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Compensating Owners of Residential Properties Located Near Airports – a Comparative Perspective on the Netherlands and Poland

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ABSTRACT

Purpose - The aim of the paper is to present and compare the rules of resolving a neighbor conflict created by airport noise in the context of Dutch and Polish experiences.
Design/methodology/approach - We consider formally similar situations, because both countries utilize public intervention in an attempt to solve the conflict, however differences are visible at the level of its scope, implementation and performance. Research is focused on analyzing the structure of the considered public intervention in both countries in order to establish salient similarities and differences existent in the jurisdictions under comparison.
Findings - Descriptive studies are supplemented by particular examples of residential property markets near the largest airport in each country, namely Schiphol Airport in Amsterdam and Chopin Airport in Warsaw. Conducted studies include an assessment of the manner in which public intervention is factually implemented, which allows to formulate initial normative conclusions as to the achieved economic and environmental effects. These are different in both jurisdictions as they depend on the adopted legal solutions and the actual implementation of law.
Research limitations and research implications - We analyze compensating loss in the form of residential property value diminution as opposed to analyzing market prices in areas surrounding airports.

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INTRODUCTION

The urbanization of areas surrounding airports and increased airport operations exacerbate neighbour conflicts, because relatively large areas occupied by the airport are utilized for a unique purpose which differs from surrounding land uses. The main negative externality is noise which spreads over large areas and often includes sensitive land uses, such as residential ones. This creates a proprietary conflict that may be resolved with the use of various means. If there is no public intervention, the airport and the landowner resolve the conflict on the market by voluntarily concluding a contract which for an agreed price transfers specified entitlements. If the conflict is to be resolved with the participation of the State, criteria, conditions and tools for resolving the conflict must be specified. This requires formulating a solid and comprehensive theory of private landownership which includes the element of public intervention.

Despite significant reservations as to its utility in a world where transaction costs do not equal zero (Smith, 2017, pp. 150-152), contemporary understanding of property focuses on the bundle of rights or a collection of entitlements model, which accommodates various public interventions that usually influence only selected rights within the bundle. Public intervention may also lead to the allocation of entitlements (rights) or their distribution, by e.g. physically taking the object of ownership (confiscation or expropriation without compensation), taking a part of the right's value, or capturing an increase in value through taxes or other public burdens. In this paper we argue that legal provisions which regulate the right and scope of compensation as well as prescribe the procedure of claiming and obtaining damages are the most important element of the intervention, which may be classified as triangular according to neoaustrian economics (Rothbard, 2008, p. 277). Describing and analyzing legal regulations created to resolve the neighbor conflict and comparing interventions based on different provisions requires utilizing a law and economics theory of property and public intervention. It allows to identify the criteria of assessing the effectiveness of the public intervention, without which it is impossible to formulate opinions and conclusions of normative, and not purely descriptive, character.

The purpose of this paper is to analyse and assess the rules of compensating losses resulting from negative externalities created by airport operations based on Dutch and Polish regulations. The obligations and restrictions introduced through legal provisions for one or both sides of the conflict reflect the aims of the public intervention and simultaneously

influence the scope of property rights, since only specified losses are compensable. For this reason, it is justified to focus initial comparative studies on compensation, as it is a good reflection of the aims of public intervention and its effectiveness in achieving those aims.

LITERATURE REVIEW

In the contemporary world, neighbor conflicts are approached from a preventive perspective with the use of instruments that shape property relations and influence the scope of rights. This approach allows to avoid creating losses and the need to award compensation. Preventive activities often consist of spatial planning and prescribing permitted uses of land. The main motivation behind planning was to protect the society from the negative consequences of industrialization and intense urbanization. The initial goal was to mitigate numerous externalities caused by no control over land uses. The proponents of such solutions aim to prescribe such use of land which does not compromise the value of neighbouring land and simultaneously allows for highest and best land use, without depriving neighbouring owners of similar possibilities (McDonald & McMillen, 2012, pp. 442-443).

Spatial planning, which has been utilized for the past 100 years could not, however, eliminate neighbor conflicts which can also be seen in urban areas located near airports in the Netherlands and Poland. Resolving neighbor conflicts with the use of Pigou's taxation of the entity creating negative externalities is not applied in practice. Despite attempts to further develop Pigou's theory (Alcalde, Corchón & Moreno, 1999) it is considered as impossible to implement due to the amount of information required (McDonald & McMillen, 2012, pp. 446-447). The practical limitations in effectively taxing the entity causing negative externalities and in utilizing spatial planning to avoid neighbor conflicts necessitates applying various instruments of intervention with an allocation effect. Thus, compensation becomes a key issue and determining its scope and rules of awarding damages is connected with the concept of legal damage, caused by legal, as opposed to illegal, activities of public bodies (Habdas & Konowalczuk, 2019, p. 5, 18; Ahmedouamar, 1983, pp. 5-6). It should be noted that in the case of legal damage compensation is awarded in situations and to the extent clearly specified by the legislator and may not cover the entire extent of loss caused by public intervention (Dybowski, 1981, pp. 189-190)

In the economic sense these are triangular interventions where the state as a third "party" to the contract determines the conditions of a market

transaction and decides about the manner of allocating property rights (entitlements). These types of interventions may be applied on residential real estate markets located near airports. The latter is obliged to pay compensation which is not a market price from a voluntary market transaction, but which is a prescribed compensation payment for the so called legal damage (Parchomiuk, 2007, p. 360 et seq.). Allocative intervention aims at protecting capital (value) and in the considered case concerns private, residential real estate located near airports.

Academic literature contains numerous research results on the functioning of real estate markets in the vicinity of airports and (Batóg et al., 2019) of other infrastructure plants which generate noise externalities (Głuszak, 2019, pp. 129-130). These studies most frequently concentrate on analyzing the negative influence of noise on real estate prices, which is of interest not only to owners and investors but also to public authorities, who consider intervention on the local market. There is also research concerning positive effects the airport has on the economy, including the development of local markets and the commercial real estate market (Hakfoort, Rietveld & Poot, 2001; Hewings, Schindler & Israilevich, 2019; Oung, 2018). In this context there is a noticeable lack of research on positive influence an airport can have on residential real estate prices and values, although such studies are carried out with regard to municipal communication infrastructure (Głuszak, 2019, pp. 117-12). This suggests that studies concerning airport influence on the residential real estate market seem to be one-sided, although airports are an important element of public transport infrastructure and as such are typical examples of plants which generate both positive and negative externalities. Residential real estate markets are influenced by numerous positive and negative consequences of neighboring land uses and airports on the one hand, negatively influence value due to noise externalities, but on the other hand, balance this by positive externalities connected with access to public transport infrastructure and employment opportunities. The above has been presented in table 1.

Table 1. Positive and negative neighborhood influencing house values

Negative effects	Positive effects
Air pollution	Proximity to employment
Airport noise	Proximity to shopping
Proximity to contaminated area	**Proximity to airport**
Proximity of nuclear power plant. Industrial noise.	Within walking distance of public transit station
Heavy traffic on street	Proximity to highway interchange
Adjacent to rail line, highway or transit	

line	
Proximity to a church	

Source: (McDonald & McMillen, 2018, p. 448).

A one-sided approach to studies of the housing market is problematic in the context of public intervention effects on residential real estate markets in the neighborhood of airports, because it hinders an objective determination of compensation for loss of real estate value caused by various actions of the state leading to limitations of ownership/entitlements. Such a situation has occurred in Poland, where the intervention in the form of introducing a restricted use area surrounding an airport has caused an increase in social costs, as opposed to their anticipated decrease (Foryś, Habdas & Konowalczuk, 2019, p. 89). The reason for this error is a faulty interpretation of the law by the courts with regard to the concept of legal damage and the extent of its compensation which is further exacerbated by valuations performed by professionals. These errors are to a large extent the effect of inappropriate use of research concerning housing markets near airports which is selectively focused on negative airport externalities and neglects to account for positive externalities.

The scope and rules of compensation connected with houses located near an airport are considered in the context of the currently dominating concept of ownership understood as a bundle of rights or a collection of entitlements, applicable in both Dutch and Polish law. The popularity of such a concept of ownership/property in economics and law and economics is to a large extent connected with Coase's approach to intervention, which has facilitated accepting an extreme view that all rights within a bundle are separate without an inner, orderly structure (Merrill & Smith, 2001). Concentrating on the owner’s bundle of rights may lead to ignoring the environmental context of property and consequent relations of the human being with the environment (Arnold, 2002). Coase’s objective was not, however, to provide an explanation of the law or property but to show how legal regulations influence the economy. Nevertheless his understanding of the bundle of rights established viewing property as a cluster of rights despite limitations inherent in neoclassical economy, in particular its unrealistic disregard of the institutional framework governing reactions among various economic actors (Smith, 2017, pp. 151-152; Coase, 2018, p. 174).

Conflicts caused by noise externalities on housing markets located near airports are described in terms of effectiveness. According to Coase’s theorem there is no equilibrium between social and private (market) costs.

Intervention is introduced if conflict resolution through market instruments is too costly and it may lower those costs. Coase worked on the assumption that transaction costs are zero, when in reality they are not and this may undermine comparisons between social and private costs (de Soto, 2010, p. 36 et seq.) and motivate to move towards institutional analyses (Allen, 1991). Nevertheless in practice it is still Caose's theorem that allows to analyze the effectiveness of public intervention, although problems concerning comparisons of the expected decrease in transaction costs and devising rules of compensation in a manner which allows to attain the expected social results remain.

RESEARCH METHODOLOGY

The methodology of studying real estate markets influenced by various externalities (positive and negative) is well developed and uniform, because of the widespread application of various hedonic regression models as well as of other instruments, such as the cost benefit analysis. Such studies are facilitated by the definitive nature of transaction prices which are the object of the economic analysis. Studies performed by Malpezzi (2000) and extended by Głuszak (2018) show that a similar methodology of analysing the real estate market is applied on all continents, except for Antarctica, where no such studies have been carried out. Obtaining transaction prices from housing markets surrounding airports is relatively uncomplicated and results of various studies are easily comparable because there are no differences between economic and utility characteristics of houses (flats) influenced by noise externalities.

Unlike the above, there are no comparable studies concerning public intervention and its effects on housing markets near airports and no methodology of carrying out such research has been created. This is also true of the most basic comparison that may be done with respect to the levels of awarded compensation payments. Comparing compensation does, however, encounter an initial obstacle, because compensation is usually determined on the basis of value, and not prices, only the latter being definitive and precise. This denotes that it is the value, and not the price, that is the direct object of analysis, and transaction prices are only an indirect parameter used to calculate the value, which is particular for each piece of real estate (Says et al., 2006). Simultaneously, valuation systems vary among countries, even within the EU, despite the existence of European Valuation Standards (TEGoVA, 2020) and there is no unified method of calculating compensation for loss of real estate value. In addition, although aviation functions in an

international setting, neighbour conflicts connected with airport operations, the applied intervention and compensable loss are of a completely local character and strongly connected with property law. The latter, however, is traditionally viewed as a highly national and technical, therefore perceived as unattractive and perhaps unsuitable for extended comparative research often confined to a descriptive approach. The traditional, descriptive approach should not be disregarded, as it is a good basis for more complex approaches to comparative studies (Van Erp, 2019, pp. 1032, 1040).

Due to the lack of studies comparing public intervention on housing markets surrounding airports, the methodology proposed by Posner (2014) with its key differentiation between positive and normative analysis of law has been employed. In addition, Coase's criteria of effectiveness have been superimposed, which allows to separate the regulated phenomenon (changes on the housing market after public intervention) and the regulating phenomenon (the legal system through which public intervention is implemented and compensation is provided). In the case of conflicts concerning compensation connected with the neighbour conflict caused by noise externalities it is useful to analyse the relations and reactions of the regulated entities (airports) and households acquiring entitlements as a result of public intervention. It is also beneficial to investigate the structure of the legal system which prescribes the conditions in which both the regulated entity and the entity in whose favour the regulation occurs function. The table below shows the possible areas of research concerning public intervention on housing markets surrounding airports.

Table 2. Classification of research areas concerning public intervention on housing markets surrounding airports

Type of analysis	Area of research	
	Behavior of regulated entities	Structure of the regulating system
Positive	Analysing changes in market prices of real estate as a reaction to information about restrictions on land use or airport construction/enlargement. Analysing market prices of voluntarily negotiated compensation payments within Restricted Use Area (similar zones) around airports.	Comparing principles of determining the value of loss caused by different emissions (e.g. direct or indirect) and for different types of real estate, with various rules of property valuation. Analysing methodological connections between loss regarding real estate and loss regarding moveable objects and enterprises.
Normative	An assessment of transaction costs of households if there is no regulation or a change in the regulation regarding	An assessment of the effects of changes in the rules and scope of loss compensation in areas surrounding airports.

	determination and scope of compensation.

Source: own study.

The table below has been applied to carry out orderly, descriptive comparisons between Dutch and Polish regulations regarding public intervention and compensation procedures for loss or real estate value of residential properties near airports.

Table 3. Areas and scope of analysis for descriptive comparisons of regulations regarding public intervention and compensation procedures for loss of value of residential real estate near airports

No.	General area of analysis	Scope of analysis
1	Object of intervention (economic goods subjected to intervention)	Real estate
		Businesses (enterprises)
		Persons
		Other
2	Regulated entities – under obligation	Airports
		Municipality and other bodies prescribing land uses
		Owners of the objects of intervention
		Other
3	Regulated entities – entitled	Owners of the objects of intervention
		Municipality and other bodies prescribing land uses
		Other
4	Type of provisions introducing public intervention	Private(civil) law – general rules and provisions
		Administrative law – general rules and provisions
		Environmental protection
		Planning law
		Construction and infrastructure law
		Special real estate regulations
		Industry regulations – provisions on airports
		Other
5	Public bodies introducing public intervention	State administration
		Local administration
		Dedicated public body
6	Public bodies implementing/performing and monitoring public intervention	State administration
		Local administration
		Administrative courts
		Private law courts
		Others
7	Legal and economic type of intervention	Triangular (regulates type and scope of exchanged property right)
		Binary (imposes an exchange of property right)

No.	General area of analysis	Scope of analysis
		Autistic (property taking with no compensation)
		Other
8	Intervention objective	Allocation of goods
		Stabilizing the situation or the market
		Distribution of goods
		Other
9	Scope of compensation in case of allocation of property rights (delimiting legal damage)	Acoustic improvements – reimbursement of costs borne by the owner or performance by repairs by the obliged entity
		Value diminution caused by the intervention (e.g. introducing special legislation or zones) itself (market stigmatization)
		Value diminution caused by introduced restrictions in land use
		Value diminution caused by noise externalities
		Lost profits
		Buyout at the request of the landowner
		Other
10	Sources of financing compensation payments	Public (state, public body)
		Private – own airport funds
		Mixed – Airport, public funds, other private funds
		Mixed – airport, other private funds (airlines)
		Other
11	Entity paying compensation	Airport
		Public – public body
		Public – dedicated public body
		Other
12	Premises of determining the level of compensation and the entity determining compensation	Free market negotiations of parties
		Public body in an administrative decision
		Other
13	Valuers' involvement in determining compensation	Optional, not formally necessary
		Required – valuation is binding
		Required – valuation is guidance
		Other

Source: own study.

RESULTS & DISCUSSION

Public intervention on housing markets located near airports in the context of its aim and compensation scope is compared based on the example of Schiphol Airport (Amsterdam) in the Netherlands and Chopin Airport (Warsaw) in Poland. Descriptive remarks serve as a basis for carrying out an

initial, comparative analysis and assessing the rules of compensating losses resulting from negative externalities created by airport operations, from the point of view of the aim of intervention and its attainment.

1. Legal damage, public burdens, scope of compensation

Schiphol Airport is by far the biggest and most important airport in the Netherlands. In the past decades, the airport has seen several expansions, including the construction of new landing strips that have noise effects on surrounding areas, often resulting in a decrease in the value of (mainly) residential real estate in those areas. The expansions have been made possible by administrative decisions from public authorities. As will be specified below, the public authorities have in making these decisions taken into account the effect of the increased noise. This means that damage as a consequence of the noise cannot be brought to the civil court based on an obligation arising from an unlawful act. In the Netherlands, a request for compensation in cases like these is possible based on the so-called no-fault liability. It is connected with liability for lawful government acts (*nadeelcompensatie*).

Like Schiphol, the Chopin Airport is the main, national airport in Poland and is the largest one in the country, as well as in Central and Eastern Europe. Air and passenger traffic has systematically been increasing after WWII, particularly after Poland's shift to a market economy in 1989/90. The airport has two runways which since the 1980s have not been enlarged, however increasing airport operations have resulted in numerous extensions and the construction of new terminal buildings as well apron alterations. As a result of increased noise levels beyond the boundaries of the airport, local authorities have enacted zones surrounding the airport which are called Restricted Use Areas (RUA). The obligation to create such zones follows from art. 135 of the Protection of the Environment Act 2001 (POE). The purpose of these zones is to allow for increased noise levels (thus "legalizing" them), prescribe future land uses compatible with the neighborhood of an active airport, and to provide reimbursement of costs spent on acoustic improvements of residential (and other sensitive use: schools, kindergartens, hospitals, care homes) buildings. Like in the Dutch system, enacting RUAs is a legal activity of the government (currently in Poland it is the highest, third tier of local government) and this influences the scope of liability and compensable loss.

Based on the principle of égalité the Dutch administrative courts can judge that a civilian has a right to compensation, the cause of the damage being a lawful act of a public authority. This is the so called no-fault liability

(Huijts, 2020). Compensation due to lawful government acts differs from damages due to unlawful government acts, in the sense that in general it does not provide full compensation. Usually only a part of the actual damage – namely the disproportionate damage – will be compensated. The underlying principle for this compensation can be found in the principle of equality of public burdens (principle of égalité devant les charges publiques). The égalité principle is applied in those cases where the damage qualifies as a public burden, i.e. damage which is consciously caused to an individual by a public authority, and which is the necessary and inevitable consequence of an action performed in the general interest.

The damage suffered needs to be 'special' (generally speaking, the courts will consider whether within the group, one or more individuals have suffered disproportional damage) and 'abnormal'. With regard to the criterion of 'special', it is debatable whether the criterion is really that useful to explain if and when an obligation to compensate exists. It is often not clear against which reference group the suffered party should be tested. The criterion of abnormality is somewhat intangible. The most important criteria covered by this notion are the normal societal risk (*normaal maatschappelijk risico*), normal entrepreneurial risk (*normaal ondernemersrisico*) and acceptance of risks (*risico-aanvaarding*). The criterion of normal societal risk is the most important criterion. This criterion covers many different aspects. Dutch case law shows that the main aspects consist of the nature of the cause of the damage, the nature of the damage, the extent of the damage, the gravity of the damage and the foreseeability of the damage. To what results the application of these criteria will lead, will very much be decided on a case-to-case basis. It is furthermore important to notice that the administrative courts leave the public authority that assesses this normal societal risk a rather wide margin of appreciation. Discounts of 15% or more are not unusual.

Another reason for not (wholly) compensating the damage, is the so called active risk-assumption (*voorzienbaarheid*). This criterion is about foreseeability of a concrete measure on a so called reference date (*peildatum*), usually the date on which the administrative decision that causes the damage is taken. The question is whether the adversely affected party has accepted or should have taken into account the risk of negative measures when deciding to buy or invest in his business or property. For risk-assumption it is sufficient that the foreseeability of the adverse administrative decisions can be derived from a concrete and publicly available policy document of a public authority.

In Poland, introducing restrictions (as opposed to expropriation) of ownership does not, as a rule, necessitate the payment of compensation (Bednarek, 2007, p. 230; Jarosz-Żukowska, 2016, pp. 138-139). According to art. 31 s. 3 Constitution of the Republic of Poland (CRP) and art. 64 s. 3 CRP the legislator may restrict the right of ownership through statutory provisions if the restrictions are necessary in a democratic state to protect public security or order, the environment, public health or morals, or freedoms and rights of other persons. Constricting ownership by introducing restrictions is legally permissible, as long as it is done, among other things, for environmental protection purposes and is proportionate to the objective to be achieved (Habdas, 2015, pp. 303-308). Providing compensation for such restrictions is not required and occurs only when it is necessary to achieve the mentioned proportionality. There is also no legal requirement to compensate the entire extent of loss that the restrictions caused because one is dealing with legal activities (Gray & Gray, 2009, pp. 26-27, 1392-1400).

Like in the Netherlands, in Poland the general constitutional principle of equality in law allows to construe the principle of equality in being burdened by public duties. Individuals disproportionality burdened with the consequences of protecting a public interest are entitled to compensation that reinstates proportionality, which rarely means full compensation for all possible effects of intervention (Parchmiuk, 2007, pp. 119, 184; Bagińska, 2006, pp. 41-43, 134-136). Unlike in the Netherlands, in Poland in the case of public intervention taking the form of a RUA, the level of overall loss is not calculated and no general discount on compensation is applied. Instead, loss for which compensation may be claimed is specified and that loss is reimbursed in full. In the case of airports, compensable loss consists of losses caused by restrictions on land use introduced in a RUA that concern a given piece of real estate. Losses caused by loss of comfort, amenity, stigmatization, etc. have not been designated as compensable (art. 129 s. 1 and 2 POE). In practice, Polish courts have applied an extensive interpretation of POE and seek to award compensation for the full extent of loss (i.e. not only restrictions in land use, but also decreased comfort and market stigmatization), disregarding the fact that damage caused by legal activities of public bodies is limited and precisely defined (Habdas & Konowalczuk, 2018, pp. 9-10).

2. Pursuing compensation claims

When it comes to the technical aspects of determining and claiming compensation it should be noted that the Schiphol area encompasses the ‘domain’ of a number of public authorities, all of whom may in some way

have to decide on issues regarding the development of the airport and whose administrative acts might have caused damage to parties within that Schiphol area. Any (serious) expansion (resulting in an increase of noise) would have to find a basis in an administrative act, most likely a zoning plan. Part of the (mandatory) preparation of such a zoning plan would be an environmental impact assessment. Part of that assessment would be a calculation of the expected noise caused by the (use of the) airport to (among others) adjacent properties. If the outcome of that assessment would be that the expected amount of noise was intolerable, meaning that the (extra) noise would result in the real estate in the affected area becoming unsuitable for (continued) use, the only way to go forward would be to remove that obstacle by expropriating the affected real estate. If however the outcome of the assessment would be that the noise effects are tolerable, the (expected) noise limits would be integrated in the environment plan. The increase of noise on the basis of those limits, and the impact of this noise on the value of the property, would, of course, entitle owners of such property to compensation. The cause of the damage is in such a case deemed to be the administrative act permitting the (maximum amount of) noise[1].

In order to handle claims of the affected parties in the Schiphol area, all those public authorities, the minister of Transport, Public Works and Water Management, the provincial council of the province of North-Holland, the board of the water authority of Groot-Haarlemmermeer and some nineteen municipal councils decided to create a 'one-stop-shop' for claims resulting from administrative acts aimed at facilitating the expansion of Schiphol Airport. In accordance with the so-called Act on Common Regulations that provides for the possibility for public authorities (such as municipal councils, provincial councils and ministers) to create a so-called 'common regulation' (*gemeenschappelijke regeling*), a new public entity was created, namely the Damages Authority Schiphol Airport (*Schadeschap Luchthaven Schiphol*, Stcrt. 1998, no. 223). The specific purpose of this new public entity was to facilitate 'a clear, knowledgeable and efficient assessment' of claims resulting from the expansion of Schiphol Airport.

[1] If the actual noise proves to be (much) higher than expected, the noise limits in the environment plan will be violated. Violation of those limits is something that an affected property owner will be able to bring to the attention of the (administrative) court. The public authority might then do one of two things: either (force the operator of the airport to) reduce the noise or raise the noise limits. The latter course is the most likely one, but this would result in a situation where the new noise limits conflict with the house of the affected owner being suitable for living. The outcome would then be that the public authority purchases or – if necessary – expropriates the property in order to solve the noise issue.

Creating one front desk for all those claims was supposed to make life a lot easier for possible claimants who would not have to file several claims before various public authorities.

The Damages Authority was established in 1998 initially for a period of ten years, but with a possibility of extension. The Damages Authority decided upon the last claim in 2019 and was dissolved per 1 June 2020 (Stcrt. 2019, no. 35320). The Damages Authority dealt with some 5000 applications and looked back to decisions taken from 1995 as well. The decision to dissolve was made in 2017 because the Damages Authority no longer had the power to handle new claims. Claims expire after a period of five years and the last changes of the zoning plans around Schiphol took place in 2008. Furthermore, due to a change in the Aviation Act (Luchtvaartwet), claims regarding the expansion of Schiphol Airport must be filed with the central government. The Ministry of Infrastructure and Water Management will handle any future claims and there no longer exists a need for a special entity. There has so far been no evaluation of the work of the Damages Authority.

In Poland, no special authority to handle compensation claims has been created. This is a consequence of the fact that unlike in the Netherlands, compensation is connected with particular restrictions in land use introduced in a RUA for the airport. The latter handles claims and is easily identifiable. The legislator did not envisage the necessity to involve any public authorities in the process of claiming compensation, as art. 129 s. 1 and 2 POE clearly identifies the occurrence potentially causing damage (the introduction of land use restriction in a RUA) and allows compensation only for the normal consequences of such restrictions. The parties should resolve the matter on the market, with the use of a valuation prepared by a real estate appraiser whose valuation is objective. It is also relatively easy to compare the value of real estate without restrictions on land use with its value when it has been subjected to specified restrictions. In the case of a dispute, each party may apply to the civil court which should happen in exceptional cases, when restrictions in land use have caused extraordinary losses, e.g. loss of profits. In practice, homeowners demand compensation which encompasses the difference in values between properties located close to the airport and within a RUA and the values of properties located further away. In other words, compensation claims include all market losses, not only ones compensable under POE. This means that homeowners wish to be compensated also for typical market risk of value diminution connected with urbanization. For this reason, the vast majority of cases are resolved in courts, the latter taking a broad view of loss compensable under 129 s. 2 POE

and relying on valuations in which it is unclear what the cause of loss of value was. Thus the causal link between the legal activity causing loss (i.e. introducing restrictions in land use) and the loss itself is broken.

3. Compensation procedure

The Damages Authority consisted of a general board, a daily board, a chairperson and a so-called decision committee (*besliscommissie*). The members of the general board were appointed by the public authorities that created the Damages Authority. This general board was given the exclusive authority to decide on claims resulting from legitimate decisions or actions from or on behalf of the participants in the Damages Authority. Article 19 of the Common Regulation entitled the general board to create the so-called decision committee and to transfer the authority to decide on claims to his decision committee. The decision committee reported on the progress of its activities and in particular on the settlement of the claims received, once a year (through the intervention of the daily board) to the general board. The decision committee consisted of three independent experts and their substitutes. One of those three experts acted as chairperson. The experts and their substitutes were paid by the State. The Minister provided civil servants to staff the Damages Authority.

As mentioned, the decision committee of the Damages Authority had the authority to decide on claims regarding the noise nuisance caused by the administrative act that allowed the expansion of Schiphol Airport. On the base of Article 10 of the Common Regulation the general board had formulated a Procedure Regulation (*Verordening schadeschap Luchthaven Schiphol*) to guide the decision process. When the decision committee declined to grant a compensation and dismissed the objection against its decision, the applicant/suffering party could file an appeal at the administrative court and afterwards could file another appeal at the judiciary branch of the Council of State (*Afdeling bestuursrechtspraak van de Raad van State*). The decision committee would not decide on a claim when the request did not comply with the formal requirements in Article 3 of the Procedure Regulation and the suffering party omitted to complete the request after the restored term granted by the decision committee.

The eventual decision on the claim relied largely on the advice of the so-called advisory committee (*adviescommissie*), which committee is mentioned in Articles 7-9 of the Procedure Regulation. This advisory committee investigated amongst other things whether the damage is in compliance with all the substantive requirements, the extent of the damage, the active risk-assumption and if the compensation for damage is not

otherwise assured. This committee had its own research opportunities, such as the possibility to obtain information and advice from third parties and a site visit (*plaatsopneming*). The advisory committee made sure that both the decision committee and the suffering party had the opportunity to elaborate, possibly via an authorized representative, their positions by organizing an oral hearing. Both parties were obliged to provide the advisory committee with all the information necessary for advising.

The advice of the advisory committee was sent to both parties. The suffering party could express his/her concerns about the advice within six weeks to the decision committee. The decision committee had to decide upon the claim within twelve weeks after the receipt of the advice, which period could be extended by six weeks. The decision committee could, instead of deciding on the claim, request the advisory committee to submit an additional advice within six weeks regarding remaining questions. In that case the decision committee decided on the claim within six weeks after receiving the additional advice. Settled case law allowed the decision committee to support its decision on the claim by referring to this advice, as long as the advice gave an objective and neutral insight into the facts and circumstances on which the conclusion of the advisory committee was based. Almost since its establishment, the Damages Authority was struggling with handling claims within the prescribed terms laid down in Article 10 of the Procedure Regulation. On behalf of the Damages Authority an investigation was conducted. Based on the outcome and recommendations of this investigation (*Onderzoek naar de juridische doelmatigheid en de besluitvorming van het Schadeschap Luchthaven Schiphol*) the general board introduced some changes in the Procedure Regulation (Stcrt, 2012, nr. 8910). For instance the decision board could choose to appoint one expert instead of three to form the advisory committee in the so-called 'simple cases'.

The costs of the Damages Authority were (indirectly) financed by the airlines that were landing at Schiphol Airport with civil aircrafts, by means of a levy for every landing they made (ABRvS 6 December 2017). The practice of frequently exceeding the decision deadlines raised the question if financing by the airlines was reasonable. More specifically the question was brought before the administrative court by the Board of Airline Representatives in the Netherlands (BARIN) whether the costs that were the consequence of 'ineffective and systematic illegal acts' (*i.e.* exceeding deadlines for issuing decisions) must be deducted. The court held that the ministry of Transport, Public Works and Water Management had to reassess if these costs should not or only partially be charged to the airlines. This resulted in an agreement between the BARIN and the ministry to compensate the airlines on the costs

that were attributed to ineffective and untimely decision making by the Damages Authority.

As already mentioned, unlike the Dutch solution, the Polish legislator did not establish a special authority to deal with claims and parties were expected to conclude transactions, with the help of property appraisers, on a voluntary basis. This did not happen largely to differences in the perception of what losses were to be compensated and most cases end up in the civil court system, causing disputes to last from 2-5 years and often go through two instances of courts, sometimes reaching the Supreme Court.

4. Damage that qualifies for compensation

Most of the claims handled by the Damages Authority dealt with damage as a result of a decrease in value of residential real estate. In the Dutch approach on compensation for lawful government acts there is no room for a separate compensation for immaterial damage due to reduced enjoyment of living because of for instance noise disturbance. The capitalized objectively reduced enjoyment of living is included in the decrease in value of real estate. Claims handled by the Damages Authority regarding reduced enjoyment of living because of noise disturbance were therefore, not surprisingly, declined (Administrative court North-Holland 5 July 2018, ABRvS 13 October 2010). The Damages Authority handled a few claims based on depreciation of the value of (farmable) land and (agricultural) business real estate and income loss, for instance tax damage, higher rent and division of business operations, as well (ABRvS 28 December 2018, ABRvS 27 September 2017, Administrative court North-Holland 5 July 2018). The active risk-assumption played a big part in the handling of claims by the Damages Authority. In almost 20% of the available case law the decision committee (and/or the advisory committee) held the foreseeability of the concrete measures against a suffering party[2]. The presumed foreseeability is deduced out of, for example, draft zoning plans which were made publicly available for inspection. But the administrative court also decided that out of the establishment of noise zones and noise contours by a public authority could be deduced that an increase of noise pollution associated with the growth of Schiphol Airport was sufficiently foreseeable (Administrative court Haarlem 29 June 2012).

[2] From research in the Dutch database of case law (available via rechtspraak.nl) follows that there are 97 publicly available judgements on the subject "Schadeschap Luchthaven Schiphol" and within 18 of them the judge decided about the active risk-assumption (*voorzienbaarheid*) of the damage and/or the affected party argued something about it.

In comparison, in the case of Poland compensation for airport noise (or noise and emissions from other public works) has not been introduced. The legislator's assumption was that the location of a property near an airport cannot be compensated, because there is no reason to pay for the fact that there are other, more desirable locations of residential properties, which are more valuable. Instead, the legislator decided to intervene in areas, where noise levels exceed ones prescribed in environmental legislation by introducing restrictions in land use or obligations to acoustically improve buildings. Consequently, for the effects of these activities, compensation is due. This solution has not been understood by homeowners, courts and valuers alike, all of whom assumed, that the mere introduction of a RUA legalizes increased noise levels and thus restricts the right of ownership, causes a diminution in value and deserves compensation. This line of argumentation is contrary to art. 129, 135 and 136 POE but also assumes that were it not for the introduction of RUA, noise levels would not be exceeded and house values near an airport would not be lower than in other, more distant locations.

In addition, land use restrictions regarding residential properties in the RUA for Chopin Airport have only been introduced in a zone closest to airport. These restrictions forbid erecting new residential buildings and rebuilding, extending, or adding storeys to existent residential buildings, as well as changing other uses to residential use (Resolution No 76/11, §5 point 1). If such restrictions cause loss of real estate value, it is to be compensated. For residential buildings located in other zones of RUA, no restrictions have been introduced, therefore despite noise externalities homeowners have no cause of action to claim compensation, however all of them are entitled to reimbursement of acoustic renovation costs. It is safe to say that this solution has not been accepted by homeowners who seek to obtain compensation for excessive noise and the inconvenience this causes. As already mentioned, an extensive interpretation of POE provisions has allowed courts to award compensation for loss of value, despite the fact that a given property has not been restricted in use and that there have been no alterations of the airport itself (e.g. Supreme Court judgement of Aug. 2013 and of 15 Dec. 2016). The problem with such an approach is that valuations show differences in market values that may have existed all along, are not directly connected with public intervention, and unjustifiably compensate all market risks of selected homeowners (near airports, but not near e.g. roads). Nevertheless practice has clearly shown, that homeowners wish to be compensated for inconvenience caused by noise and not for land use restrictions, which are not extensive and concern only a small number of

houses within a RUA. The above findings allow to summarize the similarities and differences of both system in table 4.

Table 4. Results of comparing interventions in the Netherlands and Poland on housing markets near airports

No.	Details	The Netherlands	Poland	Comments
1	**Object of intervention (economic goods subjected to intervention)**			
1.A	Real estate	yes	yes	
1.B	Businesses (enterprises)	yes	no	
1.C	Persons	no	no	
1.D	Other	no	no	
2	**Regulated entities – under obligation**			
2.A	Airports	yes	yes	
2.B	Municipality and other bodies prescribing land uses	no	yes	PL- RUA may prescribe limitations on land uses in development plans enacted by municipalities
2.C	Owners of the objects of intervention	no	yes	PL- Voluntary acoustic improvements of existent houses, obligatory acoustic standards for new houses to be erected
2.D	Other	no	no	
3	**Regulated entities – entitled**			
3.A	Owners of the objects of intervention	yes	yes	
3.B	Municipality and other bodies prescribing land uses	no	no	
3.C	Other	no	no	
4	**Type of provisions introducing public intervention**			
4.A	Private(civil) law – general rules and provisions	no	yes	
4.B	Administrative law – general rules and provisions	yes	no	
4.C	Environmental protection	no	yes	
4.D	Planning law	no	no	
4.E	Construction and infrastructure law	no	no	
4.F	Special real estate regulations	no	no	

4.G	Industry regulations – provisions on airports	no	no	
4.H	Other	yes	no	
5	**Public bodies introducing public intervention**			
5.A	State administration	yes	no	
5.B	Local administration	yes	yes	PL- third tier of self-government
5.C	Dedicated public body	no	no	
6	**Public bodies implementing/performing and monitoring public intervention**			
6.A	State administration	yes	no	
6.B	Local administration	yes	no	
6.C	Administrative courts	yes	yes	PL- only in relation to the RUA resolution. In In the Netherlands disputes on the level of compensation or buy-out price
6.D	Private law courts	no	yes	PL - only in disputes on the level of compensation or buy-out price
7	**Legal and economic type of intervention**			
7.A	Triangular (regulates type and scope of exchanged property right)	yes	yes	
7.B	Binary (imposes an exchange of property right)	no	no	
7.C	Autistic (property taking with no compensation)	no	no	
7.D	Other	no	no	
8	**Intervention objective**			
8.A	Allocation of goods	yes	yes	
8.B	Stabilizing the situation or the market	no	yes	
8.D	Distribution of goods	no	no	
8.E	Other	n	no	
9	**Scope of compensation in case of allocation of property rights (delimiting legal damage)**			
9.A	Acoustic improvements – reimbursement of costs borne by the owner or performance by repairs by the obliged entity	yes	yes	

9.B	Value diminution caused by the intervention (e.g. introducing special legislation or zones) itself (market stigmatization)	no	yes	
9.C	Value diminution caused by introduced restrictions in land use	no	no	
9.D	Value diminution caused by noise externalities	yes	yes	
9.E	Lost profits	yes	yes	
9.F	Buyout at the request of the landowner	yes	yes	PL- Only if restrictions materially limit or make impossible the use of property; in practice no such claims filed
9.G	Other	no	no	
10	**Sources of financing compensation**			
10.A	Public (state, public body)	no	no	
10.B	Private – own airport funds	no	yes	
10.C	Mixed – Airport, public funds, other private funds	no	no	
10.D	Mixed – airport, other private funds (airlines)	yes	no	NL- compensation paid by public authority, reimbursed by Schiphol, the latter adding tariffs to airline costs
10.E	Other	no	no	
11	**Entity paying compensation**			
11.A	Airport	no	yes	
11.B	Public – public body	no	no	
11.C	Public – dedicated public body	yes	no	
11.D	Other	no	no	
12.	**Premises of determining the level of compensation and the entity determining compensation**			
12.A	Free market negotiations of parties	no	yes	PL -in practice parties cannot reach agreement and disputes solved in civil courts
12.B	Public body in an administrative decision	yes	no	no
12.C	Other	no	no	no
13.	**Valuers' involvement in determining compensation**			

13.A	Optional, not formally necessary	no	yes	PL - required in court proceedings; in voluntary market transaction valuation gives guidance
13.B	Required – valuation is binding	yes	no	
13.C	Required – valuation is guidance	yes	no	
13.D	Other	no	no	

Source: own study.

A comparison of public interventions in The Netherlands and Poland based on descriptive criteria shown above indicates significant differences. In order to present them, tables 5 and 6 below have been compiled.

Table 5. Missing or differing elements of public Polish public intervention when compared to the Netherlands

No.	Details	The Netherlands	Poland
1.B	Businesses (enterprises)	yes	no
4.B	Administrative law – general rules and provisions	yes	no
4.H	Other	yes	no
5.A	State administration	yes	no
6.A	State administration	yes	no
6.B	Local administration	yes	no
10.D	Mixed – airport, other private funds (airlines)	yes	no
11.C	Public – dedicated public body	yes	no
12.B	Public body in an administrative decision	yes	no
13.B	Required – valuation is binding	yes	no

Source: own study.

Table 6. Missing or differing elements of public Dutch public intervention when compared to Poland

No.	Details	The Netherlands	Poland
2.B	Municipality and other bodies prescribing land uses	no	yes
2.C	Owners of the objects of intervention	no	yes
4.A	Private(civil) law – general rules and provisions	no	yes
4.C	Environmental protection	no	yes
6.D	Private law courts	no	yes
8.B	Stabilizing the situation or the market	no	yes
9.B	Value diminution caused by the intervention (e.g. introducing special legislation or zones) itself (market stigmatization)	no	yes
10.B	Private – own airport funds	no	yes
11.A	Airport	no	yes

12.A	Free market negotiations of parties	no	yes
13.A	Optional, not formally necessary	no	yes

Source: own study.

In the Netherlands, the intervention is regulated by various provisions regarding the realization of investment and infrastructure projects, its scope is not limited to real estate but also includes businesses. Intervention is introduced by government administration and compensation is awarded by an entity designated to deal with compensation matters. Property valuation by an appraiser is required and it is binding. In Poland, intervention is introduced in environmental protection provisions, it is directed not only to airports but also to municipalities and landowners. One of its aims is to stabilize the market. Compensation of losses is limited only to value loss caused by formal restrictions on land use. The airport is financially responsible for compensation which is to be freely negotiated without the obligation to rely on a professional valuation. Simultaneously, it is possible to indicate common elements of interventions in both countries. These have been complied in table 7 below.

Table 7. Common elements of public interventions in the Netherlands and Poland

No.	Details	The Netherlands	Poland
1.A	Real estate	yes	yes
2.A	Airports	yes	yes
3.A	Owners of the objects of intervention	yes	yes
5.B	Local administration	yes	yes
6.C	Administrative courts	yes	yes
7.A	Triangular (regulates type and scope of exchanged property right)	yes	yes
8.A	Allocation of goods	yes	yes
9.A	Acoustic improvements – reimbursement of costs borne by the owner or performance by repairs by the obliged entity	yes	yes
9.D	Value diminution caused by noise externalities	yes	yes
9.E	Lost profits	yes	yes
9.F	Buyout at the request of the landowner	yes	yes

Source: own study.

In both countries the conflict between neighbouring land uses is resolved by an intervention that may be classified as triangular. Its aim is to allocate entitlements, improve acoustic insulation of buildings and allow for property buyouts in places most affected by increased noise levels.

CONCLUSION

Airport noise externalities and their influence on prices of residential real estate have often been the subject of research based on developed methodology and data amenable to comparisons. The aim of this article was to provide initial, descriptive comparisons of the approaches adopted in the Dutch and the Polish legal system with regard to resolving the neighbor conflict and instituting rules for possible compensation. In both systems the legislator intervenes, however in a different capacity. In Dutch law the owners of real estate have recourse to general administrative provisions which allow them to recover their losses which result from administrative acts that allow the airport to function. Compensation is however discounted to reflect the public burden principle and to account for market risk that must be borne by the property owner. In Polish law, environmental legislation requires RUAs to be established, with land use restriction prescribed for residential properties most affected by noise. Compensation is due not for airport externalities and their influence on value, but for specified land use restrictions, if they concern a given piece of real estate, introduced in a RUA. The above denotes that in both systems compensation is not aimed at full reparation of all losses resulting from onerous neighborhood or from administrative acts which establish rules that allow airports to operate. Both systems rely on the principles connected with the public burden doctrine, proportionality and limited scope of compensating for the effects of legal public authority activities.

An important caveat to the above is that in Polish law a significant departure from legal provisions was facilitated by court judgments and valuations, according to which lower values of properties located near airports when compared with values of properties located further away are to be compensated to the full extent, thus severing the causal link between the intervention and the loss it created and disregarding the aforementioned principles. In the Netherlands such severance and accidental compensation of value losses resulting from regular market risk are less likely to occur, since claims must be related to specified administrative acts and not the general difference of prices between properties closer and further from the airport.

Although for reasons obvious from the discussion, Poland did not require a special authority to deal with claims, it is notable that the vast majority of disputes are resolved in court, as opposed to the parties themselves, with the assistance of a property valuer. In the Netherlands the Damages Authority with its defined claims procedure could effectively decrease the number of cases that had to be tried in an administrative court.

Although in both countries the economic burden of compensation falls on the airport, in the Netherlands most of the burden is effectively passed on to airlines through fees they pay for using the Schiphol airport.

It should also be indicated that comparing public interventions in these two systems from the point of view of their economic and environmental effects is hindered due to the fact that in Poland the intervention has been implemented erroneously, i.e. compensation is awarded for losses that are not the effect of the intervention. For this reason comparing the legal systems on the level of their premises and on the level of their actual application will yield different results.

Additionally, the level of state involvement in resolving the neighbor conflict is different in both countries. The Dutch solutions are systemically complex and require a relatively high level of state involvement, however this has prevented court disputes from becoming the leading manner of resolving the conflict. The Polish solution, heavily relying on Coase's theorem, is simple and assumes a minimal involvement of the state, however its success depends on the level of institutional maturity of the real estate market. Unfortunately this level has proven to be too low, because most disputes have to be resolved in court which generates high social costs. Therefore Polish regulations require significant corrections, whereas the Dutch system may be improved to tackle drawbacks connected with the time it takes to complete the claims procedure.

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