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Sub-theme: Downstream linkages

**THE INTERNATIONAL TRANSFER OF COOPERATIVE OWNERSHIP IN
AGRICULTURE: BARRIERS AND OPPORTUNITIES**

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THE INTERNATIONAL TRANSFER OF COOPERATIVE OWNERSHIP IN AGRICULTURE: BARRIERS AND OPPORTUNITIES

Abstract

Agricultural cooperatives in the Western world have proven to be efficient in many cases. Therefore, it is likely that other countries with a less developed agricultural industry can learn from the experiences, both good and bad, of Western countries. A number of drivers behind the formation and development of cooperatives which are significant for the spreading and transfer of cooperative ownership can be identified. Agriculture and the food industry have several chronic challenges, but cooperative ownership can, to a large extent, solve these problems, while at the same time industrial and socio-economic benefits can, potentially, be achieved.

Based on these factors and assessments and input from stakeholders in countries planning a stronger agricultural cooperative industry, a number of opportunities and barriers have been identified with regard to the transfer of cooperative ownership in agriculture.

To a certain extent, experience from cooperative companies in the Western world can be applied to the rest of the world. However, the cooperative model must be adapted to the specific situation in each country. It is rarely possible to transfer experience directly from, for example, Danish cooperatives to countries with a less developed cooperative industry. There are also often a number of economic, cultural, and organisational barriers that need to be overcome.

Keywords: Agriculture, cooperatives, ownership, transfer, experience, barriers

Introduction

Cooperative ownership in the agricultural and food sector has proven to be efficient in the Western world in many cases. Therefore, one can imagine that other countries with a less developed agricultural sector can learn from the experience of western countries.

Danish cooperatives partly form the basis of this article because Denmark has a well-developed cooperative industry with large and internationally-oriented cooperatives in the agro and food industry. Experiences from cooperatives in the Western world can be utilised in agricultural development in many less developed countries, but there are a number of substantive barriers and challenges that need to be solved.

Cooperatives: An ownership form for the future?

An important question is whether the cooperative ownership in today's world has any value at all. Does it make any sense, and can you benefit from transfer of cooperative ownership internationally? Furthermore, would cooperative ownership not spread by itself if it were beneficial?

Cooperatives have a mixed reputation. Many people think that cooperative ownership is outdated, extinct and non-dynamic. Farmers dominate cooperative companies, which are not managed by the same modern business practices that characterise capital-owned companies. At the same time, they are closed as only farmers can become owners and members, while external investors cannot usually get ownership.

However, the mixed reputation does not exactly match reality. Cooperative members often have a very open debate about the companies' situation, and active ownership is perhaps most common among cooperative companies. The owners – members – are often highly motivated to ensure that the cooperative performs well as the performance has a significant influence on their individual earnings. In addition, cooperatives are managed as along commercial lines, just like other types of companies. If this was not the case, they would not be competitive on international markets.

Some people believe that the original idea behind cooperatives has vanished as companies have become so large and globally-oriented. They think that the proximity between farmers and cooperatives has disappeared, and the farmers' democratic influence is just an illusion. However, in reality, farmers today are very dependent on their cooperative – perhaps more than previously.

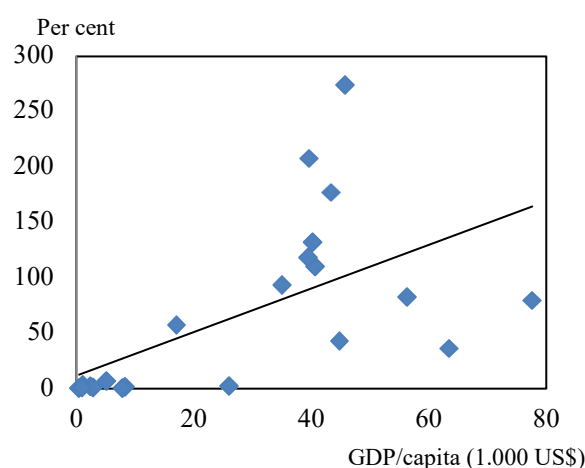
With very large farms and agricultural production, farmers are extremely dependent on the performance of their cooperatives and that profit which is derived from value added downstream is transferred back them. Structural development is common in agriculture as well as in the industrial sector, which reflects the economic conditions and opportunities for exploiting economies of scale and efficiency. However, the opportunity for democratic influence remains intact with the path to potential influence being very short for the individual farmers.

The significance and international spread of cooperative ownership in agriculture

The significance and international spread of cooperative ownership has not been comprehensively documented for several reasons. First, there are many intermediate forms or “semi-cooperatives”. Secondly, it is often impossible to gain access to data for market shares or similar information that illustrates the significance of the cooperatives. The degree of cooperative organisation in agriculture and the food industry varies significantly from industry to industry and from country to country, which can partly be explained by the different market conditions, which to a greater or lesser degree stimulate cooperative organisation. In the case of cooperatives in agriculture and the food sector, a pattern is apparent in that cooperatives are most widespread in North America, Northern and Central Europe and Japan and Korea.

In general, cooperatives – of the formal kind – are most important in the most economically developed countries. Here, cooperatives have a relatively large market share with the majority of farmers being members of one or more cooperatives. Figure 1 illustrates the link between farmers’ membership of cooperatives and the countries’ level of economic welfare.

Figure 1. Number of memberships of agricultural cooperatives as a percentage of the agricultural population



Note: Farmers can be members of several cooperatives at the same time, which explains why the percentage can be over 100.

Source: Author’s presentation based on Zeuli and Cropp (2004).

The figure shows a relatively clear correlation: Cooperatives are less common in the poorest countries, while they become more prevalent as economic welfare increases.

An important explanation is that the establishment of cooperatives requires a certain level of infrastructure, education and organisation, which is not always present in the less developed countries.

Invisible benefits of cooperative ownership

The benefits of cooperative ownership may become invisible to farmers when cooperatives dominate and when farmers are under economic pressure. Farmers often realise that the prices of their products rise less than their costs and less than other goods. Therefore, criticism is directed towards the companies that buy their agricultural products, which in many cases are cooperative companies.

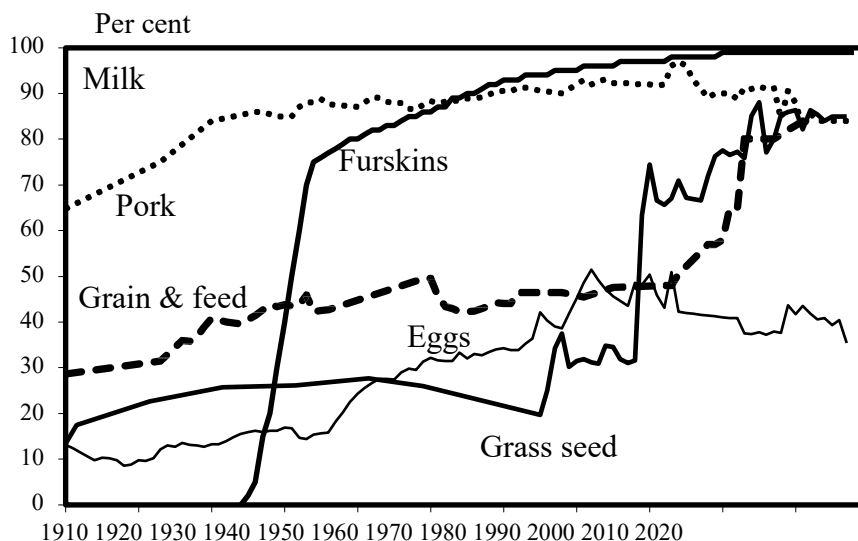
When farmers' prices develop unfavourably in the long term, and farmers face a price scissor (increasing input prices, decreasing sales prices), it may result in their levelling criticism towards their own cooperatives and railing against the cooperative form of ownership. However, it is unreasonable to blame cooperatives for the decreasing real prices and deteriorating terms of trade faced by farmers as agriculture and food usually become cheaper each year – that is a global phenomenon.

Danish agricultural cooperatives at a glance

In this article, cooperatives in Denmark are used as an example of successful agricultural cooperatives in most industries. Cooperatives have managed to develop strongly in terms of structure, market share and internationalisation. Therefore, this section provides a succinct description of the status and development of the agricultural cooperative industry.

In general, for a number of decades, cooperative ownership has been increasing in importance, cf. figure 2.

Figure 2. Market shares for agricultural cooperatives in selected industries in Denmark



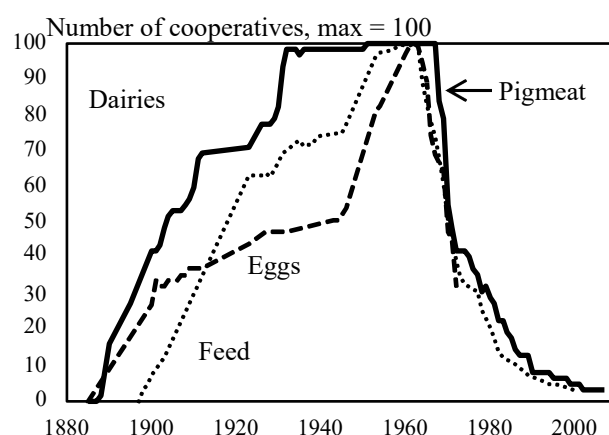
Sources: Own calculations based on Statistics Denmark (several issues), Danske Andelsselskaber (several issues a+b), DLG (1973), Danish Dairy Board (1982), Danish Agriculture and Food Council (several issues a+b) and annual reports from food companies and organisations.

As shown in Figure 2, cooperative ownership has, in general, increased during the period. However, cooperatives no longer exist or have never achieved significance in industries such as sugar, poultry, beverages, juice, or processed vegetables.

Furthermore, it is also noteworthy that cooperative ownership is most important in the processing activities that are closest to the farmers in the value chain, or where agricultural commodities represent a large proportion of the total retail price. This is a general phenomenon among cooperatives, cf. e.g. Rogers (2000) or Hansen (2013).

The period is also characterised by considerable structural development. In the first decade of the cooperative movement, a large number of cooperatives were established. Indeed, by 1900, about half of what would be the eventual highest number of cooperative dairies and slaughterhouses had already been established.

Figure 3. Number of cooperatives in selected industries in Denmark. Highest number = 100



Sources: Own calculations based on Statistics Denmark (several issues), Danske Andelsselskaber (several issues a+b), DLG (1973), Danish Dairy Board (1982), Danish Agriculture and Food Council (several issues a+b) and annual reports from food companies and organisations.

Figure 3 highlights the structural changes and adjustments. Recent decades have been characterised by consolidation, mergers, acquisitions and internationalisation, which have resulted in just a few, very large cooperatives, which have become some of the largest in the world, despite having a relatively small number of members and farmers, cf. Table 1.

Table 1. Danish agricultural cooperatives: Size (ranking in Europe)

Industry	Ranking	Company
Pork	2	Danish Crown
Beef	7	Danish Crown
Dairy	2	Arla Foods
Feed industry	2	DLG
Grass seed	1	DLF Seeds
Fur raw skin trade	1	Kopenhagen Fur
Potato starch	2	KMC

Notes: Arla is a transnational cooperative with members in 7 countries. Formally, the company is domiciled in Denmark. DLF Seeds and Kopenhagen Fur are both the largest in the world within their particular business segments.

Sources: Own calculations based on annual reports from the companies

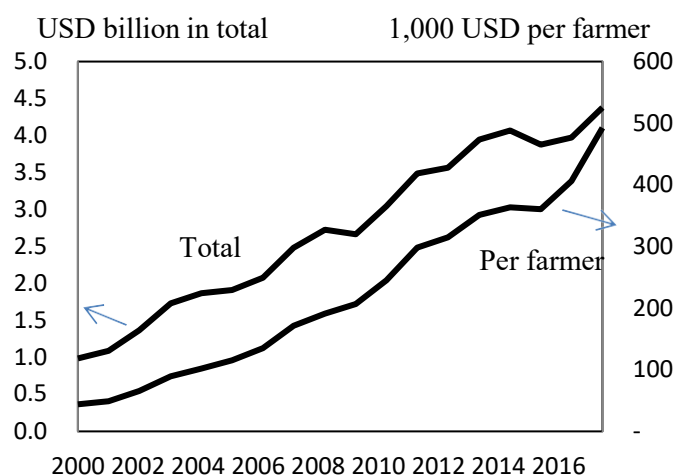
It is often difficult to compare the size of companies as some have activities in many different areas. In Table 1, size is measured as the gross revenue in the specific industry segments mentioned in the table.

The internationalisation and consolidation phase of recent decades has required resources in the form of both capital and organisation.

In recent years, internationalisation has increasingly taken place in the form of foreign direct investments, which has led to an increased focus on the capital ratio of cooperatives. In general, equity is relatively low in cooperatives as the members are obliged to deliver their products to the cooperative and the economic solidarity among the members reduces the need for financial buffers in the companies. In addition, there are certain mechanisms embedded in cooperative ownership which limit the accumulation of equity.

Despite structural problems and barriers to building equity in cooperatives, in general, it is increasing in the agricultural cooperative industry. As shown in Figure 4, equity has risen significantly in the largest Danish agricultural cooperatives in recent years.

Figure 4. Size of equity 2000-2017 in the 23 largest Danish agricultural cooperatives: Total equity and per full-time farm



Note: Excluding share of equity connected to foreign cooperative members (Arla)
Sources: Own calculations based on annual reports from the companies

The figure shows that equity has risen considerably during the period due to two major factors: First of all, capital requirements are rising due to structural developments, acquisitions, utilisation of economies of scale, reduced access to external financing, etc. Secondly, there is a clear trend towards fewer farmers and cooperative members. These trends are increasing the pressure on the cooperative members to accumulate more

equity in the cooperatives. Therefore, the equity capital of the cooperatives is increasing considerably when measured per cooperative member - or per full-time farmer, as shown in Figure 4.

As the figure illustrates, equity capital in the 23 largest cooperative companies amounts to DKK 3.2 million (USD 490,000), on average, per full-time farm in Denmark.

In general, cooperatives dominate several industries in Denmark, while their importance is increasing in several segments. At the same time, there is strong vertical integration, which reduces transaction costs, stimulates information flow in the value chain and creates more balanced bargaining power and, thus, a more perfect market. In general, farmers' access to markets has improved.

Finally, it is also important to note the strong structural development among Danish agricultural cooperatives, which has required considerable resources in terms of capital, organisation, management and member support. Without these resources, the successful development of the cooperatives would not have been possible.

To a large extent, the results meet to the needs of farmers in many less developed countries.

Driving forces behind the formation and development of cooperatives

The assumption that cooperative ownership will spread internationally is based on the further assumption that there is, in fact, a need for cooperatives - that there are driving forces or conditions that stimulate the establishment of cooperatives.

The extent to which cooperatives spread internationally depends on the following market conditions which can make it more or less advantageous to establish - or maintain - cooperatives:

1) No or only weak market power in existing supplier associations, etc.

Farmers can often achieve a degree of market power by establishing supplier/producer associations, which have bargaining power over supply and processing companies. Thus, the benefits of establishing a cooperative are less. Conversely, the absence of such supplier and producer associations increases the incentive to establish farmer-owned cooperatives.

2) Weak competition in agricultural supply or marketing stages

Fundamentally, cooperatives are created because a community needs to solve an important commercial problem, which, for one reason or another, has not been resolved

satisfactorily. If there is insufficient competition in the agricultural supply and marketing link, the market will not work properly, and the farmers' market conditions will be adversely affected. Therefore, there is an incentive to establish cooperatives in these sectors.

3) Farmers' professional, democratic and social skills

The establishment, organisation and operation of a cooperative demands that the members have the appropriate professional, democratic and social skills. Farmers need to understand and respect the common rules, and have the ability to cooperate and to recognise that mutual benefits must be present.

4) Delivery guarantee is important due to daily deliveries

Agricultural products that are sold on a daily basis, or almost daily, require a stable sales organisation and the right to deliver. For dairy farmers, it is important that the milk can be delivered every day, while it is easier for grain producers, for example, to store grain and spend time evaluating alternative sales opportunities. Therefore, the right to deliver - and thus also the value of being a member of a cooperative - is greater in some sectors than in others.

5) Legislation promotes cooperative ownership

Legislation may be a significant driver for the establishment of cooperatives in several areas. In a number of cases, the government supports the formation and development of cooperatives through special arrangements or legislation.

6) Capital structure and needs

The cooperative's capital situation, including the cooperative's capital needs relative to the number of members, also has an impact on the spread of cooperatives. If processing activities are highly capital intensive, and if there are very few members, the capital requirement per member will be so large that the cooperative structure will be unsuitable - especially if there is a start-up phase.

Chronic challenges to farmers, the food industry and cooperatives

Agriculture and the food industry often face a chronic challenge: How to gain access to the market? Many small farms must sell their products daily, but the way to consumers can be very difficult: Farmers' individual bargaining power is very weak, and farmers

may often have problems with regard to logistics, delivery security, high transaction costs, etc. These challenges may seem insignificant, but many less developed, and even some well developed countries, have serious problems with farmers' access to the markets.

Cooperative ownership can, to some extent, solve these problems: When farmers join forces to establish and operate a cooperative, they know that stable, daily deliveries will be guaranteed, and that the cooperative's profits will be returned to its members. A large cooperative also has much greater bargaining power than an individual farmer, which is a significant advantage in negotiations with the increasingly large retail chains. In this way, cooperatives can create an improved competitive situation. Furthermore, farmers do not need to use resources in order to find customers for their products on a daily basis or worry about the buyers of their products cheating them and keeping the profits of downstream processing and marketing.

Additionally, from a socioeconomic point of view, the establishment of cooperatives is also often advantageous: In a situation with many small farms and no cooperatives, imperfect markets, high transaction costs and a lack of vertical integration may occur. All these weaknesses can lead to socioeconomic losses.

In many developing countries, agriculture is facing increasing competition: Large international companies are sourcing agricultural raw materials, and European retail chains are finding an increasing number of food suppliers in developing countries. This means that many farmers are, directly or indirectly, having to deal with a few large buyers. The bargaining power of these farmers is very weak, and a very large part of the profit from downstream processing and marketing is captured by others rather than the farmers. Therefore, supporting and strengthening the farmers' market and bargaining power is becoming increasingly necessary.

Can Western and Danish experiences be transferred?

The question is can the Western and Danish form of cooperative ownership be transferred to other countries? The Danish model of cooperative ownership is based on mutual trust, loyalty and, not least, a "bottoms up" approach, which means that the farmers themselves have established and developed the cooperatives. When farmers see the need, the solution and the benefits, strong ownership of the company arises. In contrast, if cooperatives were instead established by the authorities, many farmers would

be sceptical in advance and probably would not give as much support. This is one of the reasons why cooperatives in developing countries are less common than desired.

Cooperatives are based on a certain level of trust, organisation and social capital. Farmers are often obliged to sell all their products to the cooperative, and some members may be tempted to side-step this obligation. In addition, the cooperative members entrust significant decision-making power and financial responsibility to the board and management. However, in countries that do not have the same traditions for dealing with such power, this may cause problems.

Experiences from countries with limited cooperative ownership

Based on a number of inputs from such countries (IFRO, 2018), a number of experiences and assessments can be summarised:

- A greater number of agricultural cooperatives in the less developed countries will provide clear opportunities to strengthen the value chains, thereby improving food quality, security of supply, market access and farmers' market power.
- Lack of collaborative experience among farmers is a significant barrier to the establishment of new cooperatives. There are a number of implicit and explicit rules of the game with regards to cooperatives which are not always observed. This may be due to a lack of an incentive or a lack of understanding of the cooperation. In this relation, strong cultural barriers, which can be difficult to break down, may be important.
- There are major financial barriers to establishment. For example, establishing cooperative dairies or slaughterhouses requires investment from both cooperative members and financial institutions. The cooperative form of ownership can be a limitation and a disadvantage when it comes to financing start-up companies.
- There are major organisational barriers to establishment. Often, the full support of many cooperative members is required and significant labour resources are necessary.
- Lack of or weak infrastructure such as transport facilities, legal conditions, etc. can prevent the establishment of cooperatives.
- Resistance from existing companies. If the industry consists of just a few large companies, they can be expected to attempt to obstruct the entrance of new

companies onto the market. Entry barriers put up by existing companies will appear.

- Cooperatives do not emerge "by themselves". Although there are obvious advantages for farmers connected with establishing more cooperatives, and although farmers should be the drivers behind this, support to establish a new cooperative will still often be needed. Even though the involvement of the state should not be excessive, it will often be necessary for the state to facilitate a start-up.
- Cooperative ownership can take many different forms and can arise at different stages of the value chain. In the Western world, cooperatives are mainly found in the agricultural supply and processing industry, where family owned farms dominate agriculture. In Asia, for example, cooperative ownership in the primary agricultural industry is also widespread. The governments often want to facilitate more cooperative farms, but it is difficult to find and transfer experiences from the West.
- Cooperatives in less developed countries may arise or be further developed by internationalisation, mergers and acquisitions, joint ventures and strategic alliances of Western cooperatives. These spin-offs of course require that it is a win-win situation, where both parties obtain benefits and where there is equal cooperation.
- Experiences from cooperatives - both positive and negative - in the Western world can to some extent be applied in the rest of the world. They can be used as an example of cooperatives providing market access, ensuring better negotiating positions and giving farmers a fair share of earnings from processing further downstream. However, the cooperative model must be adapted to the specific circumstances in individual countries, although, in some cases, the differences may be too great. For example, it is not really possible to directly transfer experience from Danish cooperatives to countries with a less developed cooperative industry.

Conclusion

To a large extent, agricultural cooperatives are a competitive and useful form of ownership as they can help solve a number of chronic agricultural challenges, and provide both society as a whole and farmers with economic benefits, while improving competition and market access. Experience from Denmark supports this conclusion.

It is often necessary to support or facilitate the markets in a number of less developed countries, as farmers' market access and bargaining position are weak. Cooperative ownership is an obvious and useful instrument in this relation.

Experience from cooperatives - both positive and negative - in the Western world can to some extent be applied in the rest of the world. However, the cooperative model must be adapted to the specific circumstances in individual countries. It is rarely possible to directly transfer experience from, for example, Danish cooperatives to countries with a less developed cooperative industry. There are also often a number of economic, cultural and organisational barriers that need to be overcome.

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