on their promise to the cooperative may prevent people from entering such agreements in the first place and, in the words of Dixit (2004), 'mutual gains will go unrealized.'

Thus we can see from our study of the minutes from board meetings (see Henriksen et al 2012) that in spite of strict sanctions against the untimely exit of Danish cooperatives, they nevertheless sometimes found it in their interest to negotiate an amicable exchange of members if compensation could be agreed upon between the representatives of the cooperatives in question. This can be interpreted as an understanding that such an extension of cooperation would create further economic rent to all individual participants. Among the 107 cases in which a member or sometimes a small group of members had given a reason why they wanted to exit a cooperative this was accepted in 35 cases. In these cases exit against compensation was allowed because of long transport to the creamery, sometimes because a new cooperative was established closer to the members in question. A couple of examples will suffice to illustrate this point:

1. At a meeting on December 12th, 1903 the board members of the two cooperatives Sevel and Skovlund 'reached a mutual agreement according to which the two cooperatives committed themselves not to receive milk from the other cooperative in the future without the consent of the boards of both cooperatives.' Following this the Skovlund cooperative paid Sevel to settle the accounts for two members who by that point had started to supply Skovlund.

- 2 A newly established cooperative Rostrup in 1906 authorized a committee to negotiate the size of compensation to the neighbouring Arden cooperative for letting two member groups join Rostrup. A considerable sum was paid by the former Arden members and their new fellow members in Rostrup together. The minutes from Arden confirm that this deal took place.

There is therefore much to suggest that there was a symbiosis between the high levels of social capital and the well-functioning of the legal institutions – the one reinforced the other. Danish cooperatives had the protection of the law against unreasonable behaviour by suppliers, and were thus more able to cooperate among themselves when this was called for. The story was, however, very different in Ireland, where farmers either failed to cooperate with each other, or even if they formed cooperatives, these often became rivals.

4. The cooperatives in Ireland

4.1 The Irish Agricultural Organisation Society

From the late 1880s onwards, the modern industrial creamery system was introduced in Ireland and at the same time the novel method of industrial organisation, cooperation, was also applied to the Irish dairy industry and led to increases in productivity in dairy regions (Ó Gráda 1994, p. 259; O'Rourke 2007b; Bielenberg 2009).⁸ The adaption of cooperation as an organisational form was spearheaded by Horace Plunkett (1854-1932) and Robert Andrew Anderson (1860-1942) and their creation the Irish Agricultural Organisation Society (IAOS), formed in 1894. Their efforts were explicitly modelled on Scandinavian counterparts, notably Danish and Swedish. Particular emphasis was placed on introducing both innovations in Munster, the historic heartland of the Irish dairy industry, but from the mid-1890s efforts began to introduce the combined innovations in the north of the island. However, despite research trips to Scandinavia to observe first-hand how cooperative creameries operated,⁹ the Irish imitations were not as successful, and never dominated production before independence in the way they did in Denmark.

⁸ Ó Gráda (1994, pp 259-260) shows that the issue of winter dairying in Ireland is somewhat unresolved but argues the comparative advantage of Irish dairy farmers opting for spring dairying owing to the Irish climate has significant explanatory power.

⁹ R. A. Anderson spent six-weeks in Sweden to learn about dairy cooperatives before the wholesale adoption of cooperation in Ireland (Anderson 1935, pp 47-61).

From its establishment, the IAOS was a top down promoter of cooperation, and the Irish experience thus, as noted above, contrasted greatly with that of the Danish, where cooperatives were formed by voluntary associations of peasants.¹⁰ According to Horace Plunkett, the IAOS was expected not just to support existing cooperatives but also to ‘create’¹¹ cooperatives, including cooperative creameries around Ireland, and even to ‘persuade’¹² people to adopt cooperation. Plunkett, in a circular written in October 1895, stated that the IAOS:

‘promotes and organises Societies of Farmers on Co-operative lines throughout Ireland by sending organisers, free of charge, to address meetings locally convened, and otherwise explain what steps it is necessary to take. Farmers, unaided, cannot take these steps, nor can anyone who has not made a special study of Agricultural Co-operation explain to them the exact procedure which must be followed in order to organise a Society which will work harmoniously and be permanent. Moreover, for the first year or so of their working, the Committees of young Societies need some supervision and direction. Thus under our guidance, in Dairying districts, Societies of Farmers are formed to own and work for their own profit Creameries equipped with the costly machinery now essential for the profitable manufacture of butter, similar to those which have met with such success in Denmark and elsewhere abroad.’

(IAOS, 1896, p.31)

Somewhat incredibly however, given that Denmark was their inspiration, it was not until 1902, eight years after the establishment of the IAOS and 13 years after the establishment of the first cooperative creamery by Plunkett and Anderson in 1889, that a

¹⁰ See Colvin & McLaughlin (2014) for discussion of the role of the IAOS in establishing credit cooperatives.

¹¹ Plunkett (1905, p. 192).

¹² BPP (1892).

binding rule was introduced in the standard contract they provided for new cooperative creameries.

4.2 The early evolution of the binding rule and limited liability

There was, perhaps, a more general ignorance in the UK of the importance of the binding rule. For example, the British government was all too aware that Irish dairying was being outcompeted by continental competition, and commissioned a number of reports into the matter. These demonstrate clearly that they were also cognisant of the more general importance of contracts in cooperatives. As an illustration, a report commissioned by the British Board of Agriculture (Board of Agriculture 1893) gives an example of the 'Articles of association' of a Danish cooperative creamery (as well as for Swedish and German creameries). This particular example (one of many examples in Bøggild 1887) serves well to illustrate the strength of the binding rule in Danish contracts:

Par. 6. ... Until the debt on the dairy is paid off a member can only withdraw on giving up his farm. A member who desires to withdraw must give three months' notice to the directorate, and even then he shall only have a right to receive half the amount of his share. Any member expelled by a vote at the general meeting forfeits all claims on the dairy.

(Board of Agriculture 1893, p. 10, our emphasis)

The report itself, however, also seems to illustrate a lack of understanding of the importance of the binding rule. Much is made of the technological requirements in the contract (competence of the manager, cleanliness etc.), but there is no mention of the legal side, such as the above paragraph 6 (Board of Agriculture 1893, pp. 9-13).

As mentioned above, however, the IAOS did eventually recognise the importance of the binding rule, introducing it in the standard contract they provided for new cooperatives in 1902:

'XX. Any member who shall without the consent in writing of the committee supply milk to any creamery other than that owned by the society for the space of three years from the date of his admission to membership, shall forfeit his shares, together with all money credited thereon.'

The penalty to the farmer was thus limited to the loss of his share in the creamery, which was probably not such a disincentive to finding alternative buyers for his milk, since he was presumably not interested in cooperating anyway (see the discussion below on unlimited liability). Moreover, as noted by McCabe (1906, pp. 561-562), even these rules were 'declared non enforceable at law in Ireland'.

From a somewhat small base in the 1890s the number of cooperatives numbered 83 in 1897 and tripled to 247 in 1902. By this time, the IAOS began to recognize the weakness of the 1902 rule relative to the rules operated in Denmark, and stated already in its annual report from 1902 that

'The [IAOS] Committee would prefer to see a rather more definite guarantee of milk given than is secured by the foregoing rule. In their opinion it would be very wise for societies to adopt a rule similar to the fundamental rule of the Danish co-operative dairy societies, definitely binding their members under penalty to supply the milk of a definite number of cows for a certain period. *The general adoption of this rule in Denmark has tended more than anything else to the stability of the Danish Dairy societies.* If such a precaution against disloyalty is found necessary in that country, where co-operative organisation is so thoroughly well understood and appreciated, how much more must it be required in Ireland, where the movement is now only beginning to take root'

IAOS (1902, p. 20, our emphasis)

Given that Horace Plunkett and the IAOS had been establishing cooperatives since 1889, why did it take the IAOS so long to introduce a binding rule? This is unclear from the IAOS reports. By the end of 1908 there were 292 societies in Ireland (17 were formed

in 1908 but there were also 13 dissolutions), and it was at last decided to adopt a new, stricter, binding rule, which greatly increased the penalty for disloyalty, and aimed to make 'the delimitation of the area over which the creamery operates... become an accepted principle' (IAOS 1908, p. 7). The new rule was as follows:

'Rule 5a: The Society shall, so long as its creamery may continue to work, with the exception hereinafter mentioned in this rule, accept from each milk-supplying member, and make payment therefore at the rate fixed by its committee for the time being, all the milk produced from the said member's cows and delivered at the society's creamery in good condition, and at such times as the committee may appoint, and the society, if it fails to do so, shall pay to such member (as liquidated damages and not as a penalty) the sum of one shilling per cow per day for every cow's milk not accepted. And each milk-supplying member shall, so long as he remains a member of the society, deliver to the society's creamery on every working day, all the milk produced from his cows (except such as may be required for use in his household), and in accordance with the regulations laid down by the committee from time to time for the delivery of milk, and any member who shall fail to do so shall pay to the society (as liquidated damages and not as penalty) the sum of one shilling per cow per day for every cow's milk not so delivered...

Exception. – instead of enforcing the penalty in default of supplying milk, the committee shall have the power to refuse to purchase the milk of any member who may at any time, subsequent to the commencement of business under the provisions of Rule 4, supply milk to any creamery other than that or those owned by this Society, without the permission in writing of said Committee'

Members were made aware of the rule as it was published on the back of their shares and also in the society rule books.¹³ Note that this rule, despite the intentions of the IAOS as revealed by the above quotes, did not in fact specify ‘a certain period’ or specify the ‘area over which the creamery operates’. As we discuss below, this shortcoming was to form the basis of a raft of legal challenges to the rule, which ultimately made it unenforceable.

In fact, this was perhaps an even bigger problem in Ireland than it would have been in Denmark, since a major difference between cooperatives in the two countries was that the Irish were characterized by limited liability.¹⁴ The organisational choices available did not permit the permutation of unlimited liability and the ability to trade;¹⁵ effectively this meant that members paid a nominal value for their share of the cooperative, and if it went into liquidation they stood to lose only to the value of their shareholdings.¹⁶ Shares were partially paid up, usually a quarter, and the remainder was held in reserve until such time as a society was required to call on its shareholders.¹⁷ The intention was that shares would be purchased for every cow that a member possessed and that the first instalment would be in cash and the remaining instalments in milk (IAOS 1895, p. 19). Liability of members in a dairy cooperative was thus limited to the amount they held in shares within the society. As Table 1 shows, share capital in cooperative creameries made up

¹³ Letter Riddal to IAOS, 10 April 1908, Tipperary Co-operative Creamery Ltd, ICOS archive 1088/887/1, NAI; Coolmoynne and Fethard rules, Registry of Friendly Societies archive R957, NAI.

¹⁴ Cooperative creameries were incorporated as limited liability entities as they were registered under the Industrial and Provident Societies Acts, as was common for cooperatives in the UK (Brabrook 1898, p. 140). From 1862 onwards limited liability was granted to societies incorporated as industrial and provident societies (Gosden 1973, p. 202).

¹⁵ Alternatives were limited liability companies or unlimited liability friendly societies, however the latter did not have trading powers.

¹⁶ As outlined by McGrath (2003, p. 26), ‘the members of an unlimited company have an unlimited liability for the debts of a company in the event of a company being unable to meet its debts when due. The member cannot be personally sued by the company creditors, and it is the company liquidator, the person who manages the liquidation of the company, who must pursue the members for the company debts.’

¹⁷ Shares issued by cooperatives with a maximum of £200 share value.

approximately 55 per cent of creamery liabilities, and the remainder was borrowed from banks.¹⁸

[Table 1 about here]

Anderson later argued that the limited liability of cooperative creameries under the Industrial and Provident Societies Acts meant that they were hampered by a lack of share capital, thus leading to a greater reliance on bank loans, which in turn were secured by guarantees of two members of the cooperative committee rather than the cooperative itself (Anderson 1935, pp. 160-162). In fact, however, in Denmark loan capital made up more than 70 per cent of the capital invested, suggesting again that it was the principle of unlimited liability joint and several for the loans, mainly in savings banks, which had the binding effect (see Henriksen et al 2012 pp. 215-16). As Anderson also noted, he believed the individual farmers saw their subscriptions as 'more in the light of a subscription to a worthy object than as an investment in a business... If his liability, in the event of a failure, had been made greater he might, and probably would have taken a keener interest in the undertaking.' (Anderson 1935, pp. 167-168).

4.3 The cooperatives in court: Attempts to enforce the stricter binding rule

As discussed by Henriksen et al (2012), it did not matter whether or not the binding rule was enforceable, if members did not attempt to flout it. In Denmark, the rule certainly was tested, however, and this was also the case in Ireland. In fact, efforts to enforce the binding rule were 'rarely successful and occasionally involved the co-ops in heavy litigation' (Bolger 1977, p. 205).

Henriksen et al (2012, p. 218) state that binding vertical contracts were illegal under Common Law, but the situation seems to have been somewhat more nuanced. In fact,

¹⁸ Bank borrowing created a problem as the Irish Joint Stock Banks did not recognise cooperatives as a legal person but instead had individual members guarantee bank loans. This feature of creamery capitalisation had the inadvertent effect of de-mutualising cooperative creameries.

according to Dempster (1997, p. 337), with a few esoteric exceptions, there was not a single case where an exclusive dealing contract had been held unenforceable as a restraint of trade before 1912. This situation changed, however, with a judgment from the Irish Court of Appeal in the case of *Tipperary Co-operative Creamery Society Ltd v Hanley*,¹⁹ subsequently upheld by the House of Lords. Although the King's Bench Division had ruled against Hanley, this decision was reversed.

The case concerned a farmer, Hanley, who although a member of the Tipperary Cooperative, had never supplied milk to them. Rule 5a of the society (see above) stated that all milk should be sent to the creamery every working day, and that a penalty of one shilling per cow per day was to be forfeited if this requirement was not met.

Correspondence between the Tipperary cooperative and the IAOS reveal their opinion of the importance of the case and the binding rule. In a letter to Delaney, secretary of the Tipperary Co-operative Creamery, regarding the initial court case, R.A. Anderson wrote that 'the rule to which the County Court Judge has taken exception in such an emphatic manner was *drafted by Counsel*. It has stood the test of a considerable number of cases in which the creameries suing their members have invariably won their cases and I would refer you to recent cases in Co. Limerick where Judge Law Smith upheld the rule and gave decrees....The matter is one of great importance not only to your society but to many of the others which are similarly circumstanced and you may depend upon the IAOS doing everything in its power to have the law on the subject clearly laid down (our emphasis).'²⁰ The importance of the rule was also emphasised by Charles Riddall, local organiser for the southwest, who, in a letter to R.A. Anderson, stressed that 'you perhaps don't realise how much interest is being taken in this case throughout the South where the rule in question is operative, and how great the issue is that hangs on it; it means life or death for some

¹⁹ 'Tipperary Co-operative Creamery Society Ltd v Hanley, 1912.' *The Irish Reports, 1912 vol II: King's Bench Division*, pp 586-605.

²⁰ Letter R.A. Anderson [IAOS secretary] to Delaney [secretary of Tipperary Co-operative Creamery], 4 July 1911. Tipperary Co-operative Creamery Ltd, ICOS archive 1088/887/1, NAI.

Societies.²¹ Later that year, R.A. Anderson wrote that the IAOS would ‘if necessary agitate in conjunction with the Co-op Union for an amendment to the Industrial & Provident Societies Act so as to give Irish Co-op societies the power which co-operators in other countries enjoy and which is the foundation of their movements.’²² Tellingly, R.A. Anderson believed that Cleeve’s, the largest proprietary creamery, was sponsoring Hanley’s action because he had been supplying milk to Cleeve’s, and this belief seems confirmed by subsequent events, as discussed below.²³

Thus, in the appeal of the case, the Tipperary Cooperative argued forcefully that the rule was ‘of vital importance to a Creamery Society’ and that ‘in the absence of such a rule the creamery could not reckon on having the material necessary to carry on its operations’. Moreover, they argued it was ‘mutually beneficial’, since while the cooperative was ensured a supply, so was the farmer secured a buyer for his milk. They also argued that it was ‘a matter of voluntary contract. No one is compelled to become a member of the society; but if he does so, he knows that there are rules which will become binding on him, and he can read them before he becomes a member.’

Hanley argued with equal vigour against the rule, explaining that it was ‘uncertain’, ‘unintelligible’, and had ‘no limit as to time or distance’. The Court of Appeal, and subsequently the Lords, concurred. Since the rules did not allow for the voluntary withdrawal of a member, except by transferring his shares which required the consent of the committee, and since they did not define ‘milk-supplying member’, they were found to be an illegal restraint of trade and an unreasonable one. The judgment stated that ‘There can be, as it appears to me, no question as to the restraint of trade involved. The public inconvenience is plain. We are dealing with one of our fundamental and natural foods, and the admitted consequence of a large success on the part of the society would

²¹ Letter Riddal [IAOS organiser] to R.A. Anderson [IAOS secretary], 4 June 1912, Tipperary Co-operative Creamery Ltd, ICOS archive 1088/887/1, NAI.

²² Letter IAOS secretary to Fant, 26 June 1912. Tipperary Co-operative Creamery Ltd, ICOS archive 1088/887/1, NAI.

²³ *Irish Times*, 25 April 1912; Letter from Anderson to Sealey [IAOS Counsel], 1 May 1912.

be to expose the public generally to obvious difficulty in obtaining a necessary and usual food for all people, and particularly for the young'. They are particularly critical of the poor drafting of the rule, explaining that it 'ought to have been carefully and skilfully prepared, and should not have been left, or been attempted to be enforced, in its present form... It has a scope and operation altogether beyond what is reasonable for the protection of the society'.

The Lords suggested a way to rewrite the rule so that it would be acceptable: 'there would be no objection to a rule that members, in addition to paying the price of their shares, should continue to sell to the society the milk of such cattle as are fed within a specified distance, for a limited period. A regulation of this kind would be reasonable, and the same result might be obtained in other ways.'... 'An intelligent draftsman would have little difficulty in preparing rules adequate to protect the society without placing unreasonable restrictions and obligations upon the members.'

The IAOS was quick to comply with this suggestion, and asked their barrister to redraft the rule (IAOS 1913, pp. 10-11). The new rule stated that:

'Rule 6(2): After the society shall have started a creamery for its members, no individual member of the society, so long as he continues a member thereof, who shall have milk to sell, the produce of a cow or cows kept or grazed on lands within the area defined in Rule 5, shall, without the written consent of the committee first obtained, sell any such milk to any creamery other than a creamery of the society, or to any company, society, person, or person who sell milk or manufacture butter for sale. Any member of the society committing a breach of this rule shall pay to the society, as and for liquidated damages, and not by way of penalty, the sum of one shilling per cow per day for every cow's milk sold contrary hereto.'

This rule was swiftly implemented by cooperatives across the country, and the IAOS, in their annual report from 1913, stressed again that the "binding rule" is not aimed, as it

may seem, at coercing members to support their society, but at bringing home to them in a practical way their obligations to themselves, to their neighbours who are co-operating with them, and to their society' and that it 'is also expressly directed against the evil of overlapping which inevitably turns societies that ought to be living in harmony with each other into greedy competitors for a border-land milk supply from farmers who, under present circumstances, are not co-operators but who are prepared to sell their milk to the creamery which offers the highest bid, irrespective of whether it is a co-operative or a proprietary concern' (IAOS 1913, pp. 10-11). In the same report, the IAOS stated 'that proceedings to enforce compliance with the new rules... may be taken' (IAOS 1913, pp. 10-11).

In fact, the IAOS cherry picked cases to fight, as can be seen from a series of communications between R.A. Anderson and Charles Riddall.²⁴ They finally settled on the Athlacca Co-operative creamery in Limerick, and agreed to pay Counsel's fees conditional on the amendment of their statutes.²⁵ Initial judgments supported the change. A judgment in 1914, *Athlacca creamery v Houlihan*, led James Fant, IAOS Organiser, to write to Andersen that this 'pretty well establishes the validity of the binding rule which now may go unchallenged'²⁶. Then in 1915 *Athlacca Co-Operative Creamery Ltd., v. Lynch* again ruled in favour of the new rules. However, already in in 1916 a significant episode

²⁴ There was a contemporaneous case in Charleville, Co. Cork and Anderson wrote to Riddall stating 'that the [IAOS] Committee will await your selection of the society to which you consider the IAOS ought to render assistance in prosecuting any legal proceedings under this rule' R. A. Anderson to Riddall – 24 September 1913 – Re Binding Rule Charleville Society, Athlacca Creamery, ICOS archive 1088/15/3, NAI.

²⁵ In the Athlacca case there were several defaulters but only one member was pursued because it was believed that 'Edmund Houlihan's case is one with no flaw in it' (C. C. Ridall – report on Athlacca Co-operative Creamery – 11 Nov 1913). Also, see Letter R.A. Andersen to Riddall, 24 September 1913, 16 October 1913, and 25 October 1913. Letter John J. Breen (Athlacca secretary) to R. A. Anderson, 15 Oct 1913. Letter Anderson to Coleman, 29 April 1913: Athlacca Creamery, ICOS archive 1088/15/3, NAI.

²⁶ Letter Fant to R.A. Andersen, 4 March 1914. Athlacca Creamery, ICOS archive 1088/15/3, NAI.

of litigation came with *Coolmoyne & Fethard Co-operative Creamery Ltd v Bulfin*,²⁷ where a farmer was in breach of the new binding rule.²⁸

The farmer, Bulfin, had applied for shares in the creamery under the previous binding rule 5, but after the rules were changed (apparently without his knowledge), he decided to stop supplying milk to the creamery, his reason being that he could get higher prices elsewhere. The cooperative thus sued him under rule 6(2) for £20 damages for breach of contract. Bulfin argued that the rules were a restraint of trade and injurious to the public, but the cooperative successfully argued that the new rules explicitly took account of the previous case. The King's Bench Division and the Court of Appeal ruled that the new rule was not an illegal restraint of trade, or against the public interest. The judgement recognized explicitly that the rule had been rewritten in response to *Tipperary Co-operative Creamery Society Ltd v Hanley*.

The case was then taken to the House of Lords, who concurred. Interestingly, although they were bound by the previous judgment, questions were actually raised about whether it had been correct or not. As they state, the 'agreement undoubtedly contained a restraint on individual trading, but it by no means follows that such a restraint is a "restraint on trade" within the legal meaning of the term'. Nevertheless they were obliged to accept that 'So long as the decision of the Court of Appeal stands, such an agreement is, in Ireland, both illegal and void'. There is discussion about whether the new rule took care of both objections in the former case, namely the lack of well specified geographical area and the absence of any time limit to the obligation. But importantly, and with parallels to similar judgments in Denmark (see above), the judge noted explicitly the importance of the rule being upheld:

²⁷ 'Coolmoyne & Fethard Co-operative Creamery Ltd v Bulfin, 1916'. *The Irish reports, 1917, vol II: King's Bench Division*, pp 107-137.

²⁸ See Tipperary Co-operative Creamery Ltd, ICOS archive 1088/887/1, NAI & 'Coolmoyne and Fethard dairy society' R 957, NAI Friendly Societies, for a copy of the rule 5a.

‘if each member is to be left to act as it pleases himself in the matter of sales, it is doubtful if a new venture of the sort could succeed at all. It is not a general restraint on competition. Any person can compete. It is merely an agreement entered into between several persons of full age, and aware of what they are doing, that they will not individually sell to a competitor of the whole, so as to injure the business belonging to all.’

Legislative action did not cease, however. A similar case, *McEllistrim v Ballymacelligott Co-operative Agricultural & Dairy Society Ltd.*,²⁹ was ruled on in the House of Lords in 1919.³⁰ The case itself was contemporaneous to the Coolmoynes case and was discussed in correspondence between the IAOS and its legal representatives and it was decided to focus on the Coolmoynes case as ‘Ballymacelligott can wait’.³¹ This cooperative had also altered its rules, so that they were identical to those declared legal above, but McEllistrim objected to the new wording and impeached its validity. The cooperative initially lost the case, since the judge ruled that the previous case rested on the farmer having agreed to the rules, which was not the case here. The cooperative committee then decided to associate the IAOS with the case, since it ‘is one of vital importance to the whole movement’ and ‘The general adoption of the “binding rule” would be one of the greatest advances towards the continental standard of efficiency that the Irish movement has yet made’ (IAOS 1917, p. 11). This turned the case into a battle between the IAOS and large proprietary creameries.³²

²⁹ ‘*McEllistrim v Ballymacelligott Co-operative Agricultural & Dairy Society Ltd*’, *The Irish Reports 1918, vol 1: Chancery Division*, pp 313-338; ‘*McEllistrim (appellant) and Ballymacelligott Co-operative Agricultural & Dairy Society Ltd (respondents)*’, *House of Lords Ireland [1919], A.C. 548-605*.

³⁰ Doyle (2013), a study of the political importance of cooperatives in Irish political development with emphasis on Kerry, discusses the *Ballymacelligott v McEllistrim* case as an outcome of the introduction of the binding rule in 1908 (Doyle 2013, p. 171) and argues that this case was a test of the cooperative movement (Doyle 2013, p. 178). However, he does not note the previous cases (e.g. *Tipperary Co-operative Creamery Society Ltd v Hanley*).

³¹ IAOS secretary to Carrigan [K.C.] – 20 Dec 1916; Anderson to Barry [solicitor, Cashel], 5 April 1916: Coolmoynes and Fethard, ICOS archive 1088/263/6, NAI.

³² Described as ‘opponents of the Co-operative movement’ by Anderson when retrospectively discussing

The IAOS was initially triumphant when the Court of Appeal reversed the judgment and held that the rule was binding, since the rule change was lawfully made. But it was eventually overturned in the House of Lords, where it was declared that the rules ‘imposed upon members a greater restraint than was reasonably required for the protection of the society, and was illegal as in restraint of trade and ultra vires the society.’ For reasons which are not at all clear, the new contract, although meeting one of the demands made after the *Tipperary vs. Hanley* case, namely that the geographical area covered by the cooperative was well specified, did not limit the duration of the binding rule in terms of time.

Anderson (1935, pp 170-171) later recalled the struggle to enforce the binding rule, and believed that ‘...if we had limited to a definite period, I think the appeal would have been dismissed.’ It is thus difficult to conclude anything other than that the cooperatives in Ireland failed due to the poor draftsmanship of their lawyers rather than obstacles put in place by the legal system as such. Why the IAOS failed to such an extent can only be speculated upon. One factor might have been purely financial. The IAOS was dependent on donations from member societies, many of which seemed to have been reluctant to fund it (the archives of the IAOS are full of copies of letters informing members that their subscriptions were overdue). Perhaps they were simply unable to afford good legal

the McEllistrim case (1935, pp. 170-171).

advice.³³ In any case, the decision in 1919³⁴ introduced into English law the idea that an exclusive dealing contract was a restraint of trade (Dempster 1997, p. 338).³⁵

5. The result of no binding: The competition for milk supply in Ireland

5.1 'Misnamed' cooperatives

Anderson argued that the combination of limited liability and the uncertainty surrounding the binding rule meant that a farmer was 'interested little in this trifling investment, but sometimes a good deal more in hawking his milk supply from his own creamery to some competing concern – alas, often misnamed co-operative – where he could get an extra farthing per gallon for it, for his insignificant share investment afforded no anchorage to the society he had joined' (Anderson 1935, pp. 167-168).

However, from reading their annual reports, the IAOS before Irish independence seems to have measured the extent of its achievements largely through the number of cooperatives established whether or not they ended up competing against each other. As Table 2 illustrates, in these terms, they were successful, and the cooperative share of

³³ For example, In the Coolmoynes case the IAOS agreed to pay £100 but wrote to the solicitor representing the society in December 1916 stating that 'I am afraid the Coolmoynes Committee must not count on the IAOS doing any more than paying the £100 the committee agreed to. *They have no funds out of which to make any additional payment, for the Coolmoynes case more than absorbed all that was provided for in the way of legal expenses for the year.* I hope, therefore, you may be successful in wringing something out of those who backed Bulfin, but I am afraid it would be very hard to bring it home to them.' (emphasis added) Anderson to Barry, 16 December 1916, Coolmoynes and Fethard, ICOS archive, 1088/263/6, NAI.

³⁴ According to Dempster (1997, p. 339) the House of Lords decision was made *per incuriam*, since it neglected to cite a previous binding case, *Taff Vale Railway Co v Macnabb*, which provided the former definition of restraint of trade.

³⁵ In a letter to the Chief Registrar in London on 25 March 1919, Daniel O'Connell Miley, the Assistant Registrar of Friendly Societies in Ireland, enclosed a newspaper cutting of the case from the Freeman's Journal and stated that 'you will be interested to know that from the first I gave it as my unofficial opinion that the rule was illegal'. In reply, G. Stuart Robertson, the Chief Registrar of Friendly Societies, thanked Miley for the cutting and stated that 'the decision will be very useful to us in resisting the insertion of unreasonable forfeiture clauses'. 'Ballymacelligott Cooperative Dairy Society', R 655, NAI Friendly Society Files.

production gradually increased.³⁶ Without the binding rule, however, many ended up competing against each other. In fact, even the aforementioned Athlacca creamery fell victim to this after the IAOS encouraged the neighbouring Bruree creamery to open a branch which ended up taking milk from Athlacca suppliers, later forcing the IAOS to arbitrate in the matter.³⁷

[Table 2 about here]

Moreover, unlike Denmark, which never had a large proprietary sector,³⁸ private creameries retained an important share in Ireland, particularly in Munster, which was also the centre of dairying. Here the private sector was dominated by the public company, the Condensed Milk Company of Ireland Ltd., ‘Cleeve’s’, which was a large purchaser of milk and a large-scale exporter of canned condensed milk and, during the First World War, was an important supplier of the British military (Bielenberg 2009, p. 75).³⁹ Cooperatives in the province were also the predominant contributor to the recorded output of the IAOS, at roughly double the cooperative output in the rest of Ireland (Bolger 1977, p. 183).

Map 1 – a snapshot of the situation in 1908 - illustrates the end result. Creameries clustered at opposite ends of the country, with cooperatives competing largely against each other in the north, and largely against proprietary creameries in the south.⁴⁰ This

³⁶ Although the numbers are certainly inflated, because cooperatives which ceased operations were not immediately deleted from the registers.

³⁷ Letter Riddall to Roche [Manager of the Bruree Co-op creamery], 14 June 1915. Athlacca Creamery, ICOS archive, 1088/15/4, NAI.

³⁸ The competition was mostly with large traditional landed estates, which could not easily expand their area of operation.

³⁹ As previously stated, it was however also effectively nationalized in 1920s by the Dairy Disposal Board (Anderson 1935, pp 243-246).

⁴⁰ Note the absence of creameries across the centre of the island, which was due to the livestock trade

competition meant that creameries could not be ensured a regular supply of milk, owing to the absence of a functioning binding rule.⁴¹

[Map 1 about here]

In fact, the nature of the non-cooperatives shown in Map 1 is also more complex than a cooperative versus non-cooperative narrative might suggest. Many of the large joint-stock creameries opened branches and these were predominantly located in the south-west of the island in the Golden Vale and, according to Porter (n.d./1909), ‘many of the smaller joint-stock, though not strictly co-operative, are mostly owned and worked by the milk suppliers’. It is possible to address this by using the records of dissolved companies.⁴² We searched the typeset catalogue of dissolved companies reconstituted after 1924, held in the national archives of Ireland, for words such as ‘butter’, ‘dairy’ and ‘creamery’. This search yielded 23 companies, of which a number were not creameries but wholesalers or general producers.

[Table 3 about here]

where Ireland supplied 85% of all British imports in the 1890s (Perren 1971). Bans on cattle imports from Europe due to disease cut out the European trade in livestock with Britain from the 1860s onwards, but Ireland as part of the UK was exempt. This provides another reason for the expansion of cattle rearing in Ireland at the expense of dairying over this period.

⁴¹ It is difficult to trace annually the number of proprietary creameries. The majority of creameries were companies that operated branch networks. We have not found surviving evidence of these branches in the dissolved company records in the National Archives of Ireland, see Table 3.

⁴² Companies registered in Ireland were required to submit annual shareholder returns to the Dublin office of the Registrar of Companies. Original company records were destroyed by a fire in the Custom House in 1921 during the Irish War of Independence. Following the destruction of the original material all companies in the Irish Free State were required to re-submit their details. <http://www.irishstatutebook.ie/1924/en/act/pub/0021/> - We thank the authors of Acheson et al (2014) for making us aware of this source.

The records of the creameries varied in consistency, but many contained information on shareholder name, address, occupation and shareholder value, and some also contained the memorandum of association and articles of association. Almost all contained annual accounts after 1921. For the companies, the records also show what happened upon dissolution. The records found are summarised in Table 3. The list contains not only the largest indigenous 'creamery', the Condensed Milk company of Ireland, or Cleeve's as it is more commonly known, but also a number of smaller companies, such as the Golden Vein and Newmarket dairy companies. The list also contains a number of companies that later converted into Industrial and Provident Societies (i.e. cooperatives). An interesting finding from Table 3 is the average shareholding in and participation of farmers as shareholders in each company, showing that large companies, in terms of capitalization, had less shareholders and few if any farmer shareholders, whereas smaller companies had more shareholders and a larger share of farmers as shareholders, thus confirming Porter's statement.

This brings up the issue, in terms of the organisational structure in Ireland, of what exactly it meant to be a cooperative or proprietary creamery. Many of the proprietary enterprises looked very much like the cooperative societies, which themselves were not functionally equivalent to cooperatives in the Danish sense, due to the absence of the 'fundamental' binding rule. Thus, although the absence of competition from large incumbent proprietary creameries was an important factor behind the cooperative success in Denmark,⁴³ to characterize the problem merely as such would be to oversimplify the difficulties faced. In fact, as Bolger (1977, p. 205) noted, this problem was just as pronounced, 'regrettably, between co-ops themselves.' Due to competition between creameries of all descriptions it was difficult to obtain a regular supply, both in terms of quantity and quality, of milk (Jenkins 2004).

⁴³ Proprietary creameries did exist, but nothing on the scale of for example Cleeve's existed. Many were small village enterprises founded in the 1870s and soon switched to being cooperatives in the 1880s.

To illustrate this, we need only look at the history of the Tipperary Co-operative Creamery (the society involved in litigation cited above). When it was first founded the IAOS secretary R. A. Anderson wrote to the secretary of the Tipperary society stating that 'I rather fear that the proposed site is too close to Greenane Cooperative Agricultural and Dairy society to prevent overlapping and to ensure a proper milk supply. However, Mr. Riddal [IAOS organiser] will go into this point and others more fully with you, and I hope he may have opportunity to meet you and discuss such points personally.' It later transpired that the chairman of the Greenane Society, Fr. Murphy, presided at the preliminary meeting of the Tipperary Co-operative creamery. Fr. Murphy later assured Riddal that 'a co-op creamery in Tipperary would not be in competition with any creamery but Cleeve's local factory, of which the people declare themselves tired' and that the 'binding rule was unanimously adopted, and the committee will have the option of refusing milk of any member who may have supplied it to any creamery than that or those by the society at any time.' Later Riddal wrote to R. A. Anderson that with 'the members being all legally bound to supply their milk, I feel confident that the society will be a great success, and will hit Cleeve severely.'⁴⁴ It seems therefore that the IAOS was not only careless about allowing cooperatives to have overlapping districts, but also actively promoted a turf war with the proprietary operators; thus it over-estimated the expected viability of its cooperatives in the presence of both proprietaries and cooperatives.

The proprietary operators responded in kind, however, and the annual reports of the IAOS made continual reference to the competition between creameries for milk supplies. For example, in 1899 it was stated that 'the co-operative dairies have had in some places to encounter very keen competition, owing to the extension of other creameries worked on the proprietary system,' which led to creameries paying a higher price for milk (IAOS 1899, pp. 15-16). Such 'overpricing' was presumably motivated by a desire to exploit

⁴⁴ Letter IAOS secretary to Joseph Delaney, 2 April 1908; letter Riddal to Delaney, 3 April 1908; Riddal to IAOS 10 April 1908; Letter Riddal to R. A. Anderson, 27 April 1908: Tipperary Co-operative Creamery Ltd, ICOS archive 1088/887/1, NAI.

economies of scale, and potentially even to cause the rival to fold, thus leading to the capture of even more suppliers. The support of large proprietary creameries such as Cleeve's for the bids to flout the binding rule might also suggest that some cross-subsidizing was going on to make this possible, at least in the private creamery sector.

Even after the first binding rule was introduced in 1902, complaints were often made about the problems of competing creameries in the IAOS reports. In 1907 reference was made to the practice of 'milk grabbing' resulting from overlapping boundaries as a result of competition between cooperatives (IAOS 1907, p. 6, p. 26). Later it was reported that 'most of the ground in... [Limerick and Tipperary] is now well served by co-operative creameries, but in many cases still keen competition continues with proprietary creameries... It is surprising that competition between co-operative creameries exists in districts where there is a common proprietary competitor to fight' (IAOS 1916, p. 42) – again reflecting the belligerent tone of the IAOS. In fact, the aforementioned Coolmoyne creamery was with the full knowledge of the IAOS placed so as to capture milk supply from Cleeve's, according to correspondence we found between Riddall and Anderson.⁴⁵

This competition had pernicious effects on the whole industry. We found examples of creameries sometimes being forced to accept poor quality milk out of fear of a loss of supply: competition thus manifested itself both in terms of prices offered as well as in the quality they were prepared to accept. The IAOS continually exhorted creamery managers to implement quality control policies but these were difficult to enforce as a result of competition as rivals undercut policies (i.e. IAOS 1905, p. 3, IAOS 1906, p.7, IAOS 1907, p.5). For example, as outlined in 1906, cooperative creameries 'run the risk of losing a considerable proportion of their milk supply through the readiness of other, less scrupulous, creameries to accept milk which has been rejected' (IAOS 1906, p.7). Perhaps also Cleeve's condensed milk required less stringent quality controls than butter production. Anderson (1935, p.236) later recalled creameries finding objects such as

⁴⁵ Report on Coolmoyne proposed co-operative creamery, letter C. C. Riddall to R. A. Anderson, 26 July 1909. Coolmoyne and Fethard Creamery, ICOS archive 1088/263/1, NAI.

straw and fish heads in milk when it was strained and noted that 'I frequently found that greater strictness as to condition of the milk was enforced in the cases of those suppliers whose farms were adjacent to the creamery than in the cases of those suppliers who lived on the outer edge of the creamery area and had another creamery, just as near, where they might expect more laxity. The neighbouring suppliers had no alternative and could therefore be dealt with more firmly'. Thus, creameries, due to competition from both proprietary and cooperative creameries, implemented differential pricing with farmers furthest away receiving a higher price than those closest to the creamery (IAOS 1916, p. 42).

Even as late as 1919 it was reported that 'the competition between co-operative and proprietary creameries continues unabated in the South. The co-operative creameries are handicapped in all cases by reason of their isolation. The proprietary creameries have the advantage of being able to compensate themselves for the high prices they are forced to pay for milk in districts where there are co-operative creameries by paying prices considerably below the value of the milk in districts where there are no such creameries' (IAOS 1919, p. 11).⁴⁶

When the Free State government rationalised the dairy industry under the auspices of the Dairy Disposal Board in the 1920s, explicitly with the motivation to avoid competition between creameries, it undertook preliminary surveys of the dairy industry in various counties. In Sligo it was reported that there was a decrease in milk supplies in the area of a period of 10 years as farmers switched from 'milk to dry stock' thus reducing the milk supply but that 'there are too many central creameries in the county, and there is unnecessary competition between societies for the comparatively small supplies available'. In Leitrim the shortage of milk supplies was also a factor in the failure of the South Leitrim Co-operative Society: 'the net result of the whole thing is that this cut-throat competition is not resulting – as one might imagine at first – in a higher price to

⁴⁶ Moreover, the IAOS was even involved in actively closing creameries established on marginal dairy land, since it believed that the available dairy land was reaching saturation point (IAOS 1906, 1905, cited in Ó Gráda 2006, footnote 9).

the farmer for his milk, but has the exact contrary effect. None of the creameries can offer a price such as can be given by our competitors on the English market, with their supply, marketing and finance organisations.’⁴⁷

Apart from the question of binding, other factors might also have played a role in worsening the competition. Ó Gráda (1977) pointed out the importance of ‘cow-density’ (concentration of cows per square mile) to creameries regardless of organisational structure. Henriksen (1999) confirmed this for Denmark, with a few exceptions and also found proof of a simultaneity bias, using the number of cows just before the establishment of creameries as an instrument to explain the number of cows 20 years later. Ireland in the 1890s had an altogether lower cow-density than Denmark which may have led to more conflicts in attracting members, and thus might have exacerbated the problem created by the inability to bind suppliers.

An associated transaction cost concerns the organization of milk transport. As noted above, in Ireland creameries implemented differential pricing with the farmers furthest away receiving higher prices than those closest to the creamery. This seems to imply that transport was left entirely to the suppliers themselves. This was also the case in sparsely populated places in Northern Jutland, Denmark, but without any compensation to the outliers. For the most part, however, transport was collectively paid for and organized by the cooperative. It was certainly expensive, at about 25-30 per cent of the annual costs. The milk routes, in many places, were a permanent bone of contention. The routes were put up for tender and the coach drivers started as early as 5 am in the summer. That is also why the boards of the creameries in some cases showed clemency to members that wished to leave in favour of a newly established creamery closer to their farm, as detailed above. Without disregarding the potential conflicts and the high costs one might speculate whether this collective transport of milk was a further incentive to Danish dairy farmers to stick to their cooperative.

⁴⁷P. Hogan, Minister of Agriculture, Memorandum on cooperation, 5 January 1927., Department of an Taoiseach Files NAI\ S 5213

Nevertheless, it seems safe to conclude that a well-functioning binding rule would have obviated many of the problems faced by the Irish cooperatives. Without it, they were not able to compete with their larger and richer proprietary counterparts, and were, demonstrably, not a superior organizational form in Ireland.

5.2 Alternatives to the binding rule

Competition for milk supplies and the difficulty in enforcing the binding rule before independence required novel ways to overcome the supply-chain problems. Historically, butter merchants in Cork ‘advanced money to the people’ on the condition that they ‘required a monopoly of their butter.’⁴⁸ This tradition, it seems, was also attempted by creameries at the turn of century. The British Cooperative Wholesale Society (CWS) operated a large number of creameries in Munster and found difficulties getting a regular supply of milk.⁴⁹ The CWS attempted, as outlined by Redfern (n.d. [1913], pp. 302-303), to use loans, amounting to £0.5 million, to tie-in a regular milk supply and ‘the chief condition of lending was that borrowers should pledge their milk in repayment’. However, Redfern (n.d. [1913], p. 303) outlined difficulties that the CWS found with this practice, especially that ‘the price of supplies was to rise or fall according to the price of butter, and the terms were satisfactory when the price was high. At other times the store member who goes bargain-hunting might have been matched in the persons of those farmers who took the trouble to send milk to a competitive creamery a mile or two away for the sake of a real or fancied advantage.’ Loans were repaid using cash and not milk, ‘so to offer them [payments in cash] was always against the bond; yet the CWS would take the money, although silver and gold were less desirable than plenty of butter cream.’

⁴⁸ E.g. see exchanges between Daniel O’Connell (M.P. and director of the National Bank) and Piers Mahony (solicitor of the Provincial Bank of Ireland) at the select committee on Joint Stock Banks in the 1830s (BPP 1837, Q. 3997).

⁴⁹ Anderson (1983, p.80) alleged that the CWS opened creameries in areas with uncertain milk supplies. This was in the context of attempts by the CWS to sell its creameries en bloc to the IAOS. This did not stop the CWS selling two thirds of its creameries to other proprietors (Redfern n.d. [1913], p.304) or from the IAOS negotiating for the sale of CWS creameries to local farmers for the creation of cooperative societies.

IAOS affiliated cooperative creameries also tried to use loans to tie in members. In evidence to the 1914 committee on Agricultural Credit, the Rev P. Conon O'Leary, parish priest and former chairman of a cooperative bank, outlined the benefit of loans from creameries compared to cooperative banks. He stated that 'the creameries, of course, have this advantage, that they have the milk of the borrower, and they have in that way security for the money they advance.' This benefit was only for creamery members and in addition they did not issue loans 'except to those that supplied milk' (HCPP 1914, Q. 5802-5804). However, the IOAS was critical of this approach because 'no regular system appears to be followed in regard to loans of this character, and, unless the matter is taken in hand and legislated for, it is more than probable that this very questionable inheritance from the proprietorial days may prove little better than the old system of money-lending by butter merchants, which held the dairy farmers of the South of Ireland in bondage' (IAOS 1909, p.9). Interestingly, the typical "'creamery loan" is, generally speaking, much larger in amount than the average loan made by a credit society' (IAOS 1909, p. 9).

The practice of making loans to suppliers also appears to have been adopted by smaller joint-stock creameries (see Table 3), who regularly included credit to suppliers as assets in their audited annual accounts. For example in the years ending 1921 and 1922, 36.30 and 37.26 of the assets of the 'Drangan co-operative creamery' were in the form of 'sundry debtors'. Similarly in 1925 16 per cent of the Castlecree Dairy Company's assets were 'debtors' in 1925. In 1920 9.24 per cent and 30.55 per cent of the Ballyhay Dairy Company and the Churchtown Dairy Factory Company assets were 'Sundry debtors'.⁵⁰ This implies that, in the absence of a binding rule for cooperatives, non-cooperatives were able to function in a similar way to cooperatives.

Ultimately, however, this did not of course allow them to avoid competition for milk supplies. And again, this contrasts strongly with the situation in Denmark. We have found

⁵⁰ Dissolved company files: Comp1\2151, Comp1\1380, Comp1\6143, Comp1\6154, National Archives of Ireland

evidence of only two cases where Danish cooperative creameries granted small short loans to members, plus a few cases in which members were running a deficit, when the purchase of butter and cream exceeded the value of the raw milk delivered. Lending as such was never seen as a task of the cooperative creameries,⁵¹ thus suggesting that imperfect loan contracts with repayments specified in terms of milk may have been second best options compared to Danish style binding contracts.

An alternative to setting rules on the level of the cooperative was government legislation, but this seems to have been politically unacceptable for most places before the twentieth century. An exception was New Zealand, however, which in an Act of Parliament in 1894, introduced laws on the cleanliness and hygiene of milk production, as well as implementing a system of inspections and fines (Brooking 1996). Such rules, although vigorously resisted by farmers and many politicians, might have played a role in the success of New Zealand exports in the early twentieth century. In contrast, Ireland singularly failed to enact similar legislation despite intense debates until the 1920s (Johnson 1985, pp 11-12).

6. Why did Ireland fail to cooperate? Poor social capital enforced by institutional failure

6.1 A Danish tradition of cooperation?

The question remains as to why it proved so hard to introduce the binding rule in Ireland compared to the situation in Denmark and thus why cooperation and dairying more generally was less successful in the former. There is in fact some evidence that the Danes had a long tradition of cooperating in a highly formalised fashion, at least from the

⁵¹ There was, however, a twist to this story. When the members of a cooperative had paid down their debt, mostly after 10 years, they instantly took out a new loan of the same size in the same savings bank. Instead of using the proceeds from the new loan for investments in machinery and buildings, the coop distributed the sum among the members according to the size of their transactions with the creameries. This might have been attractive to farmers who were not wealthy enough to raise a similar loan by themselves.

late eighteenth century. This might have made the emergence of a binding rule both more likely and more feasible.

An example given by Begtrup (1808, p.2), regarding an association formed in 1794 in the parish of Rødding (incidentally in the same region which saw the first dairy cooperative in 1882) regarding animal theft serves to illustrate this. The crown officer helped the locals to write down these statutes, but there is no doubt that the men of the parish were fully involved.⁵² The 'partnership' formed (*'interessentskab'* – the same word sometimes used to describe the first cooperatives one hundred years later), specified very detailed rules as to how members should help search for stolen animals and pay compensation in the event they were not found.

During the nineteenth century the peasants continued to form mutual insurance associations, but by this time without direct help from the authorities. The Danish economist Westergaard (1903) in 1900 in a survey of horse and cattle insurance associations in Denmark found that the oldest dated back as far as the 1820s. The working of one such small association is described by Westergaard as rather formless: 'When a horse died or was injured two or three appraisers came around and made the calculation of the insurance sum on a small piece of paper; subsequently, when the money had arrived and the payment been made, the paper was thrown away. The appraisers changed annually. The accounts were done in a little book in which one bookkeeper could not read the handwriting of the other.' Nevertheless, he marvelled over the knowledge and good sense demonstrated by the people of modest means who created these associations. He saw the small local insurance associations as a 'school' for a broader part of the population. Moreover, the constitution of 1849 granted the freedom to form associations for economic purposes, no doubt broadening the Danes' extensive experience at running organisations with mutual elements. Thus on the eve of

⁵² One big difference between this very early model and the later cooperatives is that membership then was mandatory, whereas it was optional for the locals in later associations. In this respect the early association resembles the first Prussian credit associations for estate owners, the *Landwirtschaften*, for which membership was also mandatory for the large local landowners.

the first cooperative creamery in 1882 the agrarian population was already involved in a number of voluntary organisations some of which were cooperative in nature. For example there was a mutual cattle insurance association for every 441 households and a local savings bank for every 519 households.

The Danes might also have received more than a little inspiration from abroad. Thus, the Danish journal *Nye Landoekonomiske Tidender* (later *Tidsskrift for Landøkonomi* – the first and for a long time leading journal on agricultural economics in Denmark) carried an article as early as 1820 describing the Swiss *fruitieres*, which were early cooperative-like organizations of peasants producing butter and cheese. The articles of association (including a binding rule) the article describes are extremely similar to the first Danish contracts of sixty years later, and might well have provided inspiration for early cooperative-style organizations, although more research is needed on this issue.⁵³ The early attempts to provide Danish peasants with centralized creameries (*fællesmejerier*), promoted to a large extent by butter merchants interested in expanding the available supply to the English market, were rather unsuccessful even before the arrival of the cooperatives which rapidly outcompeted them (or in many case simply took over their creameries). This was in part due to their inability to maintain a sufficient supply (Bjørn 1977). Bjørn (1982, p. 43) recounts how a correspondent for *Tidsskrift for Landøkonomi*, who earlier had reported on the rapid spread of the *fællesmejerier* in the 1870s, wrote an article in 1879 discussing their difficulties. He states that ‘the most natural solution would certainly be that which is used by the French *fruitieres* in the Jura, that the men of the town should club together to send milk to a *fællesmejeri* which they themselves finance, and that very exacting rules for delivery are agreed upon, and that one of more of the members are appointed to control the operation.’ (Our emphasis.) Just three years later in 1882 the first cooperative creamery was founded with exactly such a contract.

⁵³ In fact, neither did they go unnoticed in the English speaking world. Portlock (1843) even recommends their establishment in Ireland in an interesting parallel to the later attempts of the IAOS.

The situation was very different in Ireland where rural mutual societies were noticeably absent (see Table 1 in McLaughlin 2013). At an inquiry into friendly societies in the UK, R. F. Littledale, Assistant-Registrar of Friendly Societies in Ireland, was asked if he believed there were many small village societies in Ireland. He replied that there were 'very few' (BPP 1872, Q. 14876). Stating that 'it is not [the habit to establish small village clubs]; there is not the class in this country which may be called the better lower class, amongst whom those societies, I think, flourish most in England' (BPP 1872, Q. 14877). There was upper class apathy towards mutual societies and importantly in rural Ireland the clergy, both Catholic and protestant, were accused of being completely uninterested in mutual societies (McLaughlin 2013). Furthermore, Vaughan has argued that there was no formal co-operative tradition, of any description, in rural Ireland, and that the religious background of most tenants, hierarchical religions, did not 'inculcate those arts of management that are necessary for voluntary organisations'. Although there were elements of informal co-operation such as 'swapping, either of horses, machinery, or time', they were based on 'neighbourliness' as opposed to formal arrangements (Vaughan 1994, pp. 203-204). Yet this explanation does not appear on the surface to sit with the outcome in Ulster which, as seen in Map 1, had a high concentration of cooperatives. So the question remains: was Ulster more like Denmark?

6.2 Was Ulster different?

In 1892 there were few private companies that decided to enter Ulster; those companies that did enter the dairy market focused instead on Munster. However, almost a decade later, in 1901 there was a higher density of cooperatives in Ulster than elsewhere, yet here again the total number of creameries in Ulster was dwarfed by those in Munster, see Table 4. Overall there appears to have been less initial competition in Ulster compared to Munster in terms of creameries per dairy cattle, although by 1908 competition had increased in Ulster as well. As described above, Ulster's cooperative creameries were competing against each other for a scarce supply of milk.

[Table 4 about here]

The predominance of Munster is understandable given it was a traditional dairying district, but also because dairy cattle in Ulster were smaller and had lower milk yields than dairy cows in Munster (Kennedy and Solar 2012, p. 162), making initial investment in Munster appear more viable to commercial companies. Features of the Ulster farming landscape were also important; farms were smaller than in the south and practiced mixed farming and Ulster tenant-farmers were the first to purchase their land under the Irish land acts (Kennedy and Solar 2012). All of these are important features explaining the distribution of creameries (O'Rourke 2007b).

Furthermore, Boal and McAodha (1961, pp 177-178) outlined three factors explaining the distribution of milk production and its uses in Ulster:⁵⁴ farm size, religion and location. They argued that smaller farms were more likely to engage in dairying and that Catholic farmers owned smaller farms than Protestants. Furthermore, since Catholics had larger families, Catholic owner-occupiers were more attracted to dairying as they had surplus labour. Moreover, the early IAOS cooperative movement had greater support amongst Catholics in Ulster (Boal and McAodha 1961, p. 172), and many, including some high up in the IAOS, believed that it was bringing people together to make home rule possible (Gailey 1987, p. 147). Finally, location was important: milk producers in the east were closer to the liquid milk market of Belfast where it was sold for a higher price than milk suppliers in the west who instead sold their milk to cooperative creameries (Boal and McAodha 1961, p. 173); in this respect east Ulster was more similar to much of English dairying where liquid milk was predominant (Taylor 1976). These factors appear to

⁵⁴ 6 of the 9 historic counties of Ulster formed the dominion of Northern Ireland in 1920 (Antrim, Armagh, Fermanagh, Derry, Down, Tyrone). These constituted the major dairying regions in Ulster.

account for the smaller distribution of Ulster Agricultural Organisation Society⁵⁵ creameries in 1931, which had also undergone rationalisation akin to their southern counterparts (Boal and McAodha 1961, fig 1, p. 172). The liquid milk market also helps explain the dearth of creameries around Dublin in Map 1, as Dublin City drew milk supplies from a wide radius (Foley 1993, p. 127).

6.3 The final failure of cooperation in Ireland... and its imposition after independence

We believe that the failure of cooperation owes much to the explanations provided above, but that in the end the heterogeneity of the Irish population (especially compared to that of Denmark) might be a significant factor (see O'Rourke 2007). This meant that the Irish lacked the social capital and traditions to form functionally equivalent cooperatives. The binding rule may have helped the situation, for example by creating parallel cooperative organisations such as those in the Netherlands whereby cooperative organisations operated along religious lines due to socio-religious confessionalisation (*verzuijing*) (Colvin and McLaughlin 2014). However, without binding conflict was exacerbated. Nothing helps to illustrate this more than events after the decision of the House of Lords on 25 August 1919.

Almost immediately following the ruling, it was reported that the parish priest of Ballymacelligott, Fr. Kant, wrote a poster exhorting the youth of the area, 'with all fire and enthusiasm of youth', to support the cooperative creamery. Declaring that 'cooperation is simply applied Sinn Feinism, or, in other words, it is sane commonsense Sinn Feinism reduced to practice'.⁵⁶ As a consequence the rival proprietor was then 'wrecked by gelignite' and destroyed. A later note posted on the chapel gate wrote that 'it [the bombing] was done in answer to the House of Lords' decision in the case of McEllistrum against the Ballymacelligott co-operative Creamery Society. There is a higher

⁵⁵ The IAOS split in two following partition of the island.

⁵⁶ *Kerryman*, 17 January 1920. A later letter to the editor of the *Kerryman* from Rev P. J. Brennan, catholic priest of a neighbouring parish in Castleisland co Kerry, argued that the speech occurred after the first case in 1917 and not in 1919, *Kerryman* 31 January 1920.

tribunal than the House of Lords, and that tribunal decided that Slattery's creamery no longer exists.⁵⁷ However, this led to a further court case for compensation against the Ballymacelligott cooperative by owners and suppliers of the proprietary creamery, Slattery & Sons, for damages and loss of trade. Tellingly, it was noted that 'the matter arose out of what was purely a commercial dispute' between Slattery's and the cooperative creamery. This was not the end of the story and further attacks on Slattery owned creameries took place,⁵⁸ all within a few weeks of the House of Lords' decision.⁵⁹ There was even an attempt on the life of the Counsel representing Slattery, who had also represented McEllistram, Serjeant Sullivan, where it was reported that the eleven men on trial were 'all the sons of farmers who sent their milk to the Ballymacelligott Co-operative creamery.'⁶⁰

The irony here is of course that when Plunkett et al first attempted to establish cooperative creameries in the 1880s and 1890s there was nationalist hostility towards them and they were infamously told at one instance in Rathkeale, Co. Limerick, that 'every pound of butter made in this creamery must be made on nationalist principles, or it shan't be made at all' (Plunkett 1905, p. 191);⁶¹ perhaps explaining why a binding clause was not introduced at the outset in fear of antagonising farmers. Nevertheless, this offers some support to the work of O'Rourke (2007), who finds that the cooperative share of creameries was correlated with 'outrages' associated with the Irish Land War 1879-82 and argued that conflict undermined efforts to cooperate in Ireland. Notably, Richard

⁵⁷ *Kerryman*, 17 January 1920.

⁵⁸ In one instance the equipment in a creamery making cheese was destroyed and cheese stolen to the value of £6,000, in another a creamery was burnt down and suppliers to Slattery & Son were intimidated and threatened, a horse carrying milk was shot, and the Counsel representing Slattery was attacked. In another incident, suppliers to Slattery's creamery were held up by 'armed and disguised men' and were told to return home 'with a warning of the consequences if they supplied any more milk there' : e.g. see *Irish Times*, 12 February 1920.

⁵⁹ *Kerryman*, 28 February 1920.

⁶⁰ *Irish Times*, 14 February 1920.

⁶¹ This apparent paradox of national level nationalist antipathy versus local farmer-nationalist support is highlighted by Kennedy (1983, p. 368).

'Dick' McEllistrim himself was a prominent figure in the Land War in Kerry.⁶² However, the violence in the instance of the Ballymacelligott creamery was not directed towards landlords but instead was directly after a commercial case overruling the Ballymacelligott cooperatives' binding rule. This illustrates how institutional deficiencies might have exacerbated the lack of social capital, thereby explaining the poor performance of cooperatives in Ireland at the turn of the century.

Controversially, the Ballymacelligott Cooperative Creamery was itself attacked in November 1920;⁶³ however, this time the attack was instigated by Crown forces. The incident received contemporary coverage with conflicting accounts of the incident from official and non-official sources. It was discussed in the House of Commons, with the Irish Chief Secretary stating that shots were fired from the Creamery against a party of journalists, photographers and Auxiliaries. However, this account was contested in Parliament by Lieutenant Commander Greenworthy who read a letter from Fr. Trant, the same parish priest who apparently advocated the attack on Slattery's,⁶⁴ who stated that

⁶²Obituary of Richard McEllistrim, *Kerryman* 2 February 1924.

⁶³ The Ballymacelligott Cooperative Creamery later received a £2,500 loan from the Irish White Cross to rebuild the creamery. 1088/7/1 Ballymacelligott co-operative agricultural and dairy society, NAI.

⁶⁴ A sermon by Fr. Kant following the attempt on the life of Serjeant Sullivant suggested that there were limits to his support for violence and that his original sermon had been an act of brinkmanship, however he did seem to be an apologist for his parishoners. '... But, alas! an act against the Divine law was committed, which we all most seriously deplore. No doubt, the provocation was truly great indeed, and almost beyond endurance. Still, there should have been no reprisals, and counsel should have been left to go as he came, without molestation of any kind whatever. Owing to his [Serjeant Sullivan] speech feeling has now run very high amongst us: the tension is great, and I can assure you I have spent sleepless nights and troublous days since the delivery of that speech lest perhaps, bad as things are, they may become worse in consequence of it. In times of great national unrest like the present lawyers and all those engaged in the administration of law should try to be more restrained and guarded in speech. Wild and abusive utterances, such as the one referred to, do no good – on the contrary, they provoke the people almost beyond the limits of human endurance. It is a most mischievous thing, more especially for those in high places, to be girding at and harrying bishops and priests, who, after all, are the final, and, indeed, now the only mainstay of whatever law and order English misrule has not already destroyed in this country. You all know well how I have acted throughout in this creamery trouble. You know how strongly I have denounced every outrage that has occurred in this parish, and how, while pleading for liberty and freedom of action and fair play for all, my sole aim has always been to promote your interests and to act for the greater good of the greater number.'

six to eighty lorries pulled up to the creamery and that three farmers had been conducting business and ran when the auxiliaries appeared, one was shot dead and the following morning the creamery was burnt. The official account was also contested by the *Report of the Labour Commission* (LC 1921, pp 43-49) who sided with the picture of events provided by Trant after interviewing local people. According to Doyle (2013, pp 191-192), R. A. Anderson believed that this was ‘as a result of a dead set made upon it by Crown forces, at the instance, to some extent I believe at least, of local creamery proprietors’. The manager of the Ballymacelligott cooperative also accused Slattery’s of ‘false and malicious reports’ and that the ‘resultant violence of 12 and 13 November practically ruined the society and resulted in a worrying development whereby “a number of the members have gone over to the non-Co-operative concern.”’(Doyle 2013, p. 192). However, the recounting of events does not tally with that later recollections of Thomas McEllistrim, Lieutenant of the Ballymacelligott Company in the Kerry IRA, who noted that when ten lorries of ‘Tans and RIC’ appeared at the creamery ‘some members of Ballymacelligott ASU happened to be near the Creamery at the time and made a dash for escape. Fire was opened on them immediately by Tans and RIC. Two men were shot dead and two wounded, while others escaped.’⁶⁵ This would strongly suggest that there was an IRA link with the Ballymacelligott cooperative creamery, although disputed by Fr. Tant and LC (1921).

Another twist is the involvement of Tom McEllistrim in the Kerry IRA:⁶⁶ was there a relationship between the litigious Richard McEllistrim and Tom McEllistrim, the local IRA leader? McEllistrim was a rare surname in Ireland; in the 1911 census there were 42

Irish Catholic, 26 January 1920.

⁶⁵ Thomas McEllistrim, T.D. Ahane, Ballymacelligott, Co. Kerry, Witness Statement 882: <http://www.bureauofmilitaryhistory.ie/reels/bmh/BMH.WS0882.pdf>, pp 23-24. There is some confliction between McEllistrim and accounts, such as Bessie Cahill, who simply states that Black and Tans fired indiscriminately. However, Cahill’s account reports that one of the wounded was in fact a volunteer (a Jack McEllistrim) and recounts how Thomas McEllistrim (TD) ordered her take the wounded Jack McEllistrim to Cork: Mrs Bessie Chaill, Ballymacelligott, Witness Statement, 1143, pp 2-3: <http://www.bureauofmilitaryhistory.ie/reels/bmh/BMH.WS1143.pdf#page=3>.

⁶⁶ Bureau of Military History, Witness Statement no. 882: Tom McEllistrim: <http://www.bureauofmilitaryhistory.ie/reels/bmh/BMH.WS0882.pdf#page=1>

McEllistrims and 12 McEllistrums in Ireland, all bar 1 was found in Kerry, of these only 17 were males aged 18 and over.⁶⁷ Richard McEllistrim who instigated the case against the Ballymacelligott creamery in 1916,⁶⁸ was the oldest of the McEllistrims, aged 64 in 1911. He lived in the parish of Ballymacelligott and was a Roman Catholic farmer who spoke both English and Irish; he was married with a wife and six children. Although Richard McEllistrim was involved in the Land League, the *McEllistrums* appear to be the politically active family, with Thomas McEllistrum snr active in local government and, according to O'Shea (2011, p.91), Thomas McEllistrum jnr, who was 16 at the time of the 1911 census, was *the* Tom McEllistrim of IRA-fame and who later served as T.D. in the Dail from 1923-1969.⁶⁹ Furthermore, it is noteworthy that LC (1921, p. 45) reported that a John McEllistrim, the younger brother of Tom McEllistrim from the 1911 McEllistrum's, brother-in-law of the manager of the Ballymacelligott creamery was injured in the attack on the creamery in 1920.⁷⁰ Through tracing marriage and census records, it appears to be highly likely that there was a familial connection between Richard McEllistrim and Thomas & John McEllistrum and it is also possible that family or generational tensions (Thomas Snr died in October 1914)⁷¹ may have been exacerbated by Richard McEllistrim's decision to supply milk to Slattery's and not support the local cooperative, which appears to have been associated with the *McEllistrums* among others.⁷²

⁶⁷ National Archives of Ireland, 1911 online census: <http://www.census.nationalarchives.ie>

⁶⁸ *Kerryman*, 4 March 1916

⁶⁹ <http://www.oireachtas.ie/members-hist/default.asp?housetype=0&HouseNum=18&MemberID=721&ConstID=111>

⁷⁰ Tom refers to him as 'Jack' in his Witness Statement: Thomas McEllistrim, T.D. Ahane, Ballymacelligott, Co. Kerry, Witness Statement 882: <http://www.bureauofmilitaryhistory.ie/reels/bmh/BMH.WS0882.pdf>,

⁷¹ *Kerryman*, 31 October 1914

⁷² In 1901 Thomas McEllistrum (snr) spelt his surname *McEllistrim* and the respective marriage records of both Richard and Thomas McEllistrim indicate a 'Thomas McEllistrim' as father, although the identity of the mothers are unknown as it was not recorded in the marriage certs. However these records correspond to the information on marriage provided in the 1911 census records. Unfortunately, the parish church in Ballymacelligott was burnt by British forces in 1921 and the available records do not go beyond 1868: Richard McEllistrim of Ballymacelligott married Joanna Connor of Ballingamboon on 16 February 1890, <http://churchrecords.irishgenealogy.ie/churchrecords/details/b366740533694>; Thomas McEllistrim of Ballymacelligott married Mary Tyter of Ballytobenig, Traell on 17 Paril 1883, <http://churchrecords.irishgenealogy.ie/churchrecords/details/30aac00593725>

The incidents in Kerry are also notable given the connection between the Ballymacelligott cooperative creamery and the IRA: its manager was also an IRA officer and later swindled money from the cooperative (Joy 2005, p. 49). Also, in Kerry farmers made up 56 per cent of the IRA rank-and-file in the period 1918-1921 and IRA manoeuvres rarely began before seven in the evening 'on account of the milking' (Joy 2005, pp 56-57). This connection between the IRA leaders and rank-and-file and the cooperative movement is important,⁷³ especially as veterans of the latter would later become involved in the new Free State legislature.

Unsurprisingly therefore, although courts in the Irish Free State, due to its status as a dominion, were bound to abide by the new rule forbidding binding (Dempster 1997, p. 339), independent Ireland soon legislated on the issue. Binding contracts were introduced as part of the 1928 Dairy Act, which made it illegal for cooperative societies to accept milk from members of other societies without the written permission of the Department of Agriculture.⁷⁴ Furthermore dairying was made exclusively cooperative under the IAOS through the purchase of Cleve's and the Newmarket Dairy Company (for a combined total of £365,000), and other minor proprietary concerns,⁷⁵ thus obviating the problem (Anderson 1935, p. 243). As Breathnach (2000, pp 169-170) notes, the establishment of the Dairy Disposal Company by the 'newly independent Dublin Government' meant a take-over of both private creameries and insolvent cooperative creameries and the greater cooperatization of the Irish dairy industry.

Thus, by May 1931, 75 per cent of the proprietary creameries in the Free State had been acquired by the Dairy Disposal Board. As was outlined in a government white paper on dairy re-organisation 'the measure of re-organisation so far carried out covers practically the entire dairying districts of the south and south-west, with the exception of two districts in west Cork, and covers, in effect, far the most important section of the

⁷³ According to the Witness statements, a number of participants worked for cooperative creameries in some capacity.

⁷⁴ Creamery Act [Irish Free State], (6) 1928, section 10.

⁷⁵ 15 March 1927., Department of an Taoiseach Files, NAI\S 5213.

dairying industry... Creamery re-organisation hitherto has been mainly confined to the southern districts, as it was in these districts that the bulk of the proprietary creameries existed...The creameries in the Western and North-Western districts have not, of course derived any benefit from the re-organisation hitherto carried out, and which was confined to the Southern and South-Western districts.⁷⁶

7. Conclusion

We have taken up again the argument that the failure of Irish dairying relative to Denmark (and later competitors) was due in large part to the inability to introduce functional cooperatives. We focused on the difficulties caused by the inability to bind suppliers, which might have been due to and in turn reinforced poor social capital. Thus there was a vicious circle in Ireland, compared perhaps to a virtuous circle in Denmark. We cannot demonstrate that this was the reason why there were fewer cooperatives in Ireland, but we suggest that if they were not superior as an organisational form, then their emergence was at least less likely. The lack of a binding rule seems largely to be due to the incompetence of the IAOS and their Counsel, which ultimately led to its defeat in the courts. Thus, in Ireland the cooperative organizational form struggled to compete with private forms and the market was divided between both, unlike in Denmark, which was overwhelmingly cooperative.

Irish dairying was thus marked by conflict over milk supplies: not simply between cooperatives and proprietary creameries, but also between the cooperatives themselves. This might have reinforced underlying issues of lack of trust within communities which became increasingly more divided. Similar issues initially emerged in Denmark (see Henriksen et al 2012), but since the courts consistently backed the cooperatives, they soon became rarer. In Ireland long-running disputes created uncertainty right up until independence, and it seems that the sponsorship of established, powerful and rich

⁷⁶ 18 May 1931, Department of an Taoiseach Files, NAI\S 5213.

proprietary competitors, which did not exist to anything like the same degree in Denmark, played an important role for this, rather than the legal system as such.

Without the binding rule, cooperatives suffered from similar supply, price and quality issues as the proprietary creameries. On the national level, this meant both lower quantity and quality of butter, and the loss of market share to competitors like Denmark, as well as a more general failure to extend cooperation from below, in contrast to the Danish case. Thus, although the TFP numbers for Irish agriculture are reassuring, there are other signs of Irish failure around the time of the Great War and after. Consider the failure to agree about producing a common standard of Irish butter until the 1960s: this was a continued bugbear of the IAOS as there was no cooperation between their individual cooperatives to market a standardised butter export product and rival coops competed against each other. The IAOS proposed to introduce a common 'Irish' branded butter similar to the Danish, Dutch and Swedish examples (IAOS 1909, pp 34-35) and to have the brand available to both proprietary and cooperatives alike (IAOS 1910, p. 86). However, this venture failed and very few creameries took part in it – only ten societies in 1910 (IAOS 1910, p. 8) – and the scheme struggled due to the fact that the Irish dairy cooperatives were not federated (i.e. there was no cooperation between cooperatives) (IAOS 1912, p. 9). Also, the Irish farming sector (dairying included) did not capitalize on its advantage during the Great War when rival competitors such as Denmark and New Zealand were practically excluded from the market. The Danes were badly affected by the war, but they were soon back to the status quo ante.

Although we have emphasized the legal deficiencies here, we do not believe that the impact of this on social capital should be neglected. Here, however, more work is needed. The aforementioned study by Garrido on irrigation communities in eastern Spain demonstrates that seemingly well-functioning cooperatives that had existed for centuries still could fail to create 'a culture of trust'. In the Spanish case cooperating at the marketing level could potentially have presented a great advantage for the export of oranges. A totally different angle is proposed by Glaeser et al (2002) who use an

investment model to analyse an individual's incentive to invest in social capital and find that time horizons are extremely important: when individuals have a high probability of mobility they are less likely to invest in social capital. The reason for this is intuitively clear, but we cannot prove that the far higher emigration from Ireland compared to Denmark during the period we look at had an impact on cooperation.

Other avenues of future research might focus on the effect of the introduction of a binding rule in Ireland in 1927 and the resulting cooperatisation of the sector: did this lead to increasing prices for Irish dairy farmers? Also, how important were binding rules, and vertical integration, in other cooperative enterprises and in other countries? Our research has focused on dairy cooperatives in Ireland and Denmark, but other cooperative enterprises illustrate signs of vertical integration implied by binding rules and greater study of these might be informative to our understanding of cooperation more broadly.⁷⁷

⁷⁷ For example, Coffee cooperatives in colonial Tanganyika implemented binding rules which were coercive and forced coffee farmers to sell their coffee to a centralised coffee purchaser, the Kilimanjaro Native Cooperative Union (KNCA). The rule implemented in 1932, known as the 'Chagga Rule', 'prescribed that every African in the Moshi district market his coffee through the KNCU' (McCarthy 1982, p. 97). Legal attempts to challenge the validity of the 'Chagga Rule' were dismissed outright on a technicality that 'plaintiffs did not have a right to initiate them' (McCarthy 1982, p.101). When legal avenues were closed dissidents 'attempted to close, and if necessary destroy, the primary societies' premises' (Ilfie 1979, p. 280). Attempts to challenge the binding rule and the KNCA's monopoly of sales led to severe reprisals with the use of RAF aeroplanes as intimidation and deportation of ringleaders (Ilfie 1979, p.280.).

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Figures

Table 1: IAOS creamery membership and liabilities, 1906

	Ulster	Munster	Leinster	Connacht	Ireland
Membership	19,741	6,896	2,247	11,834	40,718
Paid-up Share capital (£)	52,880	34,183	11,030	19,736	117,829
Loan Capital (£)	45,995	31,316	8,499	9,671	95,481
Total capital (£)	98,875	65,499	19,529	29,407	213,310
Share capital per member (£)	2.68	4.96	4.91	1.67	2.89
Mean membership	190	90	107	455	179
Mean paid-up share capital (£)	513	438	525	705	512
Mean loan capital (£)	447	402	405	358	417
Mean total capital (£)	960	851	930	1,089	936
Mean share capital per member (£)	3.66	6.27	4.72	1.73	4.41

Source: IAOS annual report 1906

Table 2: Creameries in Ireland, 1892-1908

Year	Ireland	Proprietary share of creameries	Cooperative share of creameries	Munster share of creameries	Proprietary share in Munster	Cooperative share in Munster
	Number	%	%	%	%	%
1892	175	76.57	23.43	75.43	73.48	26.52
1893	190	75.79	24.21	79.47	72.19	27.81
1894	226	73.01	26.99	77.43	70.29	29.71
1895	255	75.69	24.31	80.39	75.61	24.39
1896	279	74.19	25.81	80.29	75.89	24.11
1897	324	73.77	26.23	77.16	79.20	20.80
1898	387	57.36	42.64	71.83	68.35	31.65
1899	480	63.33	36.67	66.04	79.18	20.82
1900	506	62.45	37.55	65.81	79.88	20.12
1901	547	62.16	37.84	63.62	80.75	19.25
1902	584	75.17	24.83	62.50	84.66	15.34
1903	612	79.25	20.75	62.42	81.41	18.59
1904	609	75.04	24.96	62.40	81.32	18.68
1905	791	67.89	32.11	59.04	79.23	20.77
1906	780	55.77	44.23	61.15	76.52	23.48
1908	644	48.91	51.09	56.83	70.22	29.78

Sources: Agricultural Statistics of Ireland and Porter (n.d./1909).

Table 3: Dissolved companies

Company	Creamery	Share capital (£)	Share holders	Average share Holding (£)	Farmer %	Incorporated	Converted to IPS	Liquidated/ wound up
Ballingarry dairy company	Y	1127	147	7.67	92.52	5/5/1896	19/02/1926	-
Condensed Milk company of Ireland	Y	350000	26	14000.00	0			13/11/1923
Castlecor Dairy Company	Y	887	75	11.83	89.33	18/3/1890	11/08/1927	
Irish creameries & exporters association	-	-	-	-	-	-	-	-
Drangan co-operative creamery	Y	444	81	5.48	91.36	29/10/1897	31/07/1933	
Bandon co-operative stores	Gen	4000	7	571.43	28.57	14/12/1899		15/03/1938
Golden Vein dairy companies	Y	9000	9	1000.00	0	16/07/1900		19/10/1938
Newmarket dairy company	Y	20878	27	1304.56	12.50	30/04/1904		22/06/1935
Irish dairymen	N	10000	18	588.24	0	30/07/1919		28/08/1931
Ballimena Dairy Company	Y	2000	2	1000.00	50.00	08/03/1920		30/11/1925
Ballyhay dairy company	Y	665	39	17.97	83.78		12/12/1923	
Buttevant dairy company	Y	-	-	-	-	-	25/06/1924	
Churchton dairy factory company	Y	791	52	15.82	57.69		29/11/1924	
Galbally dairy company	Y	-	-	-	-	-	08/03/1922	
Cork Farmers Milk emporium	Gen	4870	195	25.23	99.48	29/09/1921	30/01/1935	

United Irish counties milk producers	-	-	-	-	-	-	-	-
Irish creamery company ltd	N	2	1			21/04/1923		09/03/1928
Condensed Milk Company of Ireland (1924) ltd	Y	85000	14	7894.74	0.00	16/02/1924		25/04/1927
Puritas Milk Products company	Milk	250	-			12/03/1927		26/10/1927
Cleeve (Ireland) ltd	Y	-	-	-	-	19/05/1927		14/02/1929
X.L Dairies	N	121	5	24.20	0.00	18/08/1927		20/12/1928
Irish milk products	N	2	2	1.00	0.00	10/08/1929		
The Royal Meath Dairy ltd	Gen	2000	5	400.00	100	08/08/1934		05/10/1943

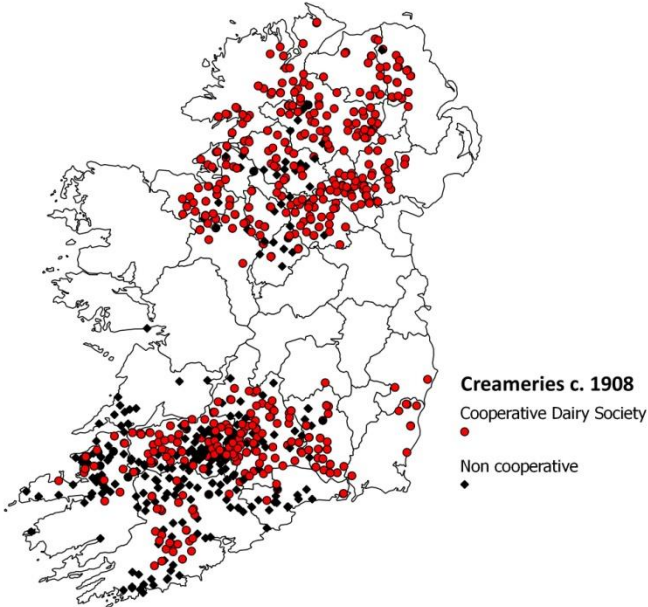
Sources: Dissolved company files: D 1134, 1323, 1380,2020, 2151,2424, 2480, 2871, 4755, 4921, 6143, 6148, 6154, 6168, 7027, 7082, 7159, 7252, 7611, 7620, 7645, 7909, 8757

Table 4: Cow and creamery density, 1892, 1901 and 1908

	1892	1901	1908
	Milch cows per square mile		
Leinster	31.19	30.84	30.83
Munster	60.17	63.11	65.89
Ulster	54.52	54.23	52.65
Connaught	30.52	31.90	32.31
	Cooperatives per 10,000 square miles		
Leinster	7.93	21.14	36.99
Munster	37.62	72.01	117.14
Ulster	0.00	117.84	181.57
Connaught	0.00	39.35	62.06
	Creameries per 10,000 square mile		
Leinster	46.23	71.33	56.80
Munster	141.86	374.00	393.35
Ulster	6.01	138.28	215.24
Connaught	4.54	45.41	84.76
	Creameries per 10,000 Milch cows		
Leinster	1.48	2.31	1.84
Munster	2.36	5.93	5.97
Ulster	0.11	2.55	4.09
Connaught	0.15	1.42	2.62

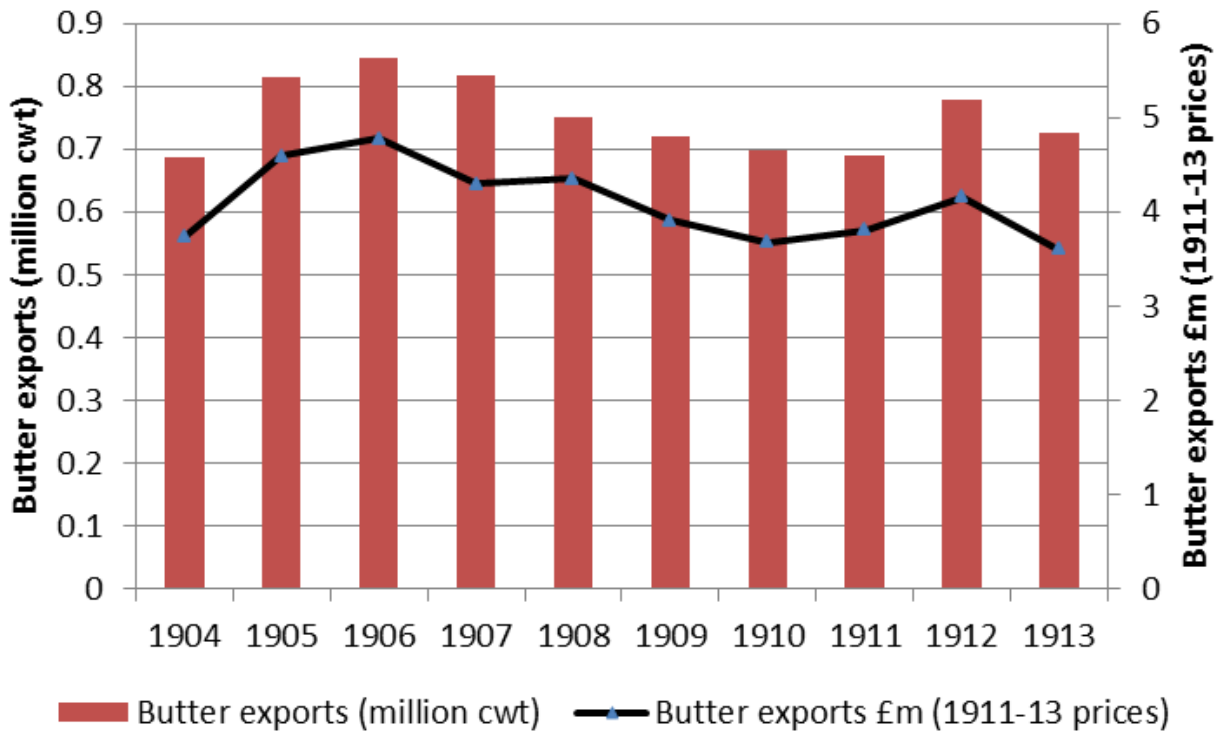
Sources: Agricultural Statistics of Ireland, 1892, 1901, 1908.

Map 1: Creameries in Ireland, 1908



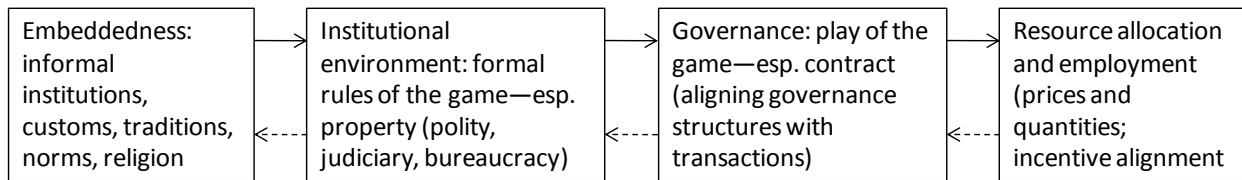
Source: Source for cooperatives: IAOS annual report 1908 and Porter (n.d./1909); source for non-cooperatives Porter (n.d./1909).

Figure 1: Irish butter exports



Source: DATI export statistics: Jason Begley, Frank Geary and Kevin H. O'Rourke (eds.), HNAG Database of Irish Historical Statistics (http://www.tcd.ie/iis/HNAG/HNAG_database.htm)

Figure 2: Economics of institutions



Source: Williamson (2000, p. 597).

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