The Rearrangement of Leasehold Agreements as an Alternative to Land Consolidation

Siim MAASIKAMÄE, Evelin JÜRGENSON, and Kristiin SIKK. Estonia

Key words: land fragmentation, landholding structure, landholdings overlap

SUMMARY

Land reform created a large number of small landed properties in Estonia’s rural areas. Many people became landowners through land restitution. These new land owners had no farming capacity. Quite often, the new landowners lived in cities, not on the plots they owned, and they lacked necessary machinery and knowledge of farming. Today many land owners don’t use their land, and the people who use the land do not own it. Moreover, small farms are often not efficient, so such small farmers stop farming. Those farmers will not sell their land to its users because of different reasons, including the low price of land. The decrease in the number of small farms and the increase of large landholdings was observed in Estonia over the last decade. The above-mentioned circumstances have led to a situation where many farmers and agricultural companies don’t own the land they use; instead, they lease it. It is quite common that the parcels of one producer are located between the parcels of other users, and it can be said that the land use regions of different producers overlap. The high ratio of leasehold land in Estonian agriculture leads to the need for new approaches in order to improve the structure of landholdings. The aim of this paper is to introduce a new approach or method that can assist in improving the land use structure in agriculture by rearranging leasehold agreements. The main components of the system for the rearrangement of leasehold relations are described. Land consolidation has been considered a main tool for improving the spatial structure of landholdings. However, land owners who don’t use their land are not interested in land consolidation, which means it is almost impossible to implement land consolidation for agricultural landholdings. The rearrangement of leasehold relations by swapping leased plots can be an appropriate tool for this purpose. Finally, a comparison of land consolidation and the leasehold agreement rearrangement system is presented.
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1. INTRODUCTION

Land reform changed land ownership structure and land relations radically in almost all post-communist countries. The main aim of those land reforms was to restore the private ownership of land. The Land Reform Act (entered into force on November 1 in 1991) laid the legal basis for land reform in Estonia. It was stated in article 2 of the Estonian Land Reform Act (https://www.riigiteataja.ee/en/eli/529062016001/consolide) that “… the objective of land reform is to transform relations based on state ownership of land into relations primarily based on private ownership of land.” By this it was meant that many small and medium-size private farms would be created instead of the former large state and collective farms. The aim of land reform was also to create preconditions for more effective land use, and it was assumed that small and medium-size private farms would increase land use efficiency.

The reality is that a large number of small landed properties were created in Estonia’s rural areas, but new land owners had no farming capacity. They did not have the knowledge or machinery necessary for farming. Quite often, the new landowners lived in the cities, not on the plots they owned or even close to them. On the other hand, active people in rural areas privatized the means of production (e.g. machinery, cattle barns, etc.) at the same time. Those people usually had the knowledge necessary for farming. Due to these circumstances, large areas of agricultural land (mainly arable land) was used as the leasehold bases. According to some estimates, about 70–80 percent of arable land is leased in Estonia today.

Today we have a trend that shows that the number of agricultural producers is decreasing and the area per one producer (farm, enterprise) is increasing. According to Statistics Estonia (http://www.stat.ee/) data, there were 55,748 agricultural holdings with a total area of 1,344,546 hectares in 2001, while in 2013 those figures were 19,186 and 1,229,425 respectively. The average area of one holding increased from 24.1 hectares to 64.8 hectares during this period. Thus, from 2001 to 2013 the number of holdings decreased 2.9 times and the average area of one holding increased 2.7 times. The reason for those changes is that many small and medium farmers gave up and terminated their farming activities.

However, two aspects should be kept in mind when talking about the decrease in the number of agricultural producers and the increase in the average area of agricultural land holdings. First, the farmers who own the land and stop farming are not willing to sell their land to the users due to different reasons, including the low price of land. Quite often, they try to lease out their land. Second, there were and are small farmers who don’t own (totally or even partially) the land they are cultivating; they are tenants. The leasehold relations are rearranged when those farmers stop farming.
We can say that land lease relations have developed sporadically and by chance. The study by Sikk and Maasikamäe (2013) shows that the plots of different users located between each other and the land use regions of adjacent landholdings overlap. This is a typical feature of the current Estonian land use structure in rural areas. This paper proposes a new approach or method that can assist in improving the land use structure in agriculture and reduce the scattering of parcels over the space. The focus of the proposed method is on the use of arable land.

First we present the nature of the current problems of land use in agriculture. To describe the current land use problems, we use a sample area consisting of five agricultural landholdings that are located adjacent and have overlapping land regions. Second, we introduce a possible system for the rearrangement of land lease relations (contracts). Finally, we make a comparison between land consolidation and rearrangement of the land lease relations as a method for improving land use conditions.

Some terminology must be defined in order to avoid misconceptions when reading the following text. A landholding is a set of agricultural parcels, no matter whether under ownership or leased, for what an agricultural producer applies for subsidies from the Agricultural Registers and Information Board (hereinafter ARIB). The reality is that some landholdings are fully under ownership while the opposite case is that the producer leases all used agricultural land. Besides that, some landholdings have a mixture of land under ownership and leased land.

The parcels of one landholding are often scattered over the space. The total area of an imaginary polygon surrounding the land parcels of one landholding is denoted in the following text as the “producer’s region”.

2. DESCRIPTION OF THE STUDY AREA AND ESTABLISHING THE PROBLEM

The nature of the problem of land use overlap is described in this chapter in detail. The study area is determined by the producer’s regions of five sample landholdings. Their location is presented in Figure 1.

![Figure 1. The location of five (A, B, C, D and E) overlapping producer’s regions.](image)
It is necessary to note that the producer’s regions in Figure 1 is an extract from the map of all producer’s regions. There is an area in Figure 1 where all five producer’s regions overlap, while in some areas they don’t overlap. The reality is more complicated and complex. The map of all overlapping producer’s regions is almost unreadable, which makes it difficult to use such maps.

Figure 2 and Figure 3 illustrate the location of parcels inside the five producer’s regions. The parcels of the five producers that formed the study area are presented in Figure 2. We can see that some parcels are relatively far from their neighbours.

Figure 2. The location of parcels that are cultivated by five (A, B, C, D and E) producers.

Figure 3. The location of all parcels inside the five producer’s regions.
The comparison of Figure 2 and Figure 3 show that there are actually many more parcels in the study area than the parcels of five producers used for the formation of the study area. The description of the sample landholdings of the study area is presented in Table 1. It is necessary to note that the number of ARIB parcels is compared to the number of properties. The reason for that is the fact that some ARIB parcels consist of more than one cadastral unit and thus can belong to different owners. On the other hand, one owner can own more than one cadastral unit and different cadastral units are leased out to different users.

**Table 1. Description of sample landholdings of the study area**

<table>
<thead>
<tr>
<th>Producer</th>
<th>No. of ARIB parcels cultivated by a particular producer</th>
<th>Area of arable land cultivated by a particular producer (ha)</th>
<th>Area of convex hull for a particular landholding (ha)</th>
<th>No. of different properties inside the convex hull of particular landholding containing arable land</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>130</td>
<td>2477</td>
<td>20553</td>
<td>897</td>
</tr>
<tr>
<td>B</td>
<td>61</td>
<td>835</td>
<td>6716</td>
<td>363</td>
</tr>
<tr>
<td>C</td>
<td>11</td>
<td>80</td>
<td>775</td>
<td>57</td>
</tr>
<tr>
<td>D</td>
<td>25</td>
<td>261</td>
<td>3305</td>
<td>221</td>
</tr>
<tr>
<td>E</td>
<td>46</td>
<td>407</td>
<td>19297</td>
<td>864</td>
</tr>
</tbody>
</table>

The data in Table 1 show that the areas of producer’s regions (convex hull) are about eight to 47 times larger than the area cultivated by one particular producer. The figures of Table 1 also show that one landholding comprises different properties. The landholding of producer A consists of 130 ARIB parcels and this area is a part of 68 different properties. It is about 1.9 ARIB parcels per one property. The number of different properties inside the producer’s regions (convex hull) of a particular landholding is about seven to 24 times bigger than the number of properties used by one particular producer.

Table 2 describes the distribution of the landholdings in the study area grouped by the number of parcels in one landholding. The total number landholdings that cultivated up to five parcels is 119 and they used about 11 per cent of land of the study area. At the same time about 74 per cent of land area is used by producers cultivating more than 20 ARIB parcels.

**Table 2. Description (distribution) of the landholding groups in the study area**

<table>
<thead>
<tr>
<th>Groups of landholdings</th>
<th>Number of landholdings</th>
<th>Area of landholdings (ha)</th>
<th>The ratio of the area of landholding groups in the study area in per cents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ARIB parcel</td>
<td>39</td>
<td>222</td>
<td>1.5</td>
</tr>
<tr>
<td>2 to 5 ARIB parcels</td>
<td>80</td>
<td>1400</td>
<td>9.7</td>
</tr>
<tr>
<td>6 to 20 ARIB parcels</td>
<td>27</td>
<td>2166</td>
<td>14.9</td>
</tr>
<tr>
<td>More than 20 ARIB parcels</td>
<td>21</td>
<td>10702</td>
<td>73.9</td>
</tr>
<tr>
<td>Total</td>
<td>167</td>
<td>14490</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Figure 2, Figure 3, Table 1 and Table 2 show clearly that there is the possibility to improve the spatial structure of landholdings. This possibility also refers to the need for the rearrangement of leasehold relations. The main attention should be paid to the landholdings that consist of many properties.

3. THE LEASEHOLD AGREEMENT REARRANGEMENT SYSTEM

Leasehold relations can be established (and have been) sporadically. There is no need for a special system for that. The process is occasional and the parcels of different users (both leased parcels and parcels under ownership) are located in a disordered way throughout the space. A system and rules are needed for the rearrangement of land lease relations and agreements. The main idea of such a system is presented in Figure 4.

![Figure 4. A conceptual description of the system for the rearrangement of leasehold relations.](image)

The system comprises four types of components. The agricultural producers (land users) who are interested in rearranging leases based on land use relations make up the first type of component. It is necessary to emphasise that land users must be active and they must initiate the rearrangement process. The second component of the leasehold relations rearrangement system comprises land owners who are leasing out their land. We can say that they are a passive component of the system. However, in certain situations they can also be active.

The central component of the system is the mediator, who will be the link between users and owners. The general role of the mediator is to work out the possible options for rearrangement of leasehold agreements. The mediator must contact the owners and other users in order to find the reasonable options for rearrangement of leasehold agreements. The fourth component of the system is a database of the land owners, land users and land parcels. A proper and up-to-date database is a necessary precondition for the successful work of the mediator.

4. REARRANGEMENT OF LEASEHOLD AGREEMENTS COMPARED TO LAND CONSOLIDATION

For many years, land consolidation has been an important tool for improving the property structure in rural areas. The importance of land consolidation for improving land use
condition and rural development has been pointed out by many researchers, e.g. Hartvigsen (2015a), Thomas (2006 and 2011) and Vitikainen (2004). Land consolidation has also been the focus of FAO (e.g. FAO 2003, FAO 2004) and FIG (e.g. Hartvigsen 2015b). The need for land consolidation in Estonia is recognised (Aasmäe and Maasikamäe 2014, Jürgenson 2016, Sikk and Maasikamäe 2015).

However, one of the preconditions for land consolidation is the interest and willingness of land owners to participate in the process. The owners who are not using their land by themselves don’t care much about the shape and location of the plots they own. This might be one reason why land consolidation is not a topical issue today in Estonia.

The system for the rearrangement of leasehold relations has some methodical similarities with land consolidation. It is not possible to consolidate land property by property. The properties of certain area are treated as a whole. The rearrangement of leasehold relations is a reasonable and similar approach. The actual situation of land lease relations in a particular region must be analysed as a whole. It offers more flexible solutions for reasonable rearrangement of leasehold agreements.

There are some important differences between land consolidation and the rearrangement of leasehold relations. The main difference is that the rearrangement of leasehold relations does not deal with the property boundaries while the aim of land consolidation is to project new boundaries for properties.

The possibility to include land lease relations into the land consolidation process is investigated, for example, by Louwsma and Lemmen (2015). However, the readiness and willingness of owners to consolidate their land is needed for that. In this case, the rearrangement of land lease agreements can be a part of the process. It is possible to rearrange the leasehold agreements without land consolidation.

It is also necessary to raise the awareness of the land users and land owners about the benefits of rearrangement of leasehold agreements. It is not possible to introduce the leasehold relation rearrangement system without it.

5. FINAL REMARKS

The general idea of the system for rearrangement of leasehold agreements was presented in this paper. It could be an option for regulating leasehold relations and improving the land use structure. The task is challenging and requires considerable effort. However, it is necessary to start to deal with the problems of regulation of leasehold relations because large land areas are used on the leasehold basis.

REFERENCES


**BIOGRAPHICAL NOTES**

**Siim Maasikamäe** is an associate professor in land management in the Department of Geomatics at the Estonian University of Life Sciences. He holds a PhD from the Moscow State University of Land Management. He has taught several land management-related subjects (e.g. land use planning, land cadastre, GIS, land management) during his career as a university teacher. His research interests are in land management, land fragmentation and spatial properties of land holdings, land consolidation, and implementation of GIS in land management.
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