Chapter 22

Reluctant co-operators: dairy farmers and the spread of creameries in Ireland 1886-1920

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Introduction

This chapter describes the origins and spread of the creamery system in Ireland between 1884 and 1920 and analyses the differing spatial patterns exhibited by the private and co-operative creamery sectors. The analysis supports the contention that Irish dairy farmers were only inclined to establish co-operative creameries where a private alternative was not available. Various indicators are employed to demonstrate the reluctance of Irish dairy farmers to co-operate and the reasons for this.

In the early twentieth century, Ireland was widely regarded as a world pioneer and role model in the area of agricultural co-operation, and particularly in the establishment of dairy co-operatives. McCarthy et al. have stated how "World-wide interest in the Irish co-operative movement was keen and many came to Ireland to study the structures and methods of Irish co-operation." Writing in 1921, Smith-Gordon and O'Brien referred to how the agricultural co-operative movement in Ireland had 'attracted the attention of students from all over the world'. Even more enthusiastically, Rashad wrote in 1920 of how Plunkett House in Dublin, the headquarters of the Irish Agricultural Organisation Society (IAOS), an organisation set up in 1894 by Horace Plunkett to promote the formation of rural co-operatives, had become 'the Mecca of agricultural co-operation to which pilgrimages are made from all parts of the world'. Rashad recounts how, during his sojourn in Dublin, he had 'met representatives of many Eastern and Western nationalities' investigating various aspects of the co-operative movement in Ireland. According to Rashad, 'It was from here and in this way that the lessons were learned which led to the starting of similar movements in other countries.'

Ireland's reputation as a paragon of agricultural co-operation was largely based on the rapid growth and geographical diffusion of dairy
co-operatives in the last decade of the nineteenth and first decade of the twentieth centuries. Between 1889 (when the first co-operative was established) and 1910 some 370 co-operative creameries were opened *ab initio*, while a further seventy-one came into existence through conversions of previously-private operations; of these, 404 were still in existence in 1910. The establishment of co-operative creameries continued, albeit at a slower pace, over the next decade so that, by 1920, the number had risen to 458, embracing most areas where dairy farming was conducted on a commercial basis.

Notwithstanding this apparent record of success, it is argued here that the image, widely promulgated abroad, of Irish farmers as co-operative trailblazers was essentially misleading and that Ireland, in fact, did not provide a good role model for those seeking to develop the co-operative movement in other countries. Instead, we argue that Irish dairy farmers were, at best, reluctant co-operators who, for the most part, only established co-operatives when there was no satisfactory alternative and did not actively participate in their governance once they were established. Furthermore, the inability or unwillingness of co-operatives to collaborate with each other meant that the benefits they brought to their members fell well short of what was achievable, as demonstrated by contemporaneous co-operative sectors in other parts of Europe.

**Origins of the Irish creamery system**

In Ireland, dairying as a commercial enterprise is strongly concentrated in the southern province of Munster, with some overspill into the south Leinster counties of Kilkenny and Wexford. Within this broad region there are more localised districts of high-intensity dairying, the most important of which is the so-called 'Golden Vale', a fertile lowland area encompassing southeast County Limerick (extending into northeast County Cork) and midwest County Tipperary. In addition to this Southern Dairying Region, a secondary Northern Dairying Region (in which dairying is less intensive than in the south) stretches from northeast Connacht across central Ulster as far as northeast Derry and north Antrim. Between these two regions, and stretching from the west to the east coast, is a zone dominated by the rearing of beef cattle and in which the rearing of dairy cows for commercial production has, traditionally, been largely non-existent. Historically, butter, the principal product of the dairying industry, was produced on dairy farms via an arduous and labour-intensive process and was highly variable in quality between individual farms and seasonally. Quality was also dependent on how long it took operators to fill a firkin, the type of barrel which was used for transporting
butter to market. However, in the late 1870s, Carl de Laval commenced manufacture in Sweden of a steam-powered mechanical device for separating cream from milk which was to have a revolutionary impact on the dairy industry, especially when it was followed by the development of a mechanised butter-making churn. While much quicker and more thorough in separating cream from milk, de Laval’s ‘centrifugal’ separator needed to process the milk of around 500 cows (given typical yields at the time) in order to achieve viability. Since most dairy herds throughout Western Europe contained less than ten cows, this required the movement of milk processing out of farms and into processing plants which became known as creameries. Centralisation of milk processing offered the additional advantages of producing a uniform product of higher quality.

The first commercial creamery using steam-powered separating and churning equipment in Ireland was established in the east Limerick village of Hospital, in 1884. Initially, further adoption of the new technology was slow, and by the end of 1888 just twenty-six creameries were in operation, all located in counties Cork, Limerick and Tipperary, and all privately owned. The first creamery to be organised legally as a co-operative opened in Drumcolliher, in southwest Limerick, in 1889, with assistance from the English-based Co-operative Wholesale Society, the wholesale arm of the Co-operative Union, which operated an extensive network of co-operative shops in England for which Ireland was a leading source of butter.

**Diffusion of the creamery system**
The establishment of the Drumcolliher co-operative had no immediate knock-on impact in terms of emulation by dairy farmers elsewhere, and a further sixteen months passed before a second co-operative creamery was set up. Meanwhile, the rate of formation of private creameries accelerated, their total number more than tripling, to eighty-four in the years 1889 and 1890, and all still confined to counties Cork, Limerick and Tipperary, while the number of Poor Law Unions (PLUs) containing creameries rose from ten to twenty-one.

No further co-operatives developed during 1889 and 1890 despite the launching, in September 1889, of a campaign to promote the formation of co-operative creameries by a group of enthusiasts led by Horace Plunkett. Plunkett, son of Lord Dunsany, was strongly influenced by the co-operative movement during his education in England and sought to spread the movement upon his return to Ireland. Finding little scope for development of retail co-operatives, Plunkett turned his attention to rural co-operatives, and particularly co-operative creameries, whose rapid growth in Denmark had greatly
impressed him. Irish butter, still mostly produced manually on farms, had been rapidly losing its dominant position in the British market to creamery-produced butter from Denmark and other European countries. As a result, Plunkett expected Irish dairy farmers to be quite open to adopting the new creamery technology. However, Plunkett was not sanguine about the prospects of co-operation emerging spontaneously among Irish farmers, as it had done in Denmark, mainly because of what he saw as their lack of organisational capacity. Irish farmers, he reckoned, had become imbued by a culture of dependence on outside agencies, be they landlords, government officials or private operators such as merchants, shopkeepers and cattle dealers:

The ideally best way for co-operation to be promoted in a country is by the people themselves as the natural result of a sound system of public education; but no spontaneous generation of co-operative societies can be hoped for in Ireland in time to affect the present situation. They will not organise themselves... 8.

Accordingly, Plunkett believed that some kind of outside agency would be necessary to promote the formation of agricultural co-operatives in Ireland – hence the campaign for this purpose which he commenced in 1889. However, Plunkett’s expectation that Irish dairy farmers would be resistant to the idea of establishing co-operatives proved to be well founded. He attended over fifty meetings in the year after launching his co-operative creamery campaign, none of which resulted in the establishment of a co-operative.9 Farmer indifference and apathy were not the only obstacles to be overcome, as Plunkett’s campaign attracted considerable hostility from various groups which perceived the emergence of co-operative creameries as a threat to their interests, including supporters of the nationalist and land reform movements, butter merchants, traders, shopkeepers, ‘gombeens’ (money lenders) and makers of firkins.10 Other impediments faced by Plunkett were his poor public speaking style, his Protestant/Unionist background and his preference for using local people of high social status as the prime movers in promoting co-operatives – none of which endeared him to a large proportion of his target audience in the farming community of the Munster dairying regions, the foci of his campaign.

Plunkett’s campaign had its initial success with the establishment, in October 1890, of a co-operative creamery in Ballyhahill, among the hills of northwest Limerick and a considerable distance from the dairying heartland in the southeast of the county. This acted as the

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springboard for a subsequent surge with seventeen (including Ballyhahill) coming into operation in 1891 – the same number as for private creameries. However, the pioneering Drumcolliher co-operative failed in the same year (after just two years in operation) and was sold to a private operator. This may partly account for the fact that the rate of establishment of new co-operatives fell away sharply in the following three years, to eight in 1892, four in 1893 and just two in 1894. In a twelve month period straddling 1892 and 1893, Robert Anderson, who was employed by Plunkett as a full-time organiser, addressed 440 meetings, yet only twelve co-operatives materialised in those two years, indicating the difficulty which was being encountered in persuading farmers to establish them. By contrast, sixty-seven new private creameries were established in the years 1892-94, at the end of which, of a total number of 198 creameries, only thirty-one (15.7 per cent) were co-operatives.

By 1894 the creamery system had spread beyond the dairying heartland counties of Cork, Limerick and Tipperary to the remaining Munster counties, except Kerry, and also to Carlow, Kilkenny and Wexford. The year 1894 also marked the appearance of the first known creameries in the Northern Dairying Region, in the form of private operations at Belturbet in Cavan and Collooney in Sligo. Of the fifty-two PLUs in the Southern Dairying Region, thirty-eight now had at least one creamery. Distinctive differences in the spatial distribution of co-operative and private creameries were becoming apparent. There were twenty-two PLUs which contained private creameries but no co-operatives; five where the reverse applied; and eleven which contained both. However, in most of the latter there was a major imbalance between the two creamery types. Of forty creameries in the Golden Vale heartland PLUs of Kilmallock, Mitchelstown and Tipperary, only two were co-operatives (both of which were located in Kilmallock FLU). In the nine immediately contiguous PLUs there were fifty-two private creameries and just six co-operatives. Apart from a cluster of ten creameries in the adjoining west Limerick PLUs of Rathkeale and Newcastlewest, co-operatives appeared to be scattered individually in a random fashion in the region’s dairying districts.

In 1895 there was something of a recovery in new co-operative formation which numbered sixteen compared with two in 1894. This resurgence was mainly attributable to the establishment, in 1894, by Plunkett and his associates, of the IAOS, dedicated to the promotion of co-operatives in rural Ireland. With the aid of state funding, the IAOS was able to mount a much more capable organisational effort than had been possible previously, involving a team of field
organisers/advisors, head-office accountancy staff, a publicity team which produced information circulars and leaflets, and a weekly newspaper, The Irish Homestead.

This new organisational capacity was primarily directed at the Northern Dairying Region where the relative paucity of private creameries left much greater potential for the establishment of co-operatives. The first co-operative creamery here was set up at Drumcliff, Co. Sligo, in 1895, and over the next five years, no less than 132 co-operatives (embracing all the counties in the Northern region) were established so that, by the end of the period, even though there also had been strong growth in the private sector, co-operatives accounted for three-quarters of all creameries in the Northern Dairying Region.

Meanwhile, in the south, the mini-surge noted for 1895 was not sustained and, over the following five years, just thirty-six additional co-operatives were set up (an average of seven per year). In the same period, 129 private creameries were established, to add to the sixty-one set up in 1895 alone. This meant that of 442 creameries, 19 per cent were co-operatives. The key development here during the period 1895-1900 was the rise to dominance of creameries owned by corporate organisations. Previously, most private creameries had been set up by locally-based individuals and groups. The main corporate groups to become involved in the Irish creamery system in the 1890s were the English-based Co-operative Wholesale Society and the Limerick-based Condensed Milk Company of Ireland. Corporate groups accounted for 19 per cent of the 170 private creameries set up in the south up to 1894, and for 69 per cent of the 190 private creameries established between 1895 to 1900 (fig.22.1).

While the creamery system continued to grow strongly in the main southern dairy counties the star performer in this period was Kerry where fifty-nine creameries were established once the initial breakthrough was made in 1895. As elsewhere, private creameries predominated, accounting for forty-one of the forty-seven creameries set up in the Tralee and Listowel PLUs. The co-operative sector remained weak and thinly scattered. While the Golden Vale heartland PLUs of Kilmallock, Tipperary and Mitchelstown added forty-two creameries in this period, only five were co-operatives (making a total of seven out of eighty-two). Dissociation between co-operative and private creameries remained at a high level: sixteen PLUs containing a total of 111 private creameries had no co-operative presence at all. County Kilkenny, however, was emerging as an exception to the general eschewal of co-operatives in the south: by 1900, eighteen of the twenty-five creameries which had been established there were co-operatives.
Fig. 22.1: Distribution of creameries in Munster and south Leinster, 1900.
In the early 1900s, the tide in terms of new establishments in the south turned in favour of co-operatives. This was due as much to a major fall-off in private creamery openings as it was to an increase in the rate of co-operative formation. Between 1901 and 1905, thirty-eight new co-operative creameries were set up compared with thirty-six in the previous five-years; in the same period the number of new private creameries fell by 100 to twenty-nine. Nonetheless, co-operatives remained very much in the minority, accounting for 29 per cent of all creameries in the region. In the north, the march of the co-operative sector continued apace with their net numbers rising by seventy-seven compared with four for the private sector and their share of extant creameries rising from 75 per cent to 82 per cent.

The number of functioning creameries in Ireland reached its highest point in 1906 at 727, of which 466 (64 per cent) were located in the south, where the proportion in private ownership, at 70 per cent, contrasted with 18 per cent in the north. While co-operatives were making minor advances in some PLUs, overall the general spatial dissociation of private and co-operative creameries continued, with one notable exception. Concerned at the limited presence of co-operatives in the Golden Vale heartland, the IAOS mounted a special campaign in this period to establish co-operatives in Tipperary PLU, with fairly spectacular results: between 1901-1906, fifteen new co-operative creameries were set up in the district, while seven private creameries converted to co-operative status. However, there was little change in the other dairy heartland PLUs, with co-operatives accounting for just four of the thirty-five creameries in Kilmallock PLU and none at all of the fifteen in Mitchelstown PLU. Elsewhere, co-operatives accounted for just one of twenty creameries in Kanturk PLU in northwest Cork, three of eighteen in Limerick PLU and none of a combined twenty-six creameries in the adjoining PLUs of Clonakilty and Skibbereen in southwest Cork.

After 1906, the establishment of new private creameries slowed to a trickle, while the formation of new co-operatives continued at a steady pace. With private creameries also more likely either to convert to co-operatives, or to close down, the proportion of creameries in the south in co-operative ownership increased from 30 per cent in 1906 to 38 per cent in 1910 and 46 per cent in 1915, before finally assuming a slim majority in 1919 (the figure was 51 per cent in 1920). This change was due in almost equal parts to growth in the number of co-operatives and decline in the number of private creameries: between 1906 and 1920 the number of co-operative creameries grew by 101 to 242 while that of private creameries fell by ninety to 235.
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The process of co-operative 'catch-up' was quite variable spatially, as indicated in table 1, which shows the total number of creameries and the proportion which were co-operatives in a set of key PLUs for both 1906 and 1920. The top three PLUs in the table comprise the Golden Vale 'heartland'. In Tipperary PLU, where the majority of creameries were co-operatives following the targeted IAOS campaign of the early 1900s, the co-operative proportion actually fell slightly between 1906 and 1920. There was substantial growth in the co-operative share in Kilmallock but it remained a minority share; hardly any headway at all was made in Mitchelstown.

**TABLE 1**

**Distribution of creameries by key PLUs in Munster 1906 & 1920**

<table>
<thead>
<tr>
<th>PLU</th>
<th>1906</th>
<th>1920</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. Creameries</td>
<td>per cent Co-op</td>
</tr>
<tr>
<td>Tipperary</td>
<td>49</td>
<td>55.1</td>
</tr>
<tr>
<td>Kilmallock</td>
<td>35</td>
<td>11.4</td>
</tr>
<tr>
<td>Mitchelstown</td>
<td>15</td>
<td>0.0</td>
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<tr>
<td>Thurles</td>
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<td>46.2</td>
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<td>Newcastlewest</td>
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<tr>
<td>Cashel</td>
<td>21</td>
<td>33.3</td>
</tr>
<tr>
<td>Tralee/Listowel</td>
<td>53</td>
<td>20.8</td>
</tr>
<tr>
<td>Kanturk</td>
<td>20</td>
<td>5.0</td>
</tr>
<tr>
<td>Clonakilty/Skibbereen</td>
<td>26</td>
<td>0.0</td>
</tr>
</tbody>
</table>

The data for the PLUs of Thurles, Nenagh, Newcastlewest and Cashel show very substantial gains for the co-operative sector, such that it accounted for the great majority of creameries in all cases by 1920. Three of these PLUs are based in County Tipperary which was much more receptive to the co-operative model than either Cork or Limerick. In Listowel/Tralee PLUs (combined because of their similar characteristics), co-operatives had come from being a relatively small minority in 1906 to almost achieving parity with the private sector in 1920. By contrast, in Kanturk PLU co-operative progress was quite limited, while the adjoining PLUs of Clonakilty and Skibbereen remained complete co-operative deserts throughout the period.

Whereas in the south the number of co-operatives continued to grow up to 1920, in the north, the co-operatives reached a peak of 232 (91 per cent of all creameries) in 1910, after which there was a slow but steady decline to 216 in 1920. However, with the number of private
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creameries falling even faster (from forty-seven in 1906 to thirty in 1910 and seventeen in 1920), the co-operative sector reached a 93 per cent share of the creameries by the end of the period. A key factor in this upsurge was the decision by British firm JJ Lonsdale, which built up a network of twenty-five creameries in the Longford/northeast Connacht/west Cavan area in 1899-1901, to offload these a decade later. The only northern PLU with a significant private creamery presence by 1920 was Enniskillen, where six of the nine creameries established in 1898/99 by the Scottish Co-operative Wholesale Society were located.

Analysis of the spatial pattern of creamery growth

In interpreting the respective patterns of growth of the co-operative and private creamery sectors in Ireland, it is useful to compare them with the corresponding patterns in Denmark during the same time. There, the creamery system was first introduced in the late 1870s and, as in Ireland, was exclusively in the hands of private operators in the initial period. The early growth of the private creamery sector was very rapid, reaching an historic peak of between 500-600 creameries in 1885/86. By comparison, in the first seven years in Ireland only 100 private creameries were established. Denmark's first co-operative creamery began operations in 1882 and by 1885, eighty co-operatives had been formed. Thereafter the rate of co-operative formation mushroomed, so that by 1888 they numbered c.550, by which time they had surpassed an already contracting private sector. During the same time span, Ireland's co-operative creameries numbered less than 100, one third the size of the private sector.

Ten years later, Denmark's co-operative creamery numbers had passed the 1,000 threshold, and was by then four times the size of its private counterpart. By the corresponding year in Ireland (1904), the number of co-operatives had reached 335 but still trailed the private sector. The latter sector had already peaked the previous year and was beginning to contract, albeit at a slow rate. The co-operative sector finally assumed parity in numbers in 1908 and continued to grow steadily, so that by 1920 there were 458 co-operatives and 251 private creameries in operation. By then there were over 1,200 co-operatives functioning in Denmark.

This comparison with the Danish experience provides support for the argument that Irish dairy farmers were reluctant to establish dairy co-operatives and tended not to do so where alternatives were available. We have seen already the poor response elicited by Horace Plunkett's initial campaign to promote the co-operative idea among Munster's dairy farmers. By contrast, the spread of the co-operative
system in Denmark was entirely a spontaneous, bottom-up, affair which required little support from outside agencies.

A further indicator of this lack of spontaneity among Irish dairy farmers was the very high proportion of co-operative ventures which consisted of conversions from pre-existing private operations. No less than one fifth (20.6 per cent) of all co-operatives established up to 1920 consisted of such conversions. The proportion was much higher in the south – 33.2 per cent compared with 7 per cent in the north where there were fewer private creameries in the first place to be converted. Furthermore, most of these conversions came later on in the period under review here: between 1891 (the year of the first recorded conversion) and 1900 there were only twelve conversions compared with fifty-nine between 1901 and 1910 and thirty-nine between 1911 and 1920. By then, both the creamery per se and its co-operative form had been tested, enhanced and proven, thereby greatly reducing the risk involved for late entrants to the business.

Some conversions to co-operatives arose on the initiative of farmer suppliers while others were necessitated by the withdrawal of private operators. The latter was especially the case where no alternative private operator was prepared to take the plant over, or where there was no alternative accessible outlet for the milk supply. The biggest single such episode occurred when the Co-operative Wholesale Society (CWS) decided to withdraw from Ireland, having built or acquired over ninety creameries in the south during the course of the 1890s. This resulted in twenty-one creameries being closed altogether, forty-three being sold to other private interests, and twenty-nine being transferred to co-operative ownership. Many of the latter were located in the hill country of west Tipperary and on the Kerry/Limerick border and other remote locations, which would have been unattractive to private investors and where alternative outlets were unavailable. As a result, the suppliers were more or less forced to set up co-operatives if they wished to continue as creamery suppliers.

The spatial pattern of the spread of the respective private and co-operative creamery sectors provides further evidence that, to a large extent, co-operatives were only established where alternative private creameries were not. Private investors were attracted to locations where a plentiful supply of milk offered the prospects of high profitability. In 1906 (the year in which the number of creameries in the south reached its peak) there were fourteen Poor Law Unions (PLUs) in the region which contained creameries and whose dairy cow density (per 100 acres of crops and pasture) exceeded fifteen (i.e. these PLUs which had the greatest milk producing capacity). If we exclude Tipperary PLU (which had been the focus of an energetic
co-operative promotion campaign by the IAOS in the early 1900s and in which nearly one half of all co-operative creameries in the fourteen PLUs in question were located), we find that the remaining thirteen PLUs contained 61 per cent of all private creameries but only 32 per cent of co-operative creameries in the region. In fact, in a subset of seven of these thirteen PLUs, co-operatives accounted for less than 8 per cent of all creameries.

Despite offering the greatest returns from investment in creamery processing, once these PLUs had been colonised by private operators, local farmers were not inclined to establish a co-operative alternative, this option being mainly reserved for less attractive PLUs in which the private sector was less likely to invest. Thus, in the twelve southern PLUs containing creameries which had the lowest cow densities in 1906 (all under nine cows per 100 acres), 68 per cent of the creameries were co-operatively owned.

Statistical analysis supports this point of view. Regressing the number of private creameries against the number of dairy cows per PLU produces a high coefficient of determination ($R^2$) value of 0.658 whereas the value for co-operatives is much lower at 0.215. Similarly, regressing the density of private creameries against the dairy cow density (both per 1,000 acres of land) gives a very high $R^2$ value of 0.633 whereas the corresponding value for co-operative creameries indicates scarcely any relationship at all ($R^2 = 0.059$). This suggests that milk availability was the key determinant of the location of private creameries but had, at best, only a minor influence on the location of co-operatives. The disconnect between the spatial distribution of the two types of creameries is also indicated by a Dissimilarity Index score for the two variables of 0.48 (an Index value of 0.6 or more typically indicates a high level of spatial segregation with 0.3 the minimum threshold value for the ‘moderate’ segregation category). 12

Yet further powerful support for the argument that Irish dairy farmers were only inclined to set up co-operatives when no private alternative was available is provided by the example of the Northern Dairying Region where the domination of co-operatives was a direct response to the failure of the private sector to establish a significant presence in the region (apart from a couple of localised exceptions): in 1907, the peak year for creamery numbers in the north, private creameries made up less than 18 per cent of the total creamery population compared with 70 per cent for the peak year in the south (1906). The weak level of development of the private sector in the north was partly attributable to its lower productivity. Although average stocking rates were not very different (10.9 dairy cows per 100 acres of crops and pasture in the north as against 11.7 in the
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south in 1906), there was a significant difference in average milk yields between the two regions, yields per cow in the south generally being of the order of 15 to 20 per cent higher than in the north. In addition, the generally smaller farm sizes in the north (where the average acreage of crops and pasture per holding of over one acre in 1906 was 21.8 compared with 31.6 in the south) meant smaller and more scattered dairy herds involving additional costs of various kinds. On top of these drawbacks, the Northern Dairying Region did not have the same commercial tradition and infrastructure in terms of butter production, storage, transportation and exchange as the south. Thus, with much better pickings available in the latter region, it was the obvious initial focus of investment by the private sector, and by the time this potential had been exploited, the co-operative sector was already sufficiently well established in the north to deter the extension of private investment.

The spatial pattern of adoption of the creamery system in the Northern Dairying Region followed the classical lines proposed by spatial innovation theory. Typically, major new innovations are initially adopted by a small minority within the potential adopting population, usually made up of people with superior financial resources (who therefore have less fear of innovation failure), superior productive resources (which make the potential advantages more attractive), and superior social capital (in terms of education, organisational ability and contact systems), which both enable them to become aware of the innovation and its potential, and make them more likely to exploit the innovation effectively.

Accordingly, both the technological innovation which the creamery represented, and the organisational innovation which dairy co-operatives entailed, were always most likely to be adopted in the Southern Dairying Region, and particularly in the mid-Munster region with its strong commercial tradition built on middle-sized farms whose owners had long shown a capacity for innovation and self-organisation. It was only when these innovations were tested and shown to be workable that diffusion spread to the less-favourably-resourced dairy farmers of the north. Thus, the first known (private) creamery did not develop in the north until 1894, ten years after its introduction in the south, while the first co-operative creamery was established the following year (six years after the pioneering co-operative in the south).

**The Irish dairy farmer’s reluctance to co-operate**

Despite the lack of a co-operative disposition among Irish dairy farmers, ultimately the co-operative became the dominant form of creamery in Ireland. This was particularly the situation in the north, where 93 per
cent of creameries were co-operatives by 1920, although they constituted a slim majority by then in the south. Over time farmers had developed a more positive attitude to forming, or becoming members of, co-operatives. There were a number of reasons for this. In general, co-operative creameries were better run than their private counterparts, and were more prepared to weather periods of economic downturn. This was reflected in the much greater stability of the co-operative sector, especially in the highly competitive Southern Dairying Region, where there were only fourteen cases of co-operatives closing down altogether, compared with 105 known closures in the private sector. In addition, co-operatives rarely changed hands: in the period up to 1920, there were twenty-two cases of this compared with 231 cases among private creameries, about half of which involved conversions to co-operatives with the other half involving ownership switches within the private sector.

Apart from being more stable, co-operatives tended to be more successful than private creameries at curbing rogue behaviour (e.g. poor hygiene, milk adulteration) among suppliers and tended to pay better prices for milk. Many co-operative creameries also acted as outlets for agricultural produce other than milk, such as poultry and eggs, and/or operated stores which sold farm and farmhouse requisites. Because they were not driven solely by the profit motive they could undersell competitors and also provide a credit system whereby payment was extracted over time from the monthly milk cheque, a system which was very attractive to many farmers.

The fact that the co-operative became the dominant form of creamery in Ireland by 1908 and accounted for two thirds of all creameries by 1920 did not necessarily signal a decisive growth in co-operative fervour among Irish dairy farmers. Rather, their view of the co-operatives of which they were formal members was, in most cases, decidedly instrumental and non-participative. It was common for members never to subscribe the full value of their nominal shares, and participation by members in the running of co-operatives was generally confined to a small minority. The latter, along with professional management, in turn tended to have little interest in, or knowledge of, the broader principles of the co-operative movement, and frequently did little to encourage member participation. It was also common for a large proportion of suppliers to co-operative creameries not to be members of those creameries at all. This was particularly the case in areas (such as east Limerick and west Tipperary) where creameries were closely spaced, giving local dairy farmers a high level of leverage in terms of favourable milk prices and avoiding the costs of becoming shareholders.
The lack of a co-operative disposition among Irish dairy farmers was further reflected in their inability to co-operate among themselves. Irish dairy co-operatives were stand-alone entities, which basically produced butter and sold it in open competition with each other. By contrast, a key factor in the spectacular success of Danish creameries in the late nineteenth century was their ability to join together in federations for the purposes of joint marketing and other activities of mutual benefit. This culminated in the introduction of a national butter brand (Lur) in 1899 subject to strict quality controls. Within four years, 98 per cent of all Danish creameries were marketing under this brand. In Ireland, there was an early attempt to establish such a marketing federation in the form of the Irish Co-operative Agency Society (ICAS) set up in 1893 as a second-level marketing co-operative whose members were themselves co-operatives (numbering sixteen initially, and forty-two eventually). However, ICAS never operated to any great effect, being largely used by member co-operatives as a dumping ground for surplus butter for which a better price could not be got elsewhere.

Irish co-operative creameries, generally small in scale, might also have benefited through more localised rationalisation of production. However, attempts by the IAOS to encourage such rationalisation generally fell on deaf ears. Indeed, far from working together as partners, neighbouring co-operatives were more likely to be bitter rivals competing for suppliers in overlapping territories. This inability to pool resources was also evident in their attitude to the IAOS. Plunkett had hoped that this organisation would eventually be converted to a second-level co-operative owned by first-level co-operatives. Not only did this not happen, but the level of financial support made available to the IAOS by co-operatives was pitiful, given the assistance and guidance which the IAOS provided to them. As a result, the IAOS was under constant financial pressure which limited the level of service which it could provide. In 1905, the combined turnover of the 850 rural/agricultural co-operatives (of various types) operating in Ireland came to £1.5 million, yet their aggregate subscription to the IAOS amounted to only £501 – just 8 per cent of the total income of the IAOS for that year.

**Explaining the reluctance to co-operate**

We are not for a moment suggesting that opposition to co-operation was an inherent trait of Irish dairy farmers, but rather that their worldview was profoundly shaped by the socio-economic structures and systems in which they operated. It is useful to look at some of the factors which have been identified in an extensive literature as
key to the success of co-operation in the Danish creamery industry and to relate these to the environment in which Irish dairy farmers and creameries were situated at the same time. One of these factors was a major restructuring of the Danish landholding system, initiated in the late eighteenth century, which saw compact farms being created out of the fragmented feudal system and tenants empowered to purchase their farms from the landlords. Therefore, by the time the dairy industry began to develop in the late nineteenth century, most Danish farmers were free of debt and other encumbrances and had up to one hundred years experience in developing the productive capacity of their farms and their own capabilities as self-reliant commercial operators.

One important consequence of the centralised nature of Danish land reform, from the point of view of co-operative development, was the absence of major inequalities in the size of the farms created which were also generally larger than was the norm in Ireland. In 1873, for example, one half of all agricultural land was held in farm units of between 40-100 hectares. This produced a strong sense of common identity and solidarity among Danish farmers which contrasted with the deep social divisions created by the great inequality in farm size in Ireland. A second crucial factor in the success of co-operation in Danish agriculture was the relatively high level of education attained by farmers there in the nineteenth century. The process began with the introduction in 1814 of a free and universal system of primary education with a strong practical orientation followed in the 1840s by the growth of the Folk High Schools, a uniquely Danish form of adult education, which combined practical training with cultural studies and became extremely popular in rural Denmark in the second half of the century. These frequently worked in conjunction with a national network of agricultural colleges and training institutes set up with state assistance at the same time. There was also a proliferation in rural Denmark of a range of community-based organisations such as farmer’s associations, credit unions, parish councils and socio-cultural activities. This community orientation, combined with high education levels and a general commonality of interests served to generate a powerful capacity for collective action and organisation among Danish farmers which was exploited to the full in the organisation of the dairy industry towards the end of the century.

In Ireland, by contrast, most farms were still held in tenancies in the late nineteenth century, while the tradition of inheriting farms on the death of the incumbent, coupled with the linking of marriage to inheritance, inhibited innovation in the farming community. The
farm size structure was highly differentiated, both inter- and intra-regionally, but on a national basis most farms were small (in the late nineteenth century, over two thirds of all holdings in excess of a half-hectare were less than twelve hectares in size). The occupiers of such holdings generally had little education and few resources, and frequently were indebted to local shopkeepers and moneylenders. The capacity to innovate and organise was not well-developed among this group. At the same time, larger commercial farmers were part of a powerful social class which also included traders, professionals and Catholic clergy with whom they shared common bonds of mutual interest and kinship. This, as Mjøset has argued, was a profoundly conservative group inimical to change and innovation which might threaten the established order.21

Conclusion
Irish co-operative creameries had secured a dominant position within the industry by 1920, despite a lack of enthusiasm for co-operation on the part of many, if not most, of the members of these co-operatives. Writing in 1925, Fay remarked on how Irish farmers 'had to be coaxed into co-operation' unlike the Swiss and Danish, among whom co-operation was 'the unaided democratic achievement of the peasants themselves'.22 Similarly, Kennedy has suggested that most Irish dairy farmers did not see self-organisation as the obvious solution to their problems, and only set up co-operative creameries either because the private sector had not done so or, because they were 'cajoled' into doing so by Plunkett and his organisation.23

Most dairy farmers, however, did embrace the creamery system, and participated in the establishment of a co-operative system which gradually developed over time and generally worked well within its own limited objectives. Nonetheless, this system never came near achieving the potential of which it was capable, as indicated by the contemporaneous performance of its Danish counterpart. The reasons lay primarily in various weaknesses in the way dairy co-operatives were structured and functioned — weaknesses which, for the most part, can be traced, to the characteristics of the farming population from which they drew their members.

In fact, the dairy co-operative system was in a far from healthy state as detailed in the 1924 Report of the Commission on Agriculture, which found that the co-operative movement was characterised by 'gross undercapitalisation and minimal share capital, which left the majority of its members with no real stake in the business; lack of co-operative loyalty and of "binding rules" to effect it; lax business methods, account-keeping and stocktaking; and lack of education and training'.24
Were it not for the radical steps taken by the government later in the decade, it is not clear that the dairy co-operative system would have survived to make the progress which it did later in the century.

References
4. Co-operative creameries are defined here as industrial plants, owned by co-operative societies, which mechanically separated cream from milk and/or churned the milk into butter. Creameries which only separated cream were called auxiliary creameries; these sent the cream to central creameries which performed the churning function (these also separated cream from milk supplied by local farmers). Some co-operatives operated only central creameries; some operated only auxiliary creameries; and some operated both.
5. The Southern and Northern Dairying Regions are defined as those Poor Law Unions (see endnote 7) in either region where there was a sufficient milk supply to support the operation of creameries. They are sometimes abbreviated in the text to 'south' and 'north'. See P. Breathnach, *The diffusion of the co-operative creamery system in Ireland, 1889-1920: a spatial analysis*, unpublished Ph.D. thesis, NUI Maynooth (2006).
7. The data on the development of the early creamery industry here is derived from a database developed over a number of years by the author from a range of sources. For further information, contact the author. The spatial units used for presenting the data are counties and Poor Law Unions (PLUs), normally comprising significant towns and their surrounding hinterlands, and which were the smallest spatial units used for the presentation of published material from the annual agricultural censuses during the period covered by this chapter.
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17. Fay, Co-operation at home and abroad.
19. For a more detailed treatment, see Breathnach, The diffusion of the co-operative creamery system in Ireland.
22. 'Fay, Co-operation at home and abroad., pp 97, 102
23. Kennedy,' Adoption of group innovation in Irish agriculture.'