

**CLUSTERING IN CATTLE INDUSTRY: AN EXAMPLE FROM
KASTAMONU, NORTHERN TURKEY**

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Abstract

Clustering concept was generated in 1990s by Michael Porter and describes condensation of corporations as firms, suppliers, universities, which operate at same sector and compete and collaborate each other, at the same geographic zone. SMEs are losing competition advantages about supply, production and marketing day by day at the system of today's world economy is unifying, empowering and centralizing big capital groups. Because of that reason, collaboration of SMEs is an inevitable necessity for keeping alive and gaining competitive advantage against big capital groups.

The Purpose of this study is putting forward analysis results of approach changes of breeders about clustering in cattle sector. Theoretical base of the study is the Situation-Specific Approach generated by H. Albrecht (1869-1989). In this study, clustering process, which was performed successfully at Kastamonu province in 2010-2012 years about cattle sector, which has a sustainable and competitive structure, was analyzed. This analysis based on the following hypotheses:

- Kastamonu province has objective conditions for clustering.
- Clustering is a need but there are no incentives.
- Breeders don't have enough information and knowledge about clusters and clustering.
- Breeders are suspicious about clustering.
- In this context, clustering is a process which needs long-term, laborious and patience efforts."

Paper includes purposes, hypotheses, research questions and details of the clustering concept. Finally, conclusions and assessments are presented.

Keywords: *Clustering, Cattle Industry, Agricultural Economics*

Introduction

Level of specialization in particular sectors highly depends on the relationship, commitment and cooperation among the companies, suppliers and other stakeholders operating in that sector. Besides affecting the level and strength of competition, these relationships determine and affect the level of development of the sector. Moreover, technology, level of knowledge and innovation are the factors that play an important role in today's business. Understanding and applying these factors are of critical importance in order to be successful and competitive in the markets where global competition takes place. (Vucic, 2009).

A high level of standardization brought about by globalization and the fact that the world has turned into the market of large firms put the small and medium-sized firms into a difficult position. Small and medium-sized firms that do not have the facilities in terms of the supply and production systems as well as marketing that large and global-scale are unable to compete (Nordin, 2003).

Through the concept of globalization, production and marketing conditions have changed almost all around the world. With the rapid decline of the importance and meaning of local elements, the ratio of financial elements to human factors increases by day. Thus, the new business concepts based on the material have the tendency to destroy the local elements and the internationally recognized methods of international and large-scale firms become relevant. In this case, particularly small and medium-sized firms face the necessity to adapt their processes of production, marketing and supply to the new global conditions. Adapting to this new system emerging out of their control is difficult for these firms due to the fact that they do not have the necessary expertise in the production and marketing methods.

Material and Methods

In this study, many data acquisition processes were used determine, understand and conclude problems of the cattle sector in Kastamonu. Data acquisition processes maintained via many interviews. Interviews practiced at face to face meetings with producers, breeders, state employees and non-governmental organization representatives.

1. The Concept of Clustering

Clustering, which can increase the regional and local competitiveness and at the same time is seen as a developmental model, is defined as a web created by firms including interdependent suppliers, knowledge-producing institutions (universities, research institutes, engineering companies, and so on.), supporting institutions (agencies, consulting firms, banks, insurance companies, etc.), customers, public institutions that support clustering (provincial administrations, KOSGEB, etc.), sectoral non-governmental organizations and local governments which are connected to each other by value-added production chain and their concentration in a particular region. (Eraslan, 2008)

2. Major Actors and Functions of Clustering

The roles of each institution in the cluster activities and weights are different. While some institutions are fulfilling the organization's core functions, the others support or encourage the activities.

Functions of different clustering actors in the embodiment of cluster are summarized as follows.

- *Firms*
- *Knowledge Producing Institutions*
- *Supporting Institutions*
- *Customers*
- *Public Institutions Supporting Clusters*
- *Sector Non-Profit Organizations and Local Governments*
- *Media for the Sector*
- *Institutions organizing Control and Standards*

Concentration of industry in certain areas enables specialization and easy access to the necessary resources. Contributions of concentration and geographic proximity based co-operation to companies and sectors are not limited to material elements, also development in terms of management and workforce is concerned.

Extensive and institutionalized organizational structure provided by clustering contributes to firms and industries in terms of the following basic elements:

- It becomes possible for the firms which cannot benefit from economies of scale on their own to have an advantage in raw materials supplying. Firms operating as small or medium-sized actors in the sectors start to act as an organization on a larger scale through the power the cluster-joint movement gave them, and this supplies them power and financial advantages in face of suppliers.

- In an atmosphere where global-scale firms take over the sovereignty in almost all the markets, small and medium-sized companies coming together with their standardized products and services derive competitive advantage by acting as a single large firm. In this context, small firms may have power on issues such as market share, profitability, competitiveness.

- The investment opportunity which is another item that will affect the competitiveness of companies takes place much more professionally through the clusters than the firms formed by coming together. Clusters which are large structures in terms of scale can make much larger and more appropriate investments through the benefits such as credit and incentive than the ones that firms can perform alone. The advantages that clusters provide to firms are not only financial resources; professional planning, application and management of the investments are of importance.

- Continuing the efforts for maintenance is a problematic issue for small and medium-sized firms that have great difficulty in meeting advertising and marketing expenses. Firms that keep limited to their local region through the advertising and promotional efforts they perform alone come together and may become more powerful and sufficient in many marketing activities such as distribution, product development and pricing by utilizing the opportunities provided by the clusters.

- Firms that do not have adequate opportunities for infrastructure due to financial and bureaucratic constraints benefit from the advantages of geographical association and investments done by the cluster.

- Innovation which is one of the indispensable elements of today's global economy is another benefit that is provided by the concept of the clustering. Traditional factors of production is not sufficient for innovation and development; thus, knowledge and technology today are factors that are expected to be continuously supplied and updated. Innovation capacities of the members of the cluster increase through research and development activities that are required for innovation by the support of cluster management and public bodies.

3. Examples of Successful Clusters

There are many examples of successful clusters both in Turkey and in the world. Examples in Turkey are mostly a combination of small and medium-sized enterprises which want to achieve competitiveness and aim to provide added value to union power. In the examples abroad, it can be observed that even the world-renowned global companies take part in clusters or in similar structures to take advantage of the sectoral development and to expand their scope and scale.

In Turkey, some examples of successful clusters most of which are local products manufacturers who are enjoying the geographical proximity are: flush and synthetic filament yarn and fabrics in Bursa, towels, bathrobes and home textile in Denizli; straygham yarn and blankets in Uşak; circular knitting in Çorlu and Çerkezköy; cotton textiles in Adana, cotton yarn in Kahramanmaraş; polypropylene in Gaizantep (Sayın, 2007).

Along with the domestic examples, there are examples from abroad, one of the most striking ones of which is the Silicon Valley that arose from the initiatives of Stanford University in the 1950s. Described as the world's manufacturing and R & D center in technology and IT sectors, this region has become one of the most important examples of

university-private sector co-operation by hosting the global-scale R & D that activities companies carry out.

4. Clustering in Kastamonu Province

Kastamonu, as is the case with other clusters with local features in Turkey, is a suitable province for clustering efforts due to the fact that local products are produced here and manufacturers have geographic proximity.

4.1. Clustering Needs of Producers in Kastamonu

The importance of Kastamonu province in terms of cluster studies and the clustering needs of the province have first been examined in the context of a basic sector seen as appropriate in terms of cluster studies. This sector is the animal husbandry sector that came to the fore because of the geographical and socio-economic structure of Kastamonu.

It will be helpful to understand the appropriate environment that brought the breeders in the city together under the umbrella of the cluster to indicate the main obstacles and problems they face:

- It is difficult to find skilled labor in the sector. Employing unskilled labor compulsorily both affects production efficiency in a negative way and prevents specialization by increasing the circulation of personnel.

- In terms of supply, small and medium-sized firms that do not have bargaining power remain fairly small-scale, thus, face higher costs of supplies and raw materials. Financial barriers and low level of information prevent firms to supply from foreign markets, which results in a negative reflection of the power of suppliers in the domestic market to the firms.

- There are shortcomings in marketing. When considering the subject especially in the context of advertising and promotional efforts, it can be seen that very few companies can allocate advertising and promotion budget, however, the number of firms having a professional marketing management seem to be very few. Without any doubt, the main causes of these shortcomings are financial difficulties and lack of information.

- Another problem of the firms in the area is the lack of capital. Financial resources necessary for the implementation of fast-growing technology are often difficult to achieve for the companies. This prevents companies from competing with large companies and regions. One of the main reasons for lack of capital is financing problems. It is either very difficult or limited and not sufficient for firms inadequate in terms of the scale and equity capital to obtain loans from banks or other financial institutions, it is very difficult.

- In connection with the problems of funding and qualified workforce, the company owners do not achieve their desired size, this makes higher production volumes impossible.

Kastamonu province is very appropriate for the development of the cattle and livestock breeding due to having a lot of villages and due to the fact that these villages host the appropriate fields. The main problems that lead animal producers to clustering and barriers that producers face are listed below:

- The majority of cattle and sheep producers compulsorily pursue this profession inherited from families and all the professional knowledge they have on the subject is thanks to their families. Thus they usually do not follow the developments and are confined to their villages.

- Animal husbandry staff, however, are mostly from the family. Therefore, there is the problem of skilled labor in this sector and the shortcomings in vocational training and specialization appear to be another obstacle in front of development.

- Animal husbandry sector has financial problems. Although producers may try to survive through the government-sponsored loans and similar supports, these efforts are insufficient. For this reason, studies care and rehabilitation in environments where animals are grown and investments for amplification of the scale have not reached a sufficient level.

- Very few producers are knowledgeable about the conditions for breeding. Shortcomings of the physical environments of shelter and barns, decrease efficiency and cause animal diseases, deaths, less breeding. The investments needed to improve the physical media by eliminating the problems cannot be realized due to the financial obstacles mentioned above.

- Supply of fodder which is vital for the sector is one of the biggest problems faced by firms. Lack of knowledge about the quality of fodder that needs to be used for high efficiency causes inappropriate feeding and efficiency problems are experienced. However, fodder supply brings high costs for the small-scale firms and-it increases the financial difficulties faced by the firms.

The conditions that are affected by the negative social and financial conditions company owners and employees have and at the same time affect them make clustering activities indispensable both to enable the companies to be available in the future and improve their situation, as well as to contribute to the economy of Kastamonu. In fact, financial problems, lack of knowledge and administrative problems gained almost equal importance in the region.

4.2. The Mistaken Belief That Clustering Cannot Happen in Kastamonu Province

So far, studies on cluster-like structures in animal husbandry sector, have not reached a concrete result. The first interviews with producers and institutions in the region have found out despair due to the fact that previous efforts for clustering have produced no results. The reasons and false beliefs lying on the basis of this despair, together with their reasons, are listed below:

- There is a false belief that the owners of the companies would lose their property because of clustering. Particularly in the animal husbandry sector where there is a relatively low level of education, the owners are suspicious of losing their livestock and their possessions due to the newly established company. However, clustering activities planned for the region is a strategic co-operation among the companies while maintaining ownership of the companies.

- Another concern raised as a result of the problems experienced in partnerships in the past is the inability to have a say in the management. These concerns which are thought to arise from the fact not comprehending the importance of professional management techniques are resulted from that people want to have a say in management, so they do not want others to have a say on their own right to save on their own factors of production. However, as noted earlier, it is planned that the cluster will be governed by a management team whose members are given the authority to represent.

4.3. Clustering Studies Performed in Kastamonu Province

By clustering project, it is planned to create a comprehensive and forward-looking envisaged policy to increase the competitiveness of Kastamonu in national and international markets, to support sustainable, social, environmental and economic development. Through the studies taking unconditional support for every step by Kastamonu Governor's Office and the Presidency of Kastamonu University, it is aimed at adopting the concept of clustering primarily and then studying it for achieving concrete results.

In this context, apart from activities to increase the local capacity to develop and implement the cluster policy, it was aimed to create the cluster maps of Kastamonu. In this

context, under the leadership of Kastamonu University Faculty of Economics and Administrative Sciences, primarily problems and shortcomings of the related sectors in the city were determined then the clustering strategies to follow were determined by the help of the provincial co-operation and contribution of civil society organizations and public institutions.

The following steps were taken within the frame of the clustering that started in 2009;

- Informative meetings were arranged several times with representatives of professional organizations in the region, the concept of clustering, the sector and its necessity for the economy of Kastamonu were presented in detail to producers and other industry representatives.

- Kastamonu University Faculty of Economics and Administrative Sciences, paid visits to other cities where the successful examples of clustering were available and representatives of civil society and of professional organizations participated in these visits. In these visits quite extensive and comprehensive information was obtained.

- Findings gained through the visits paid to the regions where successful examples clustering were available were shared with the breeders and significant progress was made in terms of eliminating question marks about clustering.

Breeders belonging to the animal husbandry sector in Kastamonu and professional organizations were contacted and information meetings were held several times. At these meetings, the problems of the industry were identified, solutions to the problems were sought, significance of clustering for the sector was revealed and manufacturers' approach to the matter was observed. The majority of the producers who had hesitations at the beginning, especially on ownership and management, decided to participate effectively in the work of the cluster following the informative meetings held several times.

- As a result of the aforementioned positive studies, in July of 2012, animal breeders in Kastamonu were brought together and the "Kastamonu Livestock Clustering Association" was founded. Thus, not only in Kastamonu, Turkey also started to work on creating the first official cluster of animal husbandry.

- Devrekani, a town of Kastamonu Province, where producers are geographically concentrated was chosen to establish a second cluster of animal breeders due to its potential and density of manufacturers, and professional organizations agreed to establish a cluster there. The cluster is called Devrekani Livestock Cluster Association.

Results and Discussion

The concept of clustering which suggests a unity among the people or institutions that are directly or indirectly related in terms of the production of a particular product or service and that have the geographical proximity to act in cooperation is an important development which is often the preferred in many sectors and countries.

The position of small and medium-sized firms against the global-scale firms having the power of competing puts their future position in danger. For the firms that are insufficient in both financial issues and expertise related to production, marketing, distribution, supply, labor, investment, it seems quite difficult to get rid of these shortcomings as long as they operate alone.

Clustering allows enterprises, primarily the chance to benefit from the advantages of economies of scale which they cannot utilize alone. Acting together on issues such as supply, marketing, and production, has the effect of increasing the competitiveness of firms. However, there are a number of financial advantages. Thanks to integrated power and scale of clusters, firms with financing difficulties can reach more appropriate and convenient financing options, which increases the level of investment both in the company and in the industry. Firms and sectors are stronger economically, which, offers the firms increased

communication opportunities and due to the fact that training and development opportunities increase, the level of specialization in sectors approaches to the desired levels.

Kastamonu province has been the scene for clustering studies that can serve as a model for clustering studies in animal husbandry due to its geographical proximity. Clustering studies which aim at bringing animal breeders together have been carried out since April 2010 under the leadership of Kastamonu University, Faculty of Economics and Administrative Sciences and with the support of public institutions and non-governmental and professional organizations. As a result of these studies, two different clusters were established in Kastamonu city center and the district of Devrekâni. The charter of the Kastamonu Province Livestock cluster was approved thus it is officially the first cluster of animal breeding established in Turkey. The charter of the Clustering Livestock Association, established in the town of Devrekâni has been created and is expected to be approved in a short time.

An notable issue noticed during the studies carried out in the province of Kastamonu is that manufacturers will have suspicion about clustering unless they are informed on clustering in a convincing way. That knowledge on the subject is insufficient and that the concept is relatively new for our country are the main factors that cause this suspicion. At the beginning of the process, the manufacturers had concerns regarding the ownership and management. However, it has been seen that as a result of years of education and training a great deal about the subject have been digested by the manufacturers. In fact, almost all of the producers which have a high level of derogation signed the charters of the recently established clusters.

Conclusion

Studies carried out in the province of Kastamonu, and the results obtained so far, have revealed the following points;

- Company owners and managers, as long as they do not have sufficient knowledge of the concept of clustering are looking at with suspicion.
- That company owners and managers approach the concept of clustering with suspicion results mainly from their false belief that they were to lose control over their companies.
- Company owners approach to the concept with suspicion, is also influenced by socio-economic conditions.
- Educational and informative activities related to the concept of clustering have an important role in changing the ideas of manufacturers on the subject.
- A long and arduous process is required for manufacturers to get used to the idea of clustering and internalization of the concept.

References

- Akgüngör, S., Falcıoğlu, P. (2005) Türkiye İmalat Sanayinde Bölgesel Uzmanlaşma ve Sanayi Kümeleri, Kentsel Ekonomik Araştırmalar Sempozyumu (KEAS '05)
- Albretch, H. 1969. Innovationsprozesse in der Landwirtschaft. Saarbrücken, 362 s.
- Albrecht, H., et. al. 1969. Agricultural Extension. Vol.1, Basic concepts and methods. GTZ, Eschborn, S.233-249
- Alp, S. (2009) Küme Ekonomilerine Bir Bakış ve Spesifik Bir Örnek Olarak Bursa PVC Makine Endüstri Kümesi, ZKÜ Sosyal Bilimler Dergisi, Cilt 5, Sayı 10, 2009.
- Alüftekin, N., Yüksel, Ö., Taş, A., Çakar, G., Bayraktar, F. (2009) Küresel Krizden Çıkışta Kümelenme Modeli: Tekstil ve Hazır Giyim Sektörü Örneği, ZKÜ Sosyal Bilimler Dergisi, Cilt 5, Sayı 10.
- Elçi, Ş., Karataylı, İ., Karaata, S. (2008) Bölgesel İnovasyon Merkezleri: Türkiye İçin Bir Model Önerisi, TÜSİAD Yayınları, İstanbul.

- Eraslan, H., Bulu, M, Bakan, İ. (2008) Kümeler ve İnovasyona Etkisi: Türk Turizm Sektöründe Uygulamalar,
http://www.urak.org/yayinlar/URAK_EraslanBuluBakan_KumelenmeInovasyon.pdf
- Hearst, M., Pedersen, J. (1996) Reexamining the Cluster Hypotesis: Scatter/Gather on Retrieval Results, Proceedings of ACM SIGIR August.
- Porter, M. (1998) Clusters and the New Economics of Competition, Harvard Business Review, November-December 1998.
- Porter, M., 2000. Location, Competition and Economic Development: Local Clusters in a Global Economy, Economic Development Quarterly, Vol.15, s.1
- Strehl, A., Ghosh, J. (2002) Cluster Ensembles – A Knowledge Reuse Framework for Combining Multiple Partitions, Journal of Machine Learning Research 3.