

# Repair and Renovation Reserve as a Tool of Commonhold Repair and Renovation Policies in Residential Properties Co-owned by Local Councils in Poland

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## Abstract

*The article discusses the repair and renovation funds as a tool of commonhold repair and renovation policies in residential properties co-owned by Polish local councils (commons). The authors made an attempt to discriminate features of 202 commonholds and form their homogenous groups in order to prove that there was a correlation between the commune's share in a divided co-property and the commonholds' repair and renovation policies. The discrimination was based on selected variables and conducted by means of six methods of discriminant analysis. The study covered commonholds co-owned by the commune of Olsztyn which were managed by a community partnership from 2007 to 2011.*

**Keywords:** repair and renovation reserve, commonhold, commune, discriminant analysis, commonhold grouping

## Introduction

In the modern world ruled by globalisation and competition the issues of optimal land use and, consequently, of efficient real estate management is becoming increasingly important (Brol 2004, 188; Hopfer and Sobczak 1998, 121; Pęski 1999, 193). Specific features of real property, such as its longevity and capital-intensity, result in substantial expenditure being incurred on repairs of what has been physically damaged or on improvements to what has become functionally obsolete (Kucharska-Stasiak 2006, 20–22). The failure to establish a proper repair and renovation policy or its unsuccessful implementation signal inefficient property management, which in turn leads to its reduced functional and market value thus shortening its lifespan both in technical and economic terms (Bryx 2006, 171–177; Kucharska-Stasiak 2000, 33–37). A research field that is vital from the point of view of contemporary practice is the issue of repair and renovation policies incorporated by commonholds co-owned by Polish local councils (commons). The meeting of two spheres—the public represented by a commune and the private represented by the remaining co-owners of a property—generates many problems and disputes that eventually need to be settled before courts (there are numerous rulings of common courts of law or of the Supreme Court in this matter).

The authors' principal intention was to find an answer to the question of what proportion of a commune's share, if any, has an impact on the repair and renovation policy of a commonhold. They made an attempt to discriminate commonholds co-owned by the commune according to specific variables and by means of six methods of the discriminant analysis. The study covered commonholds co-owned by the commune of Olsztyn which were managed by a community partnership from 2007 to 2011.

## 1 Real property owners' responsibilities in respect of maintaining built structures in proper technical and functional condition

The property owners' obligations regarding proper technical and functional maintenance of their buildings are regulated by the Construction Law<sup>1</sup> (CL) and its executive acts, such as: the Ministry of Infrastructure regulation on the construction site log<sup>2</sup> and the Ministry of Internal Affairs and Administration regulation on technical conditions of residential buildings and their locations<sup>3</sup>. According to Article 61, in reference to Article 5 paragraph 2 of CL, it is the property owner or manager who is responsible for its use in applications for which it has been constructed and in accordance with the requirements of legislation for the protection of the environment, as well as for its maintenance in proper technical and aesthetical condition thus preventing its performance and technical efficiency from deteriorating. Failure to meet the aforementioned obligations is punishable by a fine, restriction of liberty or imprisonment of up to 12 months. Article 62 of CL introduces the obligation to inspect the buildings on a regular basis. Pursuant to Article 70 paragraph 1 of CL, the owner, manager or user of a building who is liable for repair and renovation is obliged to repair any damage or deficiencies that could result in health or life risk to people, their property or to the environment. This obligation should be confirmed in the building inspection report. According to paragraph 7 of the regulation on technical conditions of residential building operation, the data included in the supervision reports are to be used for listing repair and renovation works broken down into corrective maintenance works, routine and major repairs. The breakdown of routine and major repairs is the basis for a repair and renovation plan.

In practice, there are many problems when it comes to distinguishing such notions as repair and renovation, maintenance and improvement. The term of repair and renovation have been defined in Article 3 item 8 of CL as construction works other than current maintenance that are performed in an existing building in order to return it to its original condition. It is allowable to use construction products other than the ones used to construct the building. Legislation does not clearly define where current maintenance ends and where repair and renovation (understood as construction works) start<sup>4</sup> — construction works require submitting pre-construction notification or obtaining a permit, while maintenance works do not fall under the CL regulations. Pursuant to paragraph 3 item 4 of the Regulation on technical conditions of residential buildings and their location, maintenance covers works intended for preserving the technical efficiency of a building. On the other hand, according to the Ministry of Infrastructure position,<sup>5</sup> improvement is understood as making capital assets more efficient in terms of modern technology (e.g., the replacement of a heating system) and requires submitting a pre-construction notification or obtaining a construction permit.

## 2 Commonhold repair and renovation policy — a repair and renovation reserve

A repair and renovation policy of a commonhold can be defined as a targeted process including decision-making as well as actual and legal operations aimed at maintaining a property without deterioration and according to its intended use, as pursuant to the CL special provisions. The subject

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1. See: Obwieszczenie Marszałka Sejmu Rzeczypospolitej Polskiej z dnia 2 października 2013 r. w sprawie ogłoszenia jednolitego tekstu – Prawo budowlane [Act of 7 July 1994 on the Construction Law], DzU z 2013 r. poz. 1409 ze zm.

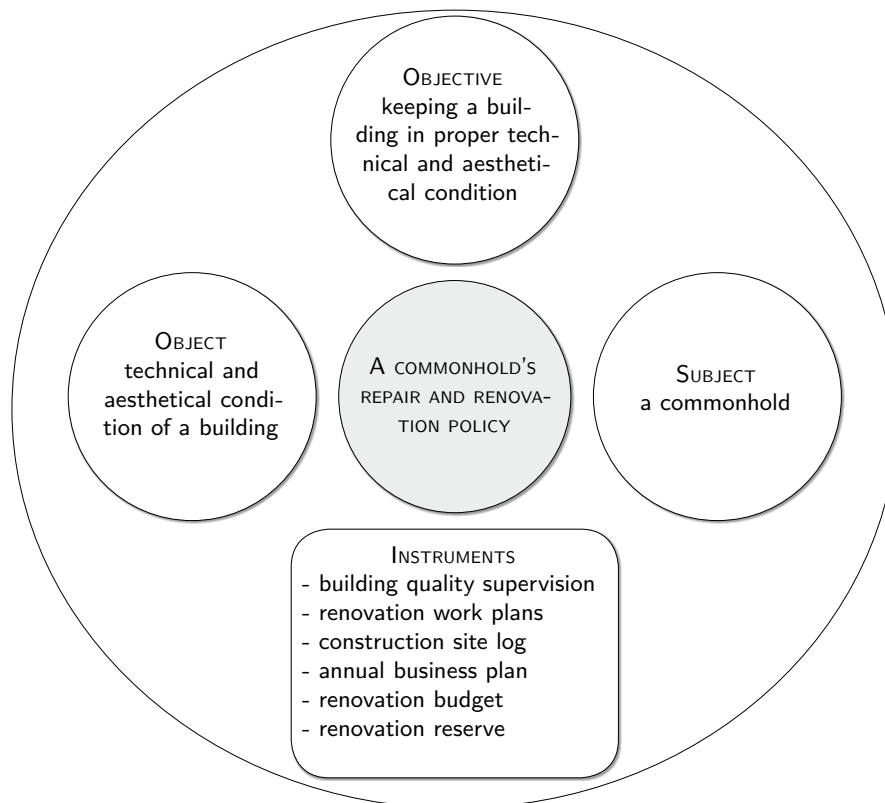
2. See: Rozporządzenie Ministra Infrastruktury z dnia 3 lipca 2003 r. w sprawie książki obiektu budowlanego [Resolution of the Minister of Infrastructure of 3 July 2003 on the construction site log], DzU z 2003 r. nr 120 poz. 1134.

3. See: Rozporządzenie Ministra Spraw Wewnętrznych i Administracji z dnia 16 sierpnia 1999 r. w sprawie warunków technicznych użytkowania budynków mieszkalnych [Resolution of the Minister of Internal Affairs and Administration of 16 August 1999 on technical conditions of residential buildings and their locations], DzU z 1999 r. nr 74 poz. 836, and Rozporządzenie Ministra Infrastruktury z dnia 27 listopada 2009 r. zmieniające rozporządzenie w sprawie warunków technicznych użytkowania budynków mieszkalnych, DzU z 2009 r. nr 205 poz. 1584.

4. See: Orzeczenie Sądu Najwyższego z dnia 24 września 1999 (IV SA 1530/97) [The Supreme Court ruling of 24 September 1999].

5. See: Letter of the Ministry of Finance of 13 March 1995 (PO3-722-160/94) [published in Serwis podatkowy 3/1996].

of this policy is a commonhold. The policy chief objective is to keep a built structure in proper technical and aesthetical condition. The policy instruments include: building quality supervision, renovation work plans, a construction site log, annual business plans, repair and renovation budgets as well as a repair and renovation reserve (fig. 1)



**Fig. 1.** Repair and renovation policy of a commonhold — elements

*Source:* the authors' own study on the basis of the Act on the ownership of premises, the Act of the Construction Law, the regulation on the construction site log, the regulation on technical conditions of residential buildings and their location

Pursuant to Article 13 paragraph 1, in reference to Article 15 paragraph 1, of the Act on the ownership of premises,<sup>6</sup> the owners of premises cover the costs of the co-owned property management by way of advance contributions due by the 10th of each month. A considerable part of these costs is spent on repairs and renovation as well as on corrective maintenance. Since the costs to be incurred usually exceed the commonhold's current assets, the co-owners have two options: to find external financing source (e.g., a bank credit, subsidy or grant) or to save money systematically in a repair and renovation reserve set up by the resolution undertaken by the commonhold members. The repair and renovation reserve is a legal construction provided for in Article 6 paragraph 3 of the Act on housing cooperatives<sup>7</sup> and transposed into the area of commonholds. It is important to mention that the Act on the ownership of premises introduced neither the notion of the repair and renovation reserve nor its management principles. Yet, the case-law and the related legal literature provide a unified view in this matter. The vast majority of Polish commonholds have set up their repair and renovation reserves. In 2006 the Court of Appeal in Krakow ruled that appropriating such a fund "is not obligatory and depends on the will of the commonhold members and requires their common resolution as it is goes beyond the scope of ordinary management . . ."<sup>8</sup>.

6. See: Ustawa z dnia 24 czerwca 1994 r. o własności lokali [Act on the ownership of premises of 24 June 1994], DzU z 1994 r. nr 85 poz. 388ze zm.

7. See: Obwieszczenie Marszałka Sejmu Rzeczypospolitej Polskiej z dnia 7 sierpnia 2013 r. w sprawie ogłoszenia jednolitego tekstu ustawy o spółdzielniach mieszkaniowych [Act on housing cooperatives of 15 December 2000], DzU z 2013 r. poz. 1222 ze zm.

8. See: Postanowienie Sądu Apelacyjnego w Katowicach z dnia 31 maja 2006 r. (I ACa 290/06) [The Appellate

The financial means are usually collected on individual bookkeeping accounts, bank accounts or sub-accounts opened in the commonholds' main bank accounts. The scope and manner of managing the means gathered in the repair and renovation reserve are defined by the Supreme Court in this matter ruling of 26 January 2011<sup>9</sup>, referring to the principles stated in the Supreme Court in this matter resolution of 21 December 2007<sup>10</sup>. In that resolution the Supreme Court in this matter took the view that “a commonhold is a legal entity, therefore it can possess its own property being separate from the property of its co-owners”, which made it possible to include the means gathered in the repair and renovation reserve to the commonhold property being independent from the property of its individual members. That stand was different from the one that the Supreme Court in this matter took on 22 April 2010<sup>11</sup> that funds gathered in the earmarked repair and renovation reserve are a separate property of individual co-owners until they are spent on investments pointed out in the commonhold resolution and that the settlement of advances should take place no sooner than after the investment has been completed. The purpose of a repair and renovation reserve is to spread over time the repair and renovation costs incurred by all the property owners. This is why the repair and renovation budget and the ringfenced reserve should be planned several years in advance. In practice, the priority is usually given to works that have been recommended during routine structural and technical building inspections. When creating repair and renovation plans, it is advised to analyse in detail the necessary works and services as well to rank them according to how urgent, costly and effective they are (Foryś and Nowak 2012, 158).

### The repair and renovation policy in the observed commonholds

The age structure of the examined housing resources was similar to the age structure of the communal housing resources in the commune of Olsztyn which constituted 7,8% of all residential real property in the town. Buildings belonging to commonholds were old—most of them had been built before 1945 (61%). Another 31% came from the period of 1945–1970 and merely 8% of buildings were constructed after 1970.<sup>12</sup> The age of buildings translated into their poor technical condition. About 70% of local housing resources required repair or renovation of varying range. The buildings included in this study that had been built earlier than 1945 represented 67% of the study group, while the ones coming from 1945–1970 constituted 29%. The newest ones were built in the 1970s, mostly in the outskirts of Olsztyn. They were houses in the worst technical condition and quality, ill-maintained and neglected for many years. They required extensive renovation and improvements. Thanks to systematically growing outlays for their technical maintenance their quality started to improve. The expenditure peaked in 2009 by 67,9%, but in the subsequent year 2010 the outlay upward trend slowed down to fall to its lowest level of 26,1%.<sup>13</sup> There was a significant rise in the expenditure on provisional or major refurbishment. Consequently, less money was spent on maintenance and repairs, which was the effect of the substantial European Union subsidies for home insulation and roofing replacement. In the time of study the repairs and renovations were performed in 198 commonholds for a total sum of PLN 12 962 573, the average expenditure per commonhold being PLN 13 093,51. The costs of works were covered mainly from the repair and renovation reserves, benefits, and earmarked subsidies. The advance contributions to the reserves were usually calculated by 1 m<sup>2</sup> of usable floor area. Occasionally, they were replaced by a fixed

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Court in Katowice ruling of 31 May 2006].

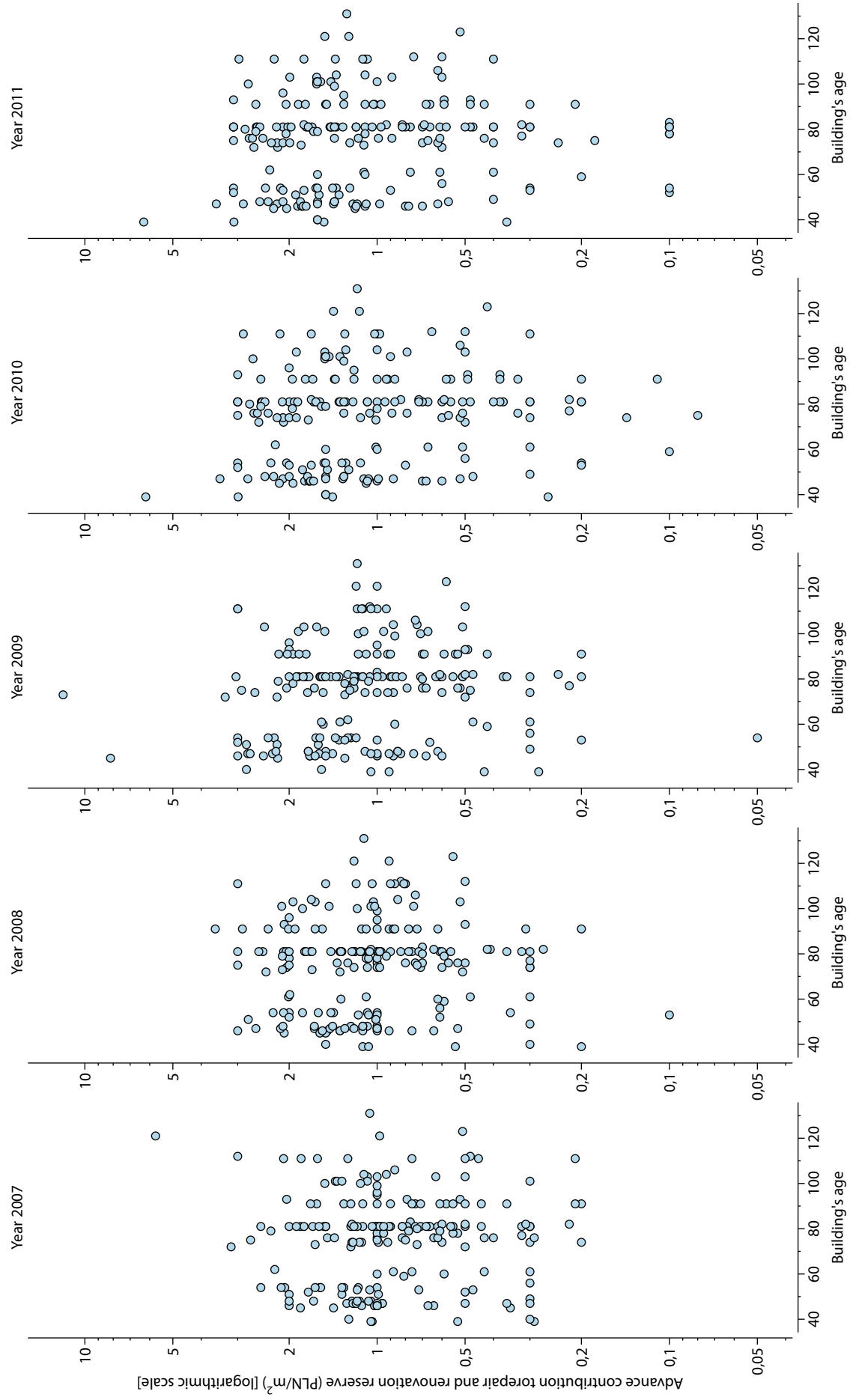
9. See: Orzeczenie Sądu Najwyższego z dnia 26 stycznia 2011 r. (II CSK 358/10) [The Supreme Court of 26 January 2006].

10. See: Orzeczenie Sądu Najwyższego z dnia 21 grudnia 2007 r. (III CZP 65/07) [The Supreme Court ruling of 21 December 2007].

11. See: Orzeczenie Sądu Najwyższego z dnia 22 kwietnia 2010 r. (V CSK 367/09) [The Supreme Court ruling of 22 March 2010].

12. See: Analiza Rynku Nieruchomości Miasta OLSZTYN in 2009–2013, page 6, [@:] [http://www.ign.org.pl/files/content/282/analiza\\_ryнку\\_nieruchomosci-olsztyn\\_2014r.pdf](http://www.ign.org.pl/files/content/282/analiza_ryнку_nieruchomosci-olsztyn_2014r.pdf).

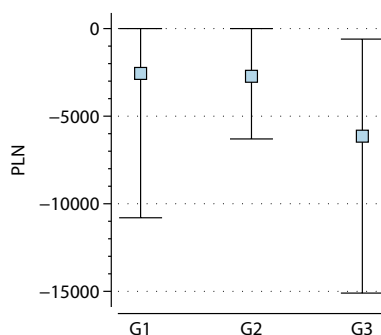
13. [In the journal (in both Polish and English texts) European practice of number notation is followed—for example, 36 333,33 (European style) = 36 333.33 (Canadian style) = 36,333.33 (US and British style). Furthermore in the International System of Units (SI units), fixed spaces rather than commas are used to mark off groups of three digits, both to the left and to the right of the decimal point.—Ed.]



**Fig. 2.** Relation between monthly advance contributions to repair and renovation funds (in PLN/m<sup>2</sup>) and the age of buildings in the analysed housing resource (as of 31 December 2011)

advance payment per flat. The contributions ranged between PLN 0,30 per m<sup>2</sup> and PLN 3 per m<sup>2</sup> of usable floor area or from PLN 10 to PLN 50 per flat. The largest advances were paid in those commonholds which invested in renovation and improvements, mainly in thermal insulation or the repair and replacement of water supply and sewage systems.

Even though the age of buildings and their quality called for considerable renovation, their co-owners' economic standing did not allow for the substantial rise in the repair and renovation reserve monthly payments, thus contributing to considerable accumulation of necessary works (fig. 2). This situation is well described by an insignificant correlation between a building's age and the volume of monthly advance payments (Pearson's linear correlation coefficient was 0,15 at the significance level of  $p = 0,05$ ). The analysis of the requested contributions and the sums that had been actually paid to repair and renovation reserves between 2007 and 2011 showed that the largest amount of payments in arrears was seen in those commonholds where the commune's of Olsztyn (i.e., the local council's) share was the biggest (18,8% of commonholds were facing the total of PLN 61 420,4 of outstanding payments) (fig. 3). What is more, the study showed that delayed payments posed another serious problem.



**Fig. 3.** Mean overdue payments to repair and renovation reserves in commonholds with a varying co-ownership share of the commune of Olsztyn

Generally, the works included thermal insulation of buildings, roofing repairs, replacing and insulation of chimneys, facade renovation, replacements of gas supply, water supply and sewage systems, improvements to ventilation systems, replacements of front doors to buildings, painting of staircases or, finally, replacements of staircase windows.

### 3 Classification of commonholds as a starting point for evaluating the effect of the commune's of Olsztyn co-ownership on the commonhold repair and renovation policies

Maintaining a property in an adequate technical and aesthetical condition is a part of efficient management and a key problem of accurate residential property management. When it comes to properties co-owned by local councils this problem becomes even more challenging due to a varying financial and technical state of the housing resources. Hence the authors had to decide whether they should take into consideration the volume of the commune's share in a co-owned property, which could have affected a commonhold's repair and renovation policy, or if they should divide commonholds into homogenous groups so that optimal strategic solutions could be developed for each of the commonholds in order to improve the technical condition of their buildings. Each of the commonholds were described by a set of attributes. Six methods of the multiple discriminant analysis were applied to test if the diagnostic variables used in this study provided a way to properly allocate a commonhold to a given group. It was assumed in the majority of the classification methods that the number of cases should be 10 times greater than the number of variables which describe the populations. The Naive Bayes classifier was used to select the number of objects and the attributes to describe them, i.e. such that will guarantee the best class diversity, and the formula proposed by Foley (1972, 5) was applied, establishing the minimum number of objects, where the maximum error of the Bayes optimal classifier for the error of classification on the training set

is not greater than 15%. For this assumption to be valid, the following condition must be fulfilled:  $Q/N > 3$  for every class, where  $Q$ —number of objects,  $N$ —the number of attributes (Witten and Frank 2005). Eventually, the following set of diagnostic variables was adopted:

- $X_1$ —demand for cash expressed as the relation of the expenditure on renovation to the funds collected in the repair and renovation reserve in 2007–2011
- $X_2$ —funds collected in the repair and renovation reserve in 2007–2011 in PLN/m<sup>2</sup> of usable floor area
- $X_3$ —overdue contributions to the repair and renovation reserve in 2007–2011 expressed as the relation of the amount due to the amount actually available
- $X_4$ —the relation between the contributions to the repair and renovation reserve in PLN/m<sup>2</sup> and the age of buildings

Standardisation of variables was conducted at the initial stage of the study. Because of varying participation of the commune in individual commonholds they were divided into three groups depending on the volume of the commune's share in the co-property:

- G1— the commune of Olsztyn holding up to 30% of the co-property
- G2— the commune of Olsztyn holding from 31% to 50% of the co-property
- G3— the commune of Olsztyn holding over 51% of the co-property

The discriminant analysis was performed by means of WEKA v 3.7. statistical software package with the use of following classification methods: *Naive Bayes Simple*, *functions Multilayer Perceptron*, *lazy KStar*, *meta Multi Class Classifier*, *rules OneR*, *trees Random Forest*, and *the progressive discriminant analysis*. As the discrimination strategy the authors chose the division of data sets into sub-sets, i.e. the 10-fold cross-validation was applied for the learning data set.

**Tab. 1.** Homogenous classification within the groups (G1, G2 G3) with varied participation of the commune of Olsztyn in the co-property in the years 2007–2011, by methods of discriminant analysis

Commonhold's membership in a group depending on gmina's share in co-property	% of commonholds properly classified to a given group							
	Naive Bayes Simple	Functions Multilayer Perceptron	Lazy KStar	Meta Multi Class Classifier	Rules OneR	Trees Random Forest	Progressive discriminant analysis	
G1	7	65	43	35	32	41	47	
G2	83	29	33	29	22	20	24	
G3	10	48	35	47	36	32	71	

The adopted variables describing repair and renovation policies incorporated by commonholds in 2007–2011 failed to fully properly classify the objects belonging to the groups G1, G2, G3. Depending on the applied method the proportion of properly classified commonholds varied between 7% and 83%. It should be noted that the commune of Olsztyn was not a sole proprietor of any of the discussed properties. Year by year the commune's shares in the co-owned premises were shrinking which affected its decision-making power in commonholds, hence their repair and renovation policies. Similar results were seen throughout the whole period of observation.

The outcomes of the discrimination based on the above diagnostic variables clearly indicate that the commune's share in a co-property did not have any effect on the repair and renovation policies adopted by commonholds managed by a community partnership.

## Conclusion

The property manager's responsibility is to initiate repairs, renovation or improvements, while the co-owners are responsible for incurring the costs of the property maintenance proportionally to their share in the divided ownership. The managers looking after several properties co-owned by the commune of Olsztyn are often bound by their residents' low incomes. The problem is aggravated

by the decrepit technical condition of some of the buildings. Therefore, the authors found it essential to properly classify the managed properties into homogenous groups, which would provide a way to develop the best repair and renovation policy for each group. The above discriminant analysis showed that the size of the commune's of Olsztyn share in the co-owned property did not have any effect on the repair and renovation policies implemented by commonholds as in any of the applied discrimination methods the variables adopted in the study did not classify properly (i.e., in 100%) the examined objects. That seemed to be the consequence of the commune's shrinking say in the commonholds' decision-making, hence in their repair and renovation policies. The results are correct for the data collected, but slightly different variables can change them. However, it should be emphasised that the dynamic nature of the housing market does not allow one to construct a model based on a fixed set of variables.

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