

Article

Reasons for the Discontinuation of Betterment-Levy Charging in Poland (A Case Study of Gorlicki County)

Józef Hernik ¹, Piotr Kudławiec ¹, Karol Król ^{2,*}, Krzysztof Hernik ³ and Robert Dixon-Gough ¹

¹ Department of Land Management and Landscape Architecture, Faculty of Environmental Engineering and Land Surveying, University of Agriculture in Krakow, Balicka 253c, 30-198 Krakow, Poland; rmhernik@cyf-kr.edu.pl (J.H.); gran123piotr@interia.pl (P.K.); dixongough@tiscali.co.uk (R.D.-G.)

² Digital Cultural Heritage Laboratory, Department of Land Management and Landscape Architecture, Faculty of Environmental Engineering and Land Surveying, University of Agriculture in Krakow, Balicka 253c, 30-198 Krakow, Poland

³ Department of Applied Mathematics, AGH University of Science and Technology, al. Mickiewicza 30, 30-059 Krakow, Poland; krzysztofhernik@wp.pl

* Correspondence: k.krol@onet.com.pl

Abstract: Local government units carry costs related to the shaping and spatial development of communes, and are consequently interested in sharing the benefits that land property owners gain on this account. This is possible through, inter alia, the betterment levy. The aim of this study was to determine the reasons for the discontinuation of betterment levy charging in Poland, illustrated with the example of Gorlicki County. A further aim was to classify the reasons for the discontinuation of betterment levy charging in Poland, and to suggest directions for changes in the way in which this levy is charged. A questionnaire survey was conducted of the communes of Gorlicki County (Małopolskie Voivodeship), and was completed by those responsible for charging betterment levies in the communes. According to the survey results, no decision on charging of the betterment levy was issued in Gorlicki County between 2012 and 2019. The reasons for the discontinuation of charging of this levy, as indicated by the respondents, included the lack of analyses (estimation) of the increase in the property value following the execution of specific investment activities, high administrative costs related to the charging of this levy, and the stimulation of socio-economic development. However, the statistical analysis showed that the discontinuation of charging of the betterment levy in Gorlicki County had failed to contribute to socio-economic growth.

Keywords: public levy; budgetary receipts; socio-economic development; property; investments



Citation: Hernik, J.; Kudławiec, P.; Król, K.; Hernik, K.; Dixon-Gough, R. Reasons for the Discontinuation of Betterment-Levy Charging in Poland (A Case Study of Gorlicki County). *Land* **2021**, *10*, 1295. <https://doi.org/10.3390/land10121295>

Academic Editor: Cynthia S. Simmons

Received: 30 September 2021
Accepted: 23 November 2021
Published: 25 November 2021

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

The role of the state and the individual are inexorably intertwined with respect to spatial planning. Often the role of the state mirrors supranational agreements, such as the United Nation's initiatives on land value capture. Thus, whilst the state takes guidance from international organisations, it provides the legal instruments governing spatial planning, normally devolved downwards through regional and local authorities; together with the finance to implement those instruments, it is the individual or groups of individuals who shape the landscape. The money provided through the state provides the infrastructure required for spatial development, and by taking advantage of the situation, land owners, commercial organisations, and private property owners can improve the value of their holdings. This leads to the vexing question of whether those who have taken advantage of improvements to the infrastructure to improve the value of their property should pay compensation for the land and property value uplift through a form of betterment tax.

Betterment taxes exist in various forms across many states throughout Europe with differing degrees of success. Jones et al. [1] provided a thorough review of post-1947 attempts in the UK to capture land uplift values through taxation, measures that have

proven to be contentious and short-lived, owing to a lack of political consensus to support them. Other directions for the provision of betterment taxes in the UK are discussed by Huston and Lahbash [2], who reviewed the concept of land value capture and its relative merits as a pragmatic source of funding for urban renewal to bridge the infrastructure funding gap. This theme also was addressed by Dunning et al. [3]. The history of betterment taxes in Italy is far longer than that of the UK. Falco [4,5] described in some detail the evolution of betterment taxes through land value capture in Italy from 1865, and identified the key stages in its evolution. The system has evolved through planning conditions to the concept of transferrable development rights utilised to capture betterment to provide a system that relies on the private developer for the provision of areas for public use [5] (p. 15). These studies were supplemented by Oppio et al. [6], who provided a valuable case study of the region of Lombardy (Italy). The situation in Portugal was discussed by Rebelo [7]. A revision of the legislation concerning territorial management passed in 2015 ensured that urban development can only be approved if betterment charges can be accrued from that development.

In Poland, local government units perform public tasks, which in most cases means the provision of social services. Public tasks are performed by public administration units through their own organisational sections; i.e., departments, branches, cells, units, etc., in cooperation with the private sector as well as the nonprofit sector, in order to ensure the dynamics of socio-economic development [8,9].

The basis of the system for performing public tasks in Poland is Article 163 of the Constitution of the Republic of Poland (the Constitution). With respect to this article, local government perform public tasks not reserved by the Constitution or statutes to the organs of other public authorities [10]. Article 164(1) of the Constitution stipulates that the commune is the basic unit of local government. Furthermore, the Act of 8 March 1990 on commune self-government is one of the most important legislative acts that regulates the activities of local government in Poland [11,12].

In general, a commune comprises local communities and an area bounded by an administrative boundary. A commune has a legal personality and shall be subject to court protection; moreover, it shall perform public tasks on its own behalf and on its own responsibility [11,12]. The commune's task is to satisfy the basic needs of its inhabitants, and to improve the living conditions of the those living in it [13].

The effective performance of public tasks by local government units requires funds. The tasks performed by public institutions are primarily funded from tax revenues, but also from the so-called public levies; e.g., zoning fees and betterment levies. These are collected when factual and legal circumstances arise, and represent a proportion of the benefits obtained by land parcel owners [14]. These benefits may arise from an increase in the property value as a consequence of investments made by the commune, property management (the betterment levy), and planning operations (the zoning fee). The levies collected by local government units have a fiscal purpose. They allow services to be provided by public entities, including to the benefit of the entity that pays the levy.

Even though the betterment levies usually account for a small percentage of a commune's budget, this should not be a prerequisite for the discontinuation of their charging, as the essence of the regulations is to partially recover the expenditures incurred by the commune for investments [15]. Moreover, communes often waive charging them, thus surrendering income. This may be due to a range of factors, including: (1) complicated factual and legal circumstances, which are difficult to assess unambiguously; (2) the inactivity or ignorance of offices and local authorities; and (3) the misinterpretation of the law. The aim of this study was to determine the reasons for the discontinuation of betterment levy charging in Poland, illustrated with the example of Gorlicki County. A further aim of the study was to classify the reasons for the discontinuation of betterment levy charging in Poland, and to suggest directions for changes in charging of this levy.

This paper is organised into five sections. Following the introduction, Section 2 presents the origin of the levy for an increase in property values in Poland, and the

circumstances under which this levy is currently charged. It continues by outlining the procedure for the charging of the betterment levy, and comparable solutions applied internationally in selected countries. Section 3 goes on to present methodological issues of the research, whilst Section 4 provides an overview of the study results. The paper is concluded with a discussion and summary.

2. Background

The Polish term “opłata adiacencka” comes from the Latin word “adiectum”, which means “to add, to give some more” [15]. This amount due is collected as a proportion of the value added to the existing value, with the “added value” arising from investments in infrastructure, or resulting from appropriate land management. In practice, the betterment levy is paid for an increase in the property value, which results from enhancing its utility value through specific operations.

The essence of the betterment levy constitutes the distribution of benefits derived from an increase in the property value, which is triggered by a specific event. The distribution of benefits takes place between the beneficiary of these benefits (the owner or perpetual lessee of the property) and a local government unit.

2.1. The Origin of the Betterment Levy in Poland

The evolution of the betterment levy began in 1920 with the added value levy, a levy that appeared for the first time in Polish legislation during the interwar period, in the Act of 10 December 1920 on the Construction and Maintenance of Public Roads in the Republic of Poland [16]. In Article 23 of this Act, there was provision that the entities who had received particular benefits from the construction or maintenance of a road, or who used it with particular frequency, could be required to contribute to the costs of its construction, unless they previously bore such costs under the terms of an agreed settlement [17]. Following the Act of 1920, further regulations governing the issues of the costs of the construction of technical infrastructure to be borne by property owners were also provided in the Regulation of the President of the Republic of Poland of 16 February 1928 on Building Law and the Development of Housing Estates. Under this regulation, the costs of the primary development of roads up to a width of 20 metres could, according to the decision of the commune, be transferred, in whole or in part, to the owners of properties adjacent to these roads, depending on the extent of the benefits they had gained from their development. A further regulation of the issue of levies for the construction of technical infrastructure using public funds were provided in the Act of 14 July 1961 on Land Management in Cities and Housing Estates [18]. Article 28 of this Act stipulated that natural and legal persons who were property owners shall be required to cover the costs of the primary development of streets and traffic yards, and proportions of the costs of other municipal installations, corresponding to the increase in the value of their properties, resulting from the construction of these installations. In addition, the first paragraph of Article 28 contained information on the possibility of paying the levy by annual installments. The body responsible for determining the amount of the levy and the rules for its payment under the aforementioned Act was the Council of Ministers, which issued a relevant regulation. The Act also included a provision indicating that the receipts from this levy were transferred to housing funds.

The Act of 1961 was replaced by the Act of 29 April 1985 on Land Management and Property Expropriation [19], which maintained the levy for an increase in the property value due to the construction of technical infrastructure facilities with the help of public funds. In the Act of 1985, the legislator used the term “betterment levy” for the first time, thus referring to the levy paid in connection with an increase in the property value due to the construction of technical infrastructure facilities. The amendment to the Act of 29 September 1990 included, for the first time, a provision for the payment of levies for an increase in the property value due to the consolidation and partition of land intended for compact single-family housing. The Act of 21 August 1997 on Property Management

introduced the understanding of the concept of the betterment levy as a levy determined in connection with an increase in the property value due to the construction of technical infrastructure facilities with the help of funds of the Treasury, local government units, funds from the budget of the European Union or from nonreclaimable foreign sources, or a levy determined in connection with property consolidation and partition, as well as property partition. Further amendments concerning the entities required to pay the levy, and the percentage rates of its charging, were provided in the following, respectively: an amendment to the Act on Property Management of 28 November 2003, and the Act of 24 August 2007, amending the Act on Property Management and certain other acts.

2.2. Circumstances of Betterment Levy Charging

The legislature provided for three cases in which a local government unit may charge the betterment levy: as a result of property partition [20], for consolidation and partition, and for the construction of technical infrastructure (Figure 1).

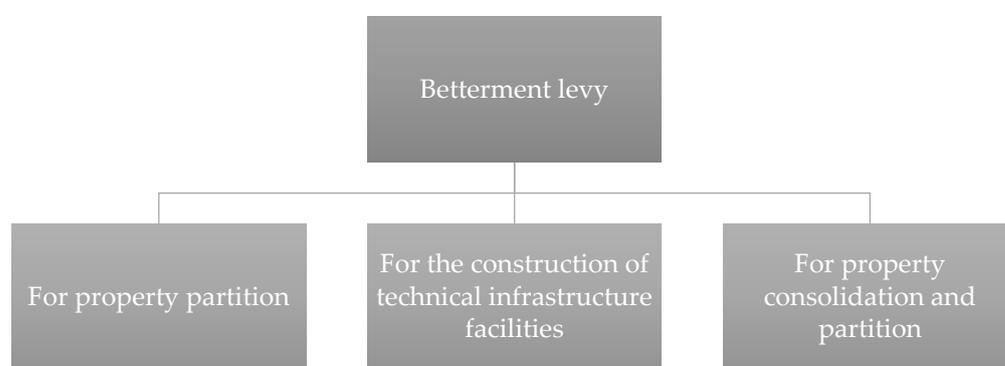


Figure 1. Types of betterment levies in Poland. Source: own study based on [20].

The first type of betterment levy is for property partition (the so-called partitional levy). According to the provisions of the Act [20], the costs of property partition shall be borne by the person having a legal interest therein. This is usually a person who is either the property owner or holds another legal title to the property. In this case, the basis for charging of the levy is an increase in the value of the combined properties resulting from the partition, in relation to the original property. The Act [20] does not impose the obligation to initiate administrative proceedings aimed at charging of the betterment levy on the head of the commune head or, in the case of the commune, the subject of this paper, the mayor.

For the establishment of this levy, the implementing body of the basic local government unit has 3 years from the date of the decision authorising the partition, while the resolution on betterment levy rates must be in force on the day on which the decision authorising the partition became final and valid. The betterment levy for property partition may amount to a maximum of 30% of the increase in the value of all the separated properties in relation to the property before the partition.

The second type of betterment levy is for the construction of technical infrastructure facilities (the so-called infrastructural levy) with the help of either public funds, European Union funds, or nonreclaimable funds from other foreign sources (development-oriented programmes and projects) According to the Act [20], the construction of technical infrastructure facilities shall be understood as the construction of utility networks, components of these networks, and all types of road investments. The natural or legal person that is charged with the betterment levy for an increase in the property value, related to the construction of technical infrastructure facilities is either the property owner or a perpetual lessee who has paid all annual installments for perpetual usufruct. The body that may initiate administrative proceedings aimed at charging of this levy is the head of the commune or mayor. In this case, the levy may amount to a maximum of 50% of the increase in

the property value after providing the conditions for the connection of or the possibility of using a particular technical infrastructure facility, or enabling the use of a new road. Importantly, it is not the mere fact of using, but the very possibility of using the constructed technical infrastructure that is a prerequisite for charging of the betterment levy. The most important prerequisite that must occur is an increase in the property value due to the construction of technical infrastructure. The rate of the levy is determined by the Commune Council in a separate resolution.

The third type of betterment levy is for property consolidation and partition. The specific inheritance structure in southern Poland has resulted in considerable plot fragmentation and the related phenomenon of the so-called piecemeal ownership of plots. Such a situation is not favourable for investments, and is why property consolidations and partitions are carried out in these areas. As such activities are funded from public resources, the landowners who have financially benefitted as a result of this activity are required to pay the betterment levy to the commune's budget [20]. The percentage rate that is adopted to determine the amount of the betterment levy due to property consolidation and partition is determined by the Commune Council in a separate resolution. The rate of this levy shall not exceed 50% of the increase in the property value following consolidation and partition. The property value before consolidation is determined by a property appraiser as of the date of the entry into force of the resolution on commencing property consolidation and partition. On the other hand, the condition of the property following the conducted consolidation is determined as at the date of the entry into force of the Resolution of the Commune Council on property consolidation and partition. The value after consolidation also includes the planned investments into technical infrastructure that the commune undertakes, in the resolution on property consolidation and partition, to carry out.

Charging of the betterment levy due to consolidation and partition is obligatory (Table 1). The commune head or mayor must, and may not, as in the case of the other betterment levy types, charge the betterment levy as soon as they carry out consolidation and partition of the property.

Table 1. A comparison of selected attributes of individual betterment levy types.

Betterment Levy Type	Property Partition	Property Consolidation and Partition	Infrastructural
Prerequisites for the levy charging	An increase in the value of the properties created following the partition, in relation to the original property	An increase in the value of the property under single ownership before and after carrying out the property consolidation and partition	An increase in the property value as a result of the construction of technical infrastructure facilities
The authority imposing the levy	Commune head/mayor	Commune head/mayor	Commune head/mayor
The necessity for the competent body to determine the levy in the case of	Optional	Obligatory	Optional
The form of levy charging	Administrative decision	Administrative decision	Administrative decision
The maximum possible time limits for the determination of the levy	3 years from the date on which the decision authorising the partition becomes final and valid	The time limit provided in an agreement negotiated between the commune head/mayor and the persons required to pay the levy, and in the absence of the agreement, a time limit no shorter than the time needed to build the planned infrastructure, specified in the Resolution of the Commune Council on property consolidation and partition	3 years from the date of opening up the possibility of using the constructed technical infrastructure facilities

Table 1. Cont.

Betterment Levy Type	Property Partition	Property Consolidation and Partition	Infrastructural
Resolution of the Commune Council on the levy rates	A separate resolution to charge the levy must be in force on the date of the decision approving the partition	In a Resolution of the Commune Council on property consolidation and partition	A separate resolution to charge the levy must be in force on the date of opening up the possibility of using the infrastructure
The form of betterment levy payment	Cash payment or the transfer of the ownership right to the plot or plots separated for the commune with its consent	Cash payment or the transfer of the ownership right to the plot or plots separated for the commune with its consent	Cash payment, on a one-off basis or in a maximum of 10 annual installments, with collateral in the form of a property mortgage

Source: own study based on [20] and provisions of the Resolution of the Council of Ministers on property consolidation and partition.

The commune may (but is not required to) determine the betterment levy as a result of the partition of land property, and of the construction of technical infrastructure facilities. The decision on charging of the betterment levy lies with local authorities. However, the option to issue a decision determining the amount of betterment levy in these cases creates a situation in which the commune may decide not to collect it. Consequently, it reduces its sources of income, and thus its ability to carry out the tasks it is charged with. On the other hand, as a result of property consolidation followed by its partition, once the prerequisites are met, the authority is required to charge the betterment levy.

The betterment levy can be calculated for any property, regardless of its type or location. The exceptions include properties designated, in the local plan, for agricultural and forestry purposes or, in the absence of the plan, used for these purposes.

2.3. Procedure for Charging of the Betterment Levy

The procedure for charging the betterment levy is one of the more complicated examples of administrative proceedings in Poland. This atypical procedure is determined by three main regulations, namely the Act of 21 September 1997 on Property Management [20], the Act of 14 June 1960—Administrative Procedure Code [21], and the Regulation of the Council of Ministers of 4 May 2005 on Property Consolidation and Partition [22]. Consequently, the procedure for charging of the betterment levy comprises the following stages: (1) initiating administrative proceedings aimed at charging of the betterment levy by the commune's implementing body; (2) commissioning a property appraiser to prepare an appraisal report for the purpose of charging of the betterment levy; (3) drawing up a property appraiser's opinion (in the form of an appraisal report); (4) notifying the parties to the proceedings of the possibilities of accessing the collected evidence, adding their own evidence, and submitting applications; (5) formal analysis of the appraisal report by the office employee; (6) assessment of the credibility of all the evidence by the parties to the proceedings, and clarification of any uncertainties concerning the evidence, in particular the appraisal report; (7) issuing a decision on charging of the betterment levy based on the presented evidence accepted as credible; (8) the possibility of appealing against the decision of the competent body to the Local Government Appeal Court; and (9) validation of the decision after 14 days.

The first stage of the proceedings is initiated based on a subjective assessment of the commune head or mayor as to whether it is justified to initiate the proceedings. This applies to charging of the betterment levy in the case of the infrastructural and partitional levy. In the case of property consolidation and partition, it is the commune's responsibility to initiate the proceedings. In view of the necessity to assess the property value, the commune appoints an expert property appraiser who estimates the property value under two circumstances; i.e., before and after the occurrence of the prerequisite for charging of

the betterment levy. The opinion drawn up by the expert property appraiser in the form of appraisal report determines the actual amount of the betterment levy.

A Commune Office employee appointed to charge the betterment levy notifies the parties of the initiation of the proceedings upon receiving the appraisal report and collecting all the evidence [21]. All participants in the proceedings have the opportunity to access the materials collected during the proceedings. Subsequently, the collected evidence is analysed. In particular, the formal and legal compliance of the appraisal report with regulations is examined. During this and the subsequent stage, all the reported doubts are clarified and, if necessary, new evidence is accepted (e.g., documents confirming the expenditure incurred by the party that contributed to an increase in the property value). Moreover, at this stage, applications for spreading the betterment levy into installments, and applications for taking over the plots separated during property consolidation and partition, as well as property partition, are made to satisfy the commune's claims in connection with the levy being charged.

After the analysis and supplementation of the documentation, the commune head or mayor determines the amount of betterment levy, which is calculated as the product of the difference in value before and after the occurrence of the prerequisite for charging of the betterment levy, and the percentage rate of this levy provided in a separate resolution of the Commune Council. This levy is reduced by the amount of the expenditure incurred by the party charged with the betterment levy, documented in the course of the proceedings, and recognised as an expenditure that has also contributed to an increase in the property value. Based on all these arrangements, a decision on charging of the betterment levy, which contains all the other arrangements in addition to the amount of the levy, is issued.

The administrative decision may be appealed to the Local Government Appeal Court (LGAC). LGACs are bodies superior to local government unit bodies in individual administrative cases and in other cases specified in separate Acts. LGACs also conduct appeal proceedings, and exercise non-instance-related supervision in relation to commune, county, and voivodeship bodies. The appeal may be lodged via the commune within 14 days after the delivery of the decision.

The Local Government Appeal Court may uphold the appealed decision, which may result in a complaint being lodged by the party before the Provincial Administrative Court, which examines the case as a court of first instance. Under the Act of 25 July 2002—the Administrative Court System Law [23], these Courts exercise jurisdiction by controlling the activities of the public administration. In the event that the court does not allow the complaint, and thus dismisses it, the party has the right to apply another measure of appeal against the invalid decision in this regard, namely the complaint in cassation. The complaint is lodged with the Supreme Administrative Court within 30 days from the date of notifying the representative of their appointment, where the party uses legal aid services, and in the absence thereof, from the date of delivery of a copy of the decision including substantiation to the party.

If no appeal procedure is available, the decision on charging of the betterment levy becomes final upon the lapse of the time limit for lodging an appeal with the LGAC. Once the decision has become valid, the payer of the levy shall be required, within 14 days of it becoming final, to pay it in its entirety or, where it has been spread into installments, the payer shall be required to pay the first annual installment.

2.4. Analogous Legal Solutions in Selected Countries of the World

The first forms of the betterment levy appeared in Europe as early as 16 September 1807, when Napoleon I instigated a tax of 50% of the increase in the property value resulting from investments in land drainage systems and the construction of roads and squares for public use, and was established based on public expenditure. Levies for an increase in the property value, as applied in France in Napoleonic times, were introduced to the legal system of the Duchy of Warsaw on Polish territory during the Partitions of

Poland. This legal solution was introduced by a Decree of the Duchy of Warsaw, issued on 11 December 1812 [13].

In the Prussian legal system, the betterment levy had its beginnings in 1868 with the introduction of the Act of 20 February 1868, the *Fluchtliniengesetz*, and its amended version of 2 June 1875, which introduced, respectively, the initial construction of public infrastructure partially by local enterprises, followed by the introduction of a solution of charging the owners of the adjacent properties with the costs of the new creation of the street and lighting networks. However, this levy was not made subject to an increase in the property value, as it was merely a share in the costs of the construction of this investment project, calculated based on the length of the boundary adjacent to the investment project under construction.

Currently, in European countries, there are different views on the issue of a levy for an increase in the property value (Table 2). In Germany and the United Kingdom, the betterment levy is not applied for property consolidation and partition, property partition, and an investment in utilities. What is applied instead is the charging of the levy in cases of public protection investments and public purpose investments. Moreover, in these countries, the betterment levy is charged based on investment costs (excluding or including administrative costs). The levy is not charged based on the estimated increase in the property value, which renders it more transparent.

Table 2. A comparison of the betterment levies in Poland, Germany, and the United Kingdom.

Feature/Country	Poland	Germany	United Kingdom (the General Case)
Legal basis for charging	Act of 21 August 1997 on property management [20]	The Building Codes Act of 27 August 1997 (<i>Baugesetzbuch</i>) and regulations in individual German states (§ 132 of the BauGB) [24]	<i>Planning Act</i> of 2008 [25], p. 29 (the infrastructure levy schedule of 2010). <i>The Community Infrastructure Levy Regulation, 2010</i> [26]
Types of levies charged	Consolidational Partitional Infrastructural	Infrastructural	Infrastructural
Levy attribute	Betterment levy of an infrastructural type		
The form of levy payment	In cash, with the possibility of spreading the payment into a maximum of 10 annual installments	In cash, with the possibility of spreading the payment into 10 annual installments	In cash in installments, or the possibility of transferring the property rights to the benefit of the commune
Competent body	Commune head/mayor	Commune authorities	Local, Unitary, and Municipal Councils
Types of investments subject to the charging of the levy	The construction or extension of the underground, on-ground, and overhead utilities network and public roads	The extension and construction of road infrastructure and auxiliary infrastructure (i.e., sidewalks, bicycle lanes), and the components and devices used to eliminate any nuisance (i.e., noise protection walls, ventilation strips, flood protection devices, etc.).	Transport investments, flood protection devices, and public purpose investments (i.e., schools, medical centres, sports and recreational facilities, etc.).
Obligatoriness of charging of the levy following the occurrence of the prerequisites for its charging	Optional	Obligatory	Optional

Table 2. Cont.

Feature/Country	Poland	Germany	United Kingdom (the General Case)
Source of funding	Entirely public, or resources from EU funds and foreign grants	A minimum of 10% from public resources	The levy is not made subject to the source of funding
When are the levies collected?	Collected after the completion of the construction of infrastructure, after the conditions for its use have been provided	Collected after the completion of the construction, or, when a construction permit was granted before its completion, the levy can be collected	Collected after the completion of the construction, or, where the construction schedule provides otherwise, before the completion of the works
Persons charged with the levy	Owner or perpetual lessee who has already paid all levies for perpetual usufruct	Owner	Owner, occupier, or developer
The basis for levy charging	An increase in the property value resulting from the possibility of using this infrastructure	Investment costs excluding administrative service costs	Investment costs including administrative service costs
The deduction of the expenditure incurred from the actual levy amount	Yes	Yes	Yes

Source: own study based on [24] and the following regulations: the Act on property management [20], Baugesetzbuch (the Building Codes) [25], the Planning Act of 2008 [26], and the Community Infrastructure Levy [27].

3. Materials and Methods

Between 2 and 10 February 2020, a questionnaire survey was conducted among employees of the Commune Offices located in Gorlicki County (Małopolskie Voivodeship). The survey involved all communes of Gorlicki County: (a) rural communes of Gorlice, Moszczenica, Łużna, Sękowa, Uście Gorlickie, and Lipinki; (b) rural and urban communes of Biecz and Bobowa, and (c) the city of Gorlice.

The survey was conducted in Gorlicki County for several reasons. There is a lack of analyses of betterment levy charging in this area and, consequently, a lack of specialised papers devoted to this issue. Furthermore, this area was selected for its unique land possession structure and considerable plot fragmentation, which is a consequence of the inheritance system in this area, dating back to the times of the Austrian Partition. Gorlicki County is located in the northeastern corner of Małopolskie Voivodeship, in the Low Beskid mountain range (Figure 2a). Gorlicki County covers an area of 966.7 km² and comprises 10 administrative units (Figure 2b): the city of Gorlice; the two rural–urban communes of Biecz and Bobowa; and the seven rural communes of Gorlice, Lipinki, Łużna, Moszczenica, Ropa, Sękowa, and Uście Gorlickie.

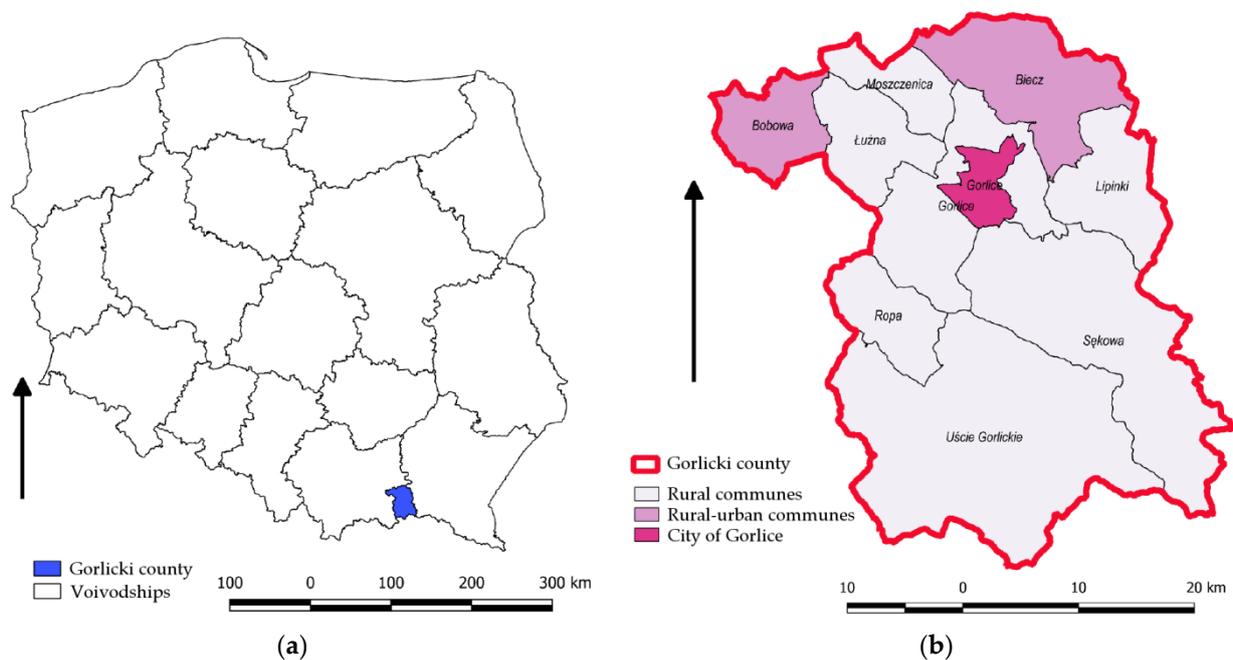


Figure 2. From left to right: the location of Gorlicki County against the background of the administrative division of the country. Source: own study based on the National Register of Boundaries (PRG) data.

3.1. Research Hypothesis and the Survey Questionnaire

The study was conducted using a survey questionnaire. The questionnaire form was filled in by persons responsible for charging betterment levies in the communes. In 8 out of 10 communes, these were the employees responsible for the issues of commune property management. In the city of Gorlice, the charging of betterment levies was the responsibility of an employee of the section of city planning and spatial development. However, in one of the communes, no powers related to the betterment levy were assigned to any of the office employees, therefore the answers to the questions provided in the questionnaire were entered by a person performing the function of the commune's secretary. The questions included in the questionnaire concerned the number of charged levies, the percentage of appeals against the decisions establishing these levies, and the percentage of the appeals recognised as justified. Moreover, a question was asked about the reasons for the discontinuation of charging of the betterment levy. The study had the following null hypothesis (H_0): the imposition of a betterment levy drives marginalisation of regions. An alternative hypothesis was proposed as well:

Hypothesis (H1): *The discontinuation of charging of the betterment levy counteracts the regional marginalisation. The research hypothesis will be verified through an analysis of the data obtained from the questionnaire survey and the statistical data obtained from the Local Data Bank, concerning the degree of socio-economic development of the county under the study.*

The survey questionnaire contained particulars in which the information on the commune type (urban, rural, or urban–rural), the commune's name, and the job position of the person providing answers were supplemented. The core part of the survey questionnaire comprised nine questions. The questions provided in the questionnaire were closed ones. Some questions required the respondents to elaborate on their answers. The questions concerned the issue of betterment-levy charging in the years 2012–2019, broken down into three-year periods. The respondents were asked about the number and type of charged betterment levies, the number of appeals against the decision on charging of the levy lodged to the Local Government Appeal Court and to the Supreme Administrative Court, and the reasons for the discontinuation of charging of the levy. The respondents were

also asked about the availability of training courses in property management and/or the betterment levy, and the frequency with which they were attended in the three last years by those responsible for charging of the levy. Moreover, the survey questions concerned the self-assessment of the respondents' knowledge on the betterment-levy charging. When designing the survey questions, the methodology used by Dawid [28] was applied, with the questionnaire form extended to include questions concerning the reasons for the discontinuation of betterment-levy charging, and the issues of commune officials' self-assessment. This is the reason why this study was both quantitative and qualitative in nature.

3.2. Statistical Analyses

The research hypothesis (H1) was verified by statistical methods, including the Hellwig's method and the synthetic index, which was applied for the assessment of socio-economic development. To calculate the synthetic index, a set of diagnostic variables used in other studies was applied [29]. These included: the unemployment percentage rate; capital expenditures in millions PLN per inhabitant; the number of national economy entities entered into the REGON register per 10,000 inhabitants; demographic dependency ratio for the pre- and post-working-age population per 100 persons of working age; and gross fixed capital formation in millions PLN per inhabitant. The variable values from the years 2007–2018 were obtained from the Local Data Bank. The study involved all counties of Małopolskie Voivodeship.

In the first place, the variable values were normalised using Formula (1). Normalisation involves the unification or standardisation of diagnostic feature values. The primary aim of this type of transformation is to bring variables with different denominations to their comparability. Based on the maximum values of the i -th feature among the values of this feature for individual counties (z_{ik}), the feature value after the reduction of feature polynomiality (z_{ok}) was obtained:

$$z_{ok} = \max_i \{z_{ik}\} \quad (1)$$

Following the elimination of the polynomiality of variables, distances (d_i) were determined between the standard obtained as a result of this transformation and the individual components subjected to analysis in accordance with Formula (2):

$$d_i = \left[\sum_{i=1}^k (z_{ik} - z_{ok})^2 \right]^{1/2} \quad i = (1, 2, \dots, n) \quad (2)$$

Then, the synthetic index (z_i) values were calculated for individual counties of the Małopolska region using Formula (3):

$$z_i = 1 - \frac{d_i}{d_0} \quad (3)$$

In order to calculate the synthetic index, it was necessary to calculate the intermediate values of the zero distance (d_0) according to Formula (4), based on the average distance value (\bar{d}) and the standard deviation (s_d) calculated from the distance value (d_i):

$$d_0 = \bar{d} + 3s_d \quad (4)$$

Based on the synthetic index value, the counties were divided into four groups according to the rules provided in Table 3.

Table 3. Rules for the classification of counties according to the level of socio-economic development.

	Group 1—counties with the lowest development level ($z_i \leq \bar{z}_1$)
	Group 2—poorly developed counties ($\bar{z}_1 < z_i \leq \bar{z}$)
	Group 3—moderately developed counties ($\bar{z} < z_i \leq \bar{z}_2$)
	Group 4—highly developed counties ($z_i \geq \bar{z}_2$)

In order to calculate the statistics necessary to classify the counties, the average index (z_i) values for individual years of the analysis were calculated in the first place, and then the number of counties for which the index value was lower than the average value (\bar{z}) was checked and recorded as N_1 :

$$\bar{z}_1 = \frac{1}{N_1} \sum_{i=1}^{N_1} z_i \quad (5)$$

N_1 is a value necessary to calculate the first classification limit according to Formula (5), while the number of greater counties (N_2) was used to calculate the second classification limit according to Formula (6):

$$\bar{z}_2 = \frac{1}{N_2} \sum_{i=1}^{N_2} z_i \quad (6)$$

The synthetic index calculated by this method took on values ranging from 0 to 1 points. The closer the index value for a particular county was to unity, the higher the socio-economic development level for that area.

4. Results

According to the results of the survey, no decisions on charging of the betterment levy were issued in Gorlicki County between 2012 and 2019. Consequently, no appeal proceedings took place. In the light of these results, the question regarding the reasons for the discontinuation of charging of this levy took on particular importance. Four respondents indicated the lack of the resolution of Commune Council on the betterment levy rates as the reason. However, it must be stressed that based on the analysis of local legislative acts passed in the county under the study, none of the communes issued such resolution during the studied period.

Three respondents indicated the lack of analyses (estimation) of the increase in the property value following the execution of specific investment activities using public funds as the reason for the discontinuation of charging of the betterment levy (Figure 3). Another reason for the discontinuation of charging indicated by the respondents in two cases was the high administrative costs associated with the charging of this levy. Moreover, an employee of a commune responded that through the discontinuation of betterment-levy charging, the commune's authorities wanted to support socio-economic development.

The questionnaire form included a question concerning the frequency with which sectoral training courses were attended by employees responsible for charging of the betterment levy, and a question concerning the self-assessment of the state of knowledge in this regard. The study showed that in Gorlicki County, some communes did not pay much attention to training sessions to enhance the competence of their employees in the field of property management and/or the betterment levy. In five communes, the respondents declared that they had attended training, but less often than once a year. Employees of three communes declared that they had regularly attended sectoral training sessions. One of the respondents attended no sectoral training over the last three years.

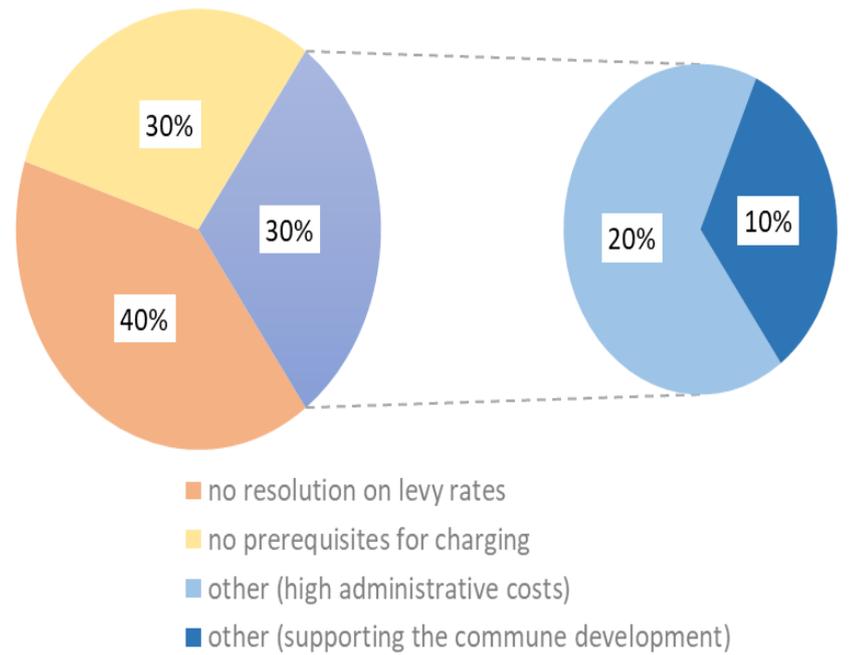


Figure 3. Diagram of the proportions of the reasons for the discontinuation of betterment-levy charging in Gorlicki County indicated in the questionnaire survey. Source: own work based on the questionnaire survey.

At the same time, the respondents gave themselves relatively low ratings for their knowledge on charging of the betterment levy. Respondents most frequently gave themselves 3 or 4 points on a 10-point scale when assessing their knowledge on charging of betterment levies (Figure 4). These ratings were given by the respondents who attended sectoral training sessions less frequently than once a year. On the other hand, the persons who attended in training sessions once a year or more frequently gave themselves 6, 8, and 9 points.

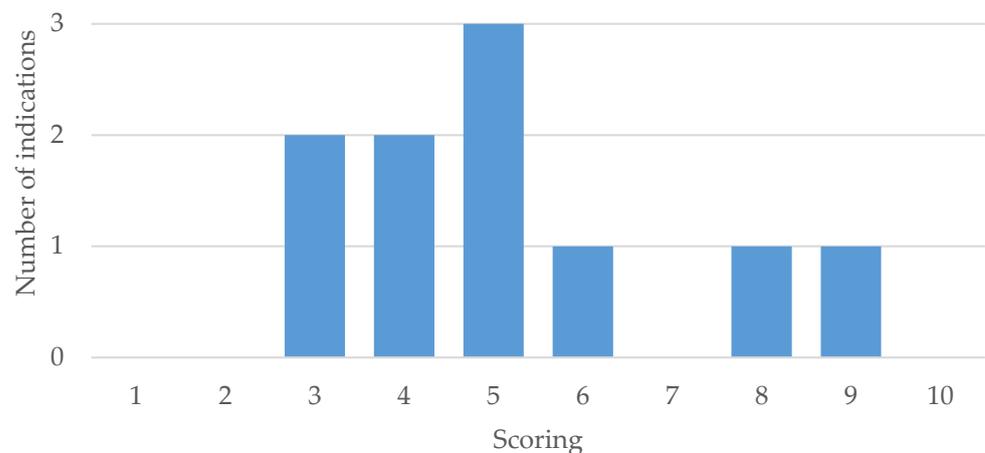


Figure 4. Self-assessment of the state of knowledge on the betterment levy among the officials responsible for charging of the betterment levy in communes of Gorlicki County. Source: own study based on questionnaire survey results.

In view of the fact that between 2012 and 2019, not a single betterment levy was charged in all communes of Gorlicki County, no inspection was conducted in this respect by the Regional Accounting Chamber or the Supreme Audit Office, which is why the respondents revealed no applications in this regard in the questionnaire survey.

The statistical analysis of socio-economic development showed a low dynamic of changes in the counties occupying lower ranking positions during the studied period, including Gorlicki County. On the other hand, at the top positions of the classification, the ranking leader changed, and the City of Kraków with county rights emerged as the county with the highest level of socio-economic development (Table A1).

The study revealed that Gorlicki County showed no faster rate of socio-economic growth in comparison with other counties of Małopolskie Voivodeship in which the betterment levy was charged. The calculation results enabled the conclusion that the discontinuation of betterment-levy charging in Gorlicki County itself failed to support socio-economic development. Such a measure would need to be linked to a number of other development support measures.

5. Discussion

In Gorlicki County in the years 2012–2019, no betterment levies were charged. The complete discontinuation of betterment-levy charging throughout the county was a curiosity, in comparison with the results of similar surveys conducted in Koszaliński and Kołobrzesci counties in Poland [28]. In these counties, there were only single municipalities that did not charge the betterment levy. However, this did not apply to the entire county, as was the case of Gorlicki County.

Given the high degree of freedom as regards charging of the betterment levy in the Polish legal system, Wójtowicz [30] indicated two possible legal solutions facilitating the levy charging, and serving as a specific incentive for the communes to its charging. The first was the complete elimination of the betterment levy in favour of the cadastral tax. The cadastral value of plots would be updated after the occurrence of prerequisites, as in the case of the betterment levy. Such a solution would offer possibilities for more effective and widespread enforcement of the levy. Another solution might be to revise the existing legal solutions related to charging of the betterment levy in order to transform it from a levy for an increase in the property value into an actual cost levy; i.e., the participation of property owners in investment costs. Such a solution has been adopted in Germany and the United Kingdom, and enabled the elimination of the specific lack of compatibility and subjectivity when property appraisers determine the increases in property values, which currently affect the amount of the levy. Such evolution of this system would enable the minimisation of the public opposition to this levy, and make it more widespread in nature.

An extremely important aspect concerning the charging of the betterment levy is the officials' knowledge of this subject. Ignorance of regulations or uncertainty in applying them may result in reluctance to charge the levy.

Discussion of the Reasons for the Discontinuation of Betterment-Levy Charging

The reasons for the discontinuation of betterment-levy charging can be divided into four main thematic groups: (1) socio-economic; (2) socio-psychological; (3) institutional and legal; and (4) economic (Figure 5). In the first category (socio-economic reasons), one specific reason for the discontinuation of the levy charging that emerged in the respondents' answers and was reflected in other studies [29] can be qualified—the discontinuation of betterment-levy charging may be an instrument supporting socio-economic development, and may prevent the marginalisation of the area in which the levy charging was discontinued.

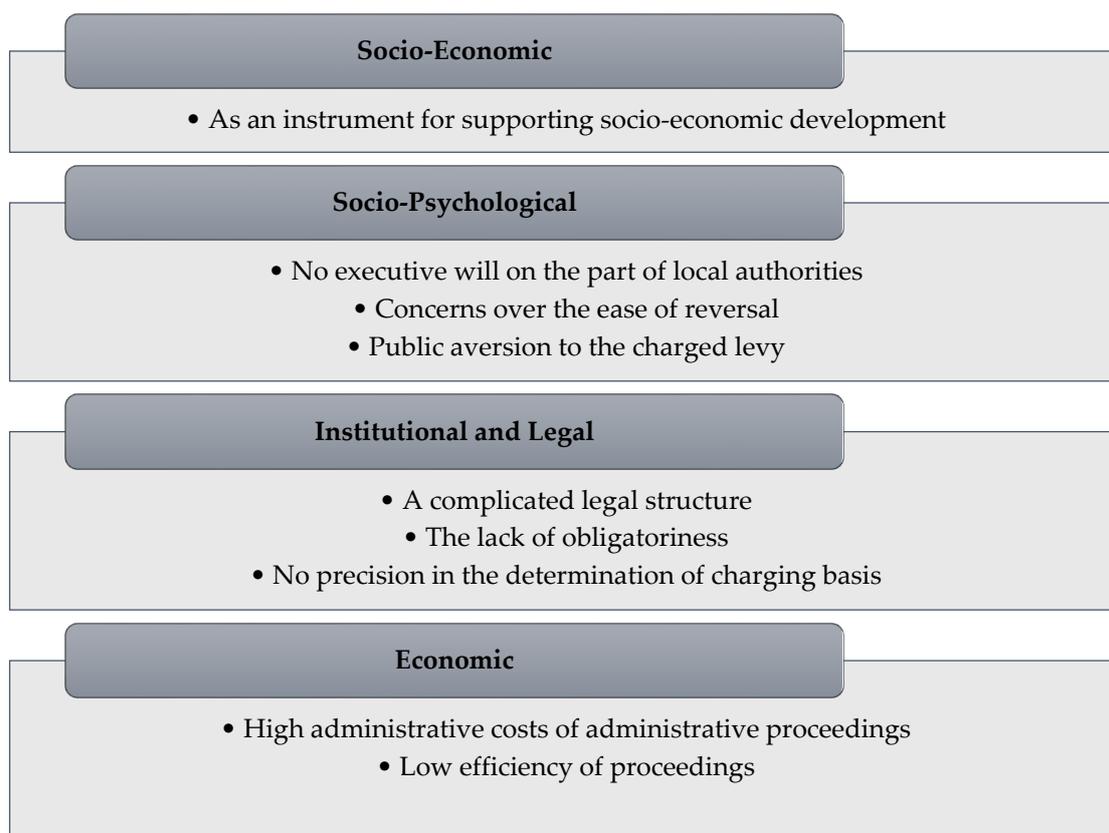


Figure 5. Classification of reasons for the discontinuation of the betterment levy. Source: own study based on questionnaire surveys and literature analyses.

In the second category of the reasons for the discontinuation of the betterment levy, three reasons were classified: (1) no executive will on the part of local authorities; (2) concerns over the ease of reversal of an issued decision; and (3) public aversion to the levy. The lack of executive will regarding the provisions concerning the charging of the betterment levy by competent bodies is one of the issues addressed in follow-up reports of the Supreme Audit Office [31]. The deficiency in the application of regulations by commune's implementing bodies may be due to incomplete knowledge of this legal solution, as shown by the questionnaire survey. Another reason for being qualified in this group was the high probability of this levy being repealed by appellate authorities, namely the Local Government Appeal Court or the Supreme Administrative Court in Poland. This reason was indicated by Dawid [28], who reported that in Koszaliński and Kołobrzesci Counties, as many as 10% of appeals lodged by persons charged with this levy had been considered justified. With almost 30% of the appeals in the total number of decisions, this amounted to as much as 3% of decisions being reversed in their entirety. The third reason for the discontinuation of the betterment levy included in this category was the public aversion to the charging of the betterment levy. Due to the lack of transparency of the manner in which the levy was determined, people required to pay the betterment levy were not willing to accept it, and appealed against it.

The first of the discussed reasons for the discontinuation of the betterment levy, belonging to the third category, was the complicated legal structure of this levy, which discouraged the body responsible for its charging from taking steps to charge it. The lack of transparency in provisions of this legal solution lies mainly in the way the basis of its charging was determined. This approach requires the body to determine whether the increase in the value occurred as a result of measures taken, which offers the possibility of initiating proceedings. Most commune office employees lack the qualifications of a property appraiser, and therefore often refrain from initiating administrative proceedings aimed

at charging of the betterment levy in cases where it would be justified [32]. According to Kulicki [33], one of the main reasons for the discontinuation of betterment-levy charging is the lack of obligation to charge it, both in the case of the infrastructural-type levy and in the case of the land property partition. This gives the communes “tacit consent” for not applying this law. Another reason for the discontinuation was the lack of precision in determining the basis of the levy amount based on appraisal reports. Appraisal reports provide a property appraiser’s subjective opinion on the increase in the property value, which offers the possibility of challenging the decision in appellate institutions [34].

The last identified group of the category of reasons for the discontinuation of the betterment levy included economic reasons, inter alia the administrative costs exceeding the receipts from the levy, low efficiency of proceedings, and a great number of appeals against the issued decisions. A study by Dawid [28] demonstrated that for approximately 10% of the analysed proceedings, the administrative costs were greater than the receipts from these levies. This was the result of the cost-intensive acquisition of evidence, low levy rates being adopted by communes, and the prudent estimate of the value increase made by appraisers.

6. Conclusions

Based on the study conducted on the betterment levy and in particular the reasons for its discontinuation in Gorlicki County, four main groups of reasons for the lack of charges could be identified. Essentially, they were legal, economic, and psychological in nature. This study also revealed the need to revise the existing design of the betterment levy in the Polish legal system to be in line with the UN Habitat’s initiatives on land value capture. The changes might include: (1) the introduction of compulsory charging of the betterment levy when all prerequisites have been met; (2) the amount of the betterment levy to be made subject to investment costs and not, as it has been the case so far, to an increase in the property value, which will eliminate inaccuracies (subjectivity) of estimating the increase in the property value; (3) shortening the time of the levy charging to one year from the date on which the project was completed (put into use); (4) the amount of the levy to be made subject to the percentage of the property area in the area of the beneficial impact zone of a particular investment project; and (5) the amount of the levy to be determined by statute depending on the type of project, but not higher than 50% of the investment costs borne by the commune.

Limitations and the Further Research

The statistical analysis employed normalised diagnostic variables. This way, each object (county) was described with a synthetic index (aggregate score). The counties were ordered in the ascending order of socio-economic development level. This identified reference counties and problem areas, counties where the socio-economic development index was lower (under the employed research design). The study followed two parallel paths. It was assumed the statistical analysis would be complemented by the opinions of employees of the Gorlicki County administration. The investigation into all counties of Małopolskie Voivodeship was expanded with a case study. Future plans include a broader survey in all the counties to facilitate an in-depth statistical analysis.

Author Contributions: All authors have contributed equally. All authors have read and agreed to the published version of the manuscript.

Funding: This study was financed by the Ministry of Science and Higher Education of the Republic of Poland under the project “Cultural heritage of small homelands” (No. PPI/APM/2018/1/00010/U/001) financed by the Polish National Agency for Academic Exchange as part of the International Academic Partnerships.

Data Availability Statement: The data presented in this study are available upon request from the corresponding author.

Acknowledgments: The paper was written at the Digital Cultural Heritage Laboratory (<https://culturalheritage.urk.edu.pl>), accessed on 12 November 2021), part of the Department of Land Management and Landscape Architecture at the Faculty of Environmental Engineering and Land Surveying of the University of Agriculture in Krakow, Poland. The authors wish to express their gratitude to the reviewers for their constructive criticism, which contributed to the final content of the paper.

Conflicts of Interest: The authors declare no conflict of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript; or in the decision to publish the results.

Appendix A

Table A1. List of counties by the value of the synthetic index for 2007 to 2018.

2007		2008		2009	
Tatrzński County	0.621	Tatrzński County	0.622	Tatrzński County	0.624
City of Kraków County	0.580	City of Kraków County	0.584	City of Kraków County	0.592
Olkuski County	0.390	Olkuski County	0.366	Olkuski County	0.358
Wadowicki County	0.373	Wadowicki County	0.362	Wadowicki County	0.355
City of Nowy Sącz County	0.348	City of Nowy Sącz County	0.347	City of Nowy Sącz County	0.354
Suski County	0.318	Suski County	0.313	Wielicki County	0.311
Wielicki County	0.314	Wielicki County	0.311	Suski County	0.306
Chrzanowski County	0.282	City of Tarnów County	0.279	City of Tarnów County	0.285
City of Tarnów County	0.282	Myślenicki County	0.273	Krakowski County	0.275
Oświęcimski County	0.276	Krakowski County	0.270	Myślenicki County	0.270
Myślenicki County	0.276	Chrzanowski County	0.267	Chrzanowski County	0.265
Krakowski County	0.273	Oświęcimski County	0.265	Oświęcimski County	0.262
Miechowski County	0.252	Miechowski County	0.256	Miechowski County	0.253
Nowotarski County	0.211	Nowotarski County	0.203	Nowotarski County	0.203
Bocheński County	0.173	Bocheński County	0.178	Bocheński County	0.189
Proszowicki County	0.155	Proszowicki County	0.150	Proszowicki County	0.146
Limanowski County	0.142	Limanowski County	0.127	Limanowski County	0.133
Gorlicki County	0.132	Gorlicki County	0.115	Nowosądecki District	0.120
Nowosądecki District	0.125	Nowosądecki District	0.114	Gorlicki County	0.120
Brzeski County	0.109	Brzeski County	0.100	Brzeski County	0.102
Tarnowski District	0.039	Tarnowski District	0.034	Tarnowski District	0.037
Dąbrowski County	0.024	Dąbrowski County	0.009	Dąbrowski County	0.013
\bar{z}	0.259	\bar{z}	0.252	\bar{z}	0.253
N_{-1}	10	N_{-1}	9	N_{-1}	10
N_{-2}	12	N_{-2}	13	N_{-2}	12
\bar{z}_1	0.136	\bar{z}_1	0.115	\bar{z}_1	0.132
\bar{z}_2	0.361	\bar{z}_2	0.347	\bar{z}_2	0.355
2010		2011		2012	
Tatrzński County	0.611	City of Kraków County	0.612	City of Kraków County	0.619
City of Kraków County	0.603	Tatrzński County	0.605	Tatrzński County	0.601
City of Nowy Sącz County	0.364	City of Nowy Sącz County	0.367	City of Nowy Sącz County	0.364
Olkuski County	0.360	Olkuski County	0.354	Olkuski County	0.351
Wadowicki County	0.352	Wadowicki County	0.352	Wadowicki County	0.346
Wielicki County	0.317	Wielicki County	0.324	Wielicki County	0.325
Suski County	0.307	Suski County	0.307	Suski County	0.302
City of Tarnów County	0.292	City of Tarnów County	0.293	City of Tarnów County	0.293
Krakowski County	0.282	Krakowski County	0.289	Krakowski County	0.290
Myślenicki County	0.278	Myślenicki County	0.281	Myślenicki County	0.277
Chrzanowski County	0.271	Chrzanowski County	0.271	Chrzanowski County	0.268
Oświęcimski County	0.267	Oświęcimski County	0.265	Oświęcimski County	0.263

Table A1. Cont.

Miechowski County	0.254	Miechowski County	0.254	Miechowski County	0.252
Bocheński County	0.210	Bocheński County	0.217	Bocheński County	0.222
Nowotarski County	0.205	Nowotarski County	0.206	Nowotarski County	0.203
Proszowicki County	0.150	Proszowicki County	0.152	Proszowicki County	0.154
Limanowski County	0.137	Limanowski County	0.138	Limanowski County	0.132
Nowosądecki District	0.123	Gorlicki County	0.130	Gorlicki County	0.128
Gorlicki County	0.122	Nowosądecki District	0.127	Nowosądecki District	0.127
Brzeski County	0.106	Brzeski County	0.109	Brzeski County	0.108
Tarnowski District	0.044	Tarnowski District	0.046	Tarnowski District	0.047
Dąbrowski County	0.016	Dąbrowski County	0.017	Dąbrowski County	0.015
\bar{z}	0.258	\bar{z}	0.260	\bar{z}	0.259
N_{1}	10	N_{1}	10	N_{1}	10
N_{2}	12	N_{2}	12	N_{2}	12
\bar{z}_1	0.137	\bar{z}_1	0.140	\bar{z}_1	0.139
\bar{z}_2	0.359	\bar{z}_2	0.360	\bar{z}_2	0.358
2013		2014		2015	
City of Kraków County	0.627	City of Kraków County	0.631	City of Kraków County	0.638
Tatrzański County	0.590	Tatrzański County	0.586	Tatrzański County	0.580
City of Nowy Sącz County	0.363	City of Nowy Sącz County	0.362	City of Nowy Sącz County	0.362
Olkuski County	0.356	Olkuski County	0.355	Olkuski County	0.352
Wadowicki County	0.336	Wadowicki County	0.336	Wadowicki County	0.332
Wielicki County	0.322	Wielicki County	0.325	Wielicki County	0.325
City of Tarnów County	0.303	City of Tarnów County	0.303	City of Tarnów County	0.307
Suski County	0.290	Krakowski County	0.293	Krakowski County	0.292
Krakowski County	0.289	Suski County	0.289	Suski County	0.284
Oświęcimski County	0.268	Myślenicki County	0.268	Myślenicki County	0.266
Myślenicki County	0.266	Chrzanowski County	0.266	Oświęcimski County	0.263
Chrzanowski County	0.266	Oświęcimski County	0.266	Chrzanowski County	0.262
Miechowski County	0.251	Miechowski County	0.254	Miechowski County	0.250
Bocheński County	0.225	Bocheński County	0.230	Bocheński County	0.230
Nowotarski County	0.187	Nowotarski County	0.189	Nowotarski County	0.187
Proszowicki County	0.162	Proszowicki County	0.161	Proszowicki County	0.161
Limanowski County	0.128	Limanowski County	0.132	Limanowski County	0.132
Gorlicki County	0.127	Gorlicki County	0.124	Gorlicki County	0.123
Nowosądecki District	0.115	Nowosądecki District	0.116	Nowosądecki District	0.114
Brzeski County	0.107	Brzeski County	0.108	Brzeski County	0.106
Tarnowski District	0.042	Tarnowski District	0.042	Tarnowski District	0.041
Dąbrowski County	0.011	Dąbrowski County	0.012	Dąbrowski County	0.011
\bar{z}	0.256	\bar{z}	0.257	\bar{z}	0.255
N_{1}	10	N_{1}	10	N_{1}	10
N_{2}	12	N_{2}	12	N_{2}	12
\bar{z}_1	0.136	\bar{z}_1	0.137	\bar{z}_1	0.136
\bar{z}_2	0.356	\bar{z}_2	0.357	\bar{z}_2	0.355
2016		2017		2018	
City of Kraków County	0.644	City of Kraków County	0.647	City of Kraków County	0.645
Tatrzański County	0.577	Tatrzański County	0.576	Tatrzański County	0.583
City of Nowy Sącz County	0.359	City of Nowy Sącz County	0.357	City of Nowy Sącz County	0.354
Olkuski County	0.350	Olkuski County	0.348	Olkuski County	0.350
Wadowicki County	0.328	Wadowicki County	0.323	Wielicki County	0.325
Wielicki County	0.322	Wielicki County	0.322	Wadowicki County	0.325
City of Tarnów County	0.305	City of Tarnów County	0.304	City of Tarnów County	0.305
Krakowski County	0.290	Krakowski County	0.290	Krakowski County	0.296
Suski County	0.283	Suski County	0.279	Suski County	0.280
Myślenicki County	0.264	Myślenicki County	0.264	Myślenicki County	0.269

Table A1. Cont.

Chrzanowski County	0.260	Chrzanowski County	0.259	Chrzanowski County	0.261
Oświęcimski County	0.259	Oświęcimski County	0.256	Oświęcimski County	0.259
Miechowski County	0.249	Miechowski County	0.246	Bocheński County	0.251
Bocheński County	0.232	Bocheński County	0.236	Miechowski County	0.250
Nowotarski County	0.183	Nowotarski County	0.184	Nowotarski County	0.190
Proszowicki County	0.160	Proszowicki County	0.159	Proszowicki County	0.166
Limanowski County	0.132	Limanowski County	0.128	Limanowski County	0.132
Gorlicki County	0.119	Gorlicki County	0.115	Gorlicki County	0.117
Nowosądecki District	0.112	Nowosądecki District	0.110	Nowosądecki District	0.114
Brzeski County	0.105	Brzeski County	0.107	Brzeski County	0.114
Tarnowski District	0.040	Tarnowski District	0.039	Tarnowski District	0.043
Dąbrowski County	0.010	Dąbrowski County	0.011	Dąbrowski County	0.017
\bar{z}	0.254	\bar{z}	0.253	\bar{z}	0.257
N ₁	10	N ₁	10	N ₁	10
N ₂	12	N ₂	12	N ₂	12
\bar{z}_1	0.134	\bar{z}_1	0.134	\bar{z}_1	0.139
\bar{z}_2	0.353	\bar{z}_2	0.352	\bar{z}_2	0.354

References

- Jones, C.A.; Morgan, J.; Stephens, M. *An Assessment of Historic Attempts to Capture Land Value Uplift in the UK*; Commissioned Reports, no. 002; Scottish Land Commission: Inverness, UK, 2018.
- Huston, S.H.; Lahbush, E. Land Value Capture and Tax Increment Financing: Overview and Considerations for Sustainable Urban Investment. *Eur. J. Sustain. Dev. Res.* **2018**, *2*, 34. [\[CrossRef\]](#)
- Dunning, R.; Payne, S.; O'Brian, P.; Buck, M. *Land Value Capture: Attitudes from the House-Building Industry on Alternative Mechanisms*; RICS Research Trust, RICS, Parliament Square: London, UK, 2020.
- Falco, E. History of Land Value Recapture in Italy: A Review of Planning and Fiscal Measures Since 1865. *J. Plan. Hist.* **2016**, *15*, 230–245. [\[CrossRef\]](#)
- Falco, E. *Land Value Recapture in Italy: A Detailed History, TDR Practices, and Case Studies*; TU Delft Open: Delft, The Netherlands, 2017.
- Oppio, A.; Torrieri, F.; Bianconi, M. Land Value Capture by Urban Development Agreements: The Case of Lombardy Region (Italy). In *Proceedings of the New Metropolitan Perspectives*; Calabrò, F., Della Spina, L., Bevilacqua, C., Eds.; Springer International Publishing: Cham, Switzerland, 2019; pp. 346–353. [\[CrossRef\]](#)
- Rebelo, E.M. Land betterment capture revisited: A methodology for territorial plans. *Land Use Policy* **2017**, *69*, 392–407. [\[CrossRef\]](#)
- Prus, B.; Król, K. Evaluation of using selected taxonomic methods to classify socio-economic phenomena. *Acta Sci. Pol. Form. Circumiectus* **2017**, *16*, 179–197. [\[CrossRef\]](#)
- Król, K.; Muchová, Z. Opportunities of financing local spatial development plans from private resources—The study in terms of Poland and the Slovak Republic. *Acta Sci. Pol. Adm. Locorum* **2018**, *17*, 29–40. [\[CrossRef\]](#)
- The Constitution of the Republic of Poland of 2nd April, 1997, as Published in Journal of Laws [Dz.U.] No. 78, Item 483. Available online: <https://www.sejm.gov.pl/prawo/konst/angielski/kon1.htm> (accessed on 12 November 2021).
- Ustawa z Dnia 29 Września 1990 r. o Zmianie Ustawy o Gospodarce Gruntami i Wywłaszczeniu Nieruchomości [Act of 29 September 1990 Amending the Act on Land Management and Expropriation of Real Estate], Journal of Laws [Dz.U.] of 1990, No. 79, Item 464. Available online: <https://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU19900790464> (accessed on 12 November 2021).
- Ustawa z Dnia 8 Marca 1990 r. o Samorządzie Gminnym [Local Self-Government Act of 8 March 1990]; No. 1–4; Polish Contemporary Law. 1991; pp. 66–77. Available online: <https://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU19900160095> (accessed on 12 November 2021).
- Ziniewicz, M.A. Oplata adiacencka w Polsce i Niemczech [Adjacent fee in Poland and Germany]. *Stud. Prawnoustr.* **2012**, *16*, 297–318.
- Król, K.; Gawroński, K.; Halva, J.; Pagáč, J. A betterment levy in Poland and a 'fee payable to development' in the Slovak Republic—differences and similarities. *Acta Sci. Pol. Form. Circumiectus* **2017**, *16*, 137–146. [\[CrossRef\]](#)
- Król, K. Zoning fee and betterment levy—chosen legal aspects. *Acta Sci. Pol. Form. Circumiectus* **2016**, *15*, 243–252. [\[CrossRef\]](#)
- Act of 10 December 1920 on the construction and maintenance of public roads in the Republic of Poland. *J. Laws* **1921**, *6*, 32.
- Sulczewska, K. Oplata planistyczna oraz oplata adiacencka—uzasadnienie aksjologiczne i analiza porównawcza. *Studia Prawno-Ekon.* **2014**, *XCII*, 129–147.
- Act of 14 July 1961 on land management in cities and housing estates. *J. Laws* **1969**, *22*, 159.
- Act of 29 April 1985 on land management and property expropriation. *J. Laws* **1991**, *30*, 127.

20. Act of 21 August 1997 on property management. *J. Laws* **2020**, 65.
21. Act of 14 June 1960—Administrative Procedure Code. *J. Laws* **2020**, 256.
22. Regulation of the Council of Ministers of 4 May 2005 on property consolidation and partition. *J. Laws* **2005**, 86, 736.
23. The Act of 25 July 2002, The Law on Administrative Courts. *J. Laws* **2021**, 137.
24. Ziniewicz, M.A. Analiza porównawcza opłat adiacenckich w Republice Federalnej Niemiec, Anglii i Polsce. *Studia I Mater. Tow. Nauk.* **2012**, 20, 51–66.
25. Baugesetzbuch of 27 August 1997, BGBl. I S. 2141. Bundesgesetzblatt Jahrgang 1997 Teil I Nr. 61, ausgegeben am 03.09.1997, Seite 2141, Neufassung des Baugesetzbuchs vom 27.08.1997. Available online: https://dejure.org/BGBl/1997/BGBl._I_S._2141 (accessed on 2 November 2021).
26. Planning Act 2008 c 29. Parliament of the United Kingdom. Available online: <https://www.legislation.gov.uk/ukpga/2008/29/contents> (accessed on 12 November 2021).
27. The Community Infrastructure Levy Regulation of 2010, No 948. Available online: <https://www.legislation.gov.uk/uksi/2010/948/contents/made> (accessed on 12 November 2021).
28. Dawid, L. Sprawność systemu opłat adiacenckich na przykładzie wybranych gmin powiatu koszalińskiego i kołobrzeskiego w latach 2006–2009. *Stud. I Mater. Tow. Nauk. Nieruchom.* **2010**, 18, 97–105.
29. Lisowska, R. Kierowanie postaw przedsiębiorczych w regionach zmarginalizowanych przez władze samorządowe. *Ekon. Probl. Usług* **2010**, 47, 57–70.
30. Wójtowicz, K.A. Możliwości wykorzystywania przez gminy podatków i opłat do przejmowania pożytków z tzw. renty planistycznej—wybrane problemy. *Ann. Univ. Marie Curie Skłodowska Sect. H Oeconomia* **2016**, 50, 409–417. [[CrossRef](#)]
31. Supreme Audit Office (Najwyższa Izba Kontroli, NIK). Information on Inspection Results Concerning the Determination and Enforcement of the Betterment Levy and the Zoning Fee by Communes of Warmińsko-Mazurskie Voivodeship, Registration No: 5/2013/12/156/LOL/PRG. Available online: <https://www.nik.gov.pl/kontrola/P/12/156/LOL/> (accessed on 25 November 2021).
32. Gdesz, M. *Renta Planistyczna i Opłata Adiacencka*; Wyd. KK Szkolenie: Warszawa, Polabnd, 2007.
33. Kulicki, J. Podstawy prawne budowy modelu administracji danin publicznych. *Analizy BAS* **2010**, 5, 1–27.
34. Dąbek, J. Opłata adiacencka uwarunkowania prawne i warsztatowe. *Biul. Stowarzyszenia Rzeczozn. Majątkowych Województwa Wielkop.* **2011**, 1, 4–10.