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A DECREASE IN MUNICIPAL INCOME FROM PROPERTY TAX AS AN EXTERNALITY OF THE ZOMBIE PHENOMENON IN THE REAL ESTATE MARKET IN POLAND

Abstract

Background: Abandoned properties, including “zombie” objects, are common worldwide. Abandoned and decaying for years, they cause negative externalities for municipalities in the form of reduced income from property tax. There is some foreign literature on the subject; however, in Poland, the phenomenon of zombies in the real estate market remains generally unrecognized.

Research purpose: The article examines the problem of the external effect of zombie properties in the form of reduced municipal income from property tax in Poland.

Methods: Analysis of existing data and the case study method were applied in this article.

Conclusions: The possibilities of estimating the scale of the external effect in the form of reduced municipal income from property tax in Poland are limited due to the lack of relevant statistical data. However, the case studies show that although such a decrease in municipality income from property tax was not observed in the examples discussed, tax arrears of zombie objects are an external effect for these municipalities, especially smaller ones.

Keywords: property tax, zombie properties, externalities.

JEL classification: H23, H26, H71, R39

1. Introduction

The phenomenon of “zombie” properties in the real estate market in the Polish literature remains unrecognized. There are many articles on abandoned properties and slightly fewer on zombie buildings or zombie subdivisions in the international literature. However, since “zombies” are a particular type of abandoned property, when analyzing this phenomenon, one can rely on a somewhat broader range of literature.

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In the literature, the definitions of zombie buildings vary widely. The term usually refers to properties that are “stuck” in foreclosure proceedings, and the owner is not exactly known.¹ They can also be properties that the owner is not interested in, so they are deteriorating, and due to physical or functional wear, they cannot perform their functions² (there are many such properties in Poland). “Zombie subdivisions” or “arrested developments” can also be distinguished. They mean unfinished, abandoned projects (in Poland, these include the Osiedle Żubr in Niepołomice or the investment at Twardowskiego Street in Cracow). The reason for abandonment is most often the bankruptcy of the developers, but it can also be financial or legal problems.³ Therefore, it can be said that “zombie” properties – objects that are neither alive nor dead⁴ – exist, but for various reasons, they are unable to perform their intended function (unregulated legal status, functional wear, poor technical condition, *etc.*). These types of properties have a number of external effects.

Externalities should be understood as the effects that a given transaction produces for entities not directly related to it.⁵ White (2015) presents a similar definition, recognizing externalities as side effects of various activities that are felt by third parties.⁶ These effects are very common in the housing market. The way we maintain the property or not affects the aesthetics of the environment

¹ See: **H. Caloir**, *The “Zombie” and Vacant Properties Remediation and Prevention Initiative: Emerging Best Practices*, LISC 2018; **A. Clark**, *How the Zombie House Crisis Mutated and What Cities Are Doing About It*, <https://nextcity.org/daily/entry/zombie-houses-vacant-properties-ownership-solutions>; accessed 1.01.2020; *The 2015 Endangered List*, <https://www.historic-albany.org/ehc>; accessed 13.04.2020.

² See: **T.A. Corfman**, *Tishman Speyer defaults on big Chicago loan*, <https://www.crainsnewyork.com/article/20091205/FREE/912059998/tishman-speyer-defaults-on-big-chicago-loan>; accessed 1.01.2020; **Ch. Goulding, J. Most, S. Marr**, *The Energy Tax Aspects of Zombie Buildings*, *Corporate Business Taxation Monthly*, April 2011, p. 15; **S. Ginsburg**, *Beware of Zombie Buildings: Danger Can Be Lurking Among the Opportunities*, <https://hughesmarino.com/san-diego/blog/2010/06/09/beware-of-zombie-buildings-danger-can-be-lurking-among-the-opportunities/>; accessed 1.01.2020.

³ **J. Holway**, *Arrested Development. Combating Zombie Subdivisions and Other Excess Entitlements*, Lincoln Institute of Land Policy, Cambridge 2014, p. 5.

⁴ **A. Clark**, *How the Zombie House Crisis Mutated and What Cities Are Doing About It*, <https://nextcity.org/daily/entry/zombie-houses-vacant-properties-ownership-solutions>; accessed 1.01.2020.

⁵ **E. Rossi-Hansberg, P.D. Sarte**, *Economics of housing externalities*, *International Encyclopedia of Housing and Home* 2012/2, pp. 47–50.

⁶ **M. White**, *On the Relevance of Wrongfulness to the Concept of Externalities*, *Oeconomia – History | Methodology | Philosophy* 2015/5(3), p. 314.

and thus the value of neighboring properties.⁷ Besides the decrease in the value of real estate, other external effects of the zombie phenomenon in the real estate market can also be distinguished, e.g.:

- a decrease in the quality of life of residents of the surrounding properties resulting from the fact that such objects attract criminals, homeless people who cause fires, and that rubbish is tossed onto this type of property. Additionally, underground parking lots often have standing water;
- a security risk – unsecured properties often encourage pedestrians to take shortcuts; protruding wires, fragments of walls, or pits on the construction site can pose a threat to the health and even life of pedestrians;
- an increase in insurance premiums due to a greater risk of fires or burglaries in the vicinity of the zombie property.⁸

Some external effects of the “zombie” phenomenon in the real estate market can also be felt by municipalities. An example is the decrease in municipalities’ income from unpaid property taxes or the decrease in the value of these properties. Property tax is a compulsory contribution paid by the taxpayer in exchange for certain benefits from local authorities in the form of tangible and intangible services, the possibility of using technical and social infrastructure, or development projects, among others.⁹ They are often a significant source of a municipality’s income, but they are very diverse in terms of the tax base, tax rates, and the possibilities of imposing and collecting tax.¹⁰

An important issue is that value is not always the basis for taxation. In some countries, the basis is the area of the property. Under such a system, a fee is charged per square meter of land, per square meter of usable floor space of a building, or for a combination thereof.¹¹ In Poland, pursuant to the Act of January 12, 1991, on local taxes and fees, land and buildings – or parts of them – are taxed based on their area, and constructions such as bridges, airports, tunnels are taxed at max. 2% of their value.

⁷ **E. Rossi-Hansberg, P.D. Sarte**, *Economics of housing externalities...*, pp. 47–50.

⁸ **J.M. Shane**, *Abandoned Building and Lots*, Problem-Specific Guides Series 2012/64, pp. 9–14.

⁹ **A. Buang**, *Analysis of Factor that Contributes to the Accumulation of Uncollected Rates in Local Authorities in Malaysia*, quoted after: **S. Pawi, D.M. Juanil, W.Z.W. Yusoff, F. Shafie**, *Property Tax Performance of Local Authorities in Malaysia*, 2011 International Conference on Management and Artificial Intelligence IPEDR vol. 6, IACSIT Press, Bali, Indonesia 2011, p. 42.

¹⁰ **R.M. Bird, E. Slack**, *Land and Property Taxation: A Review*, 2002, <http://www1.worldbank.org/publicsector/decentralization/June2003Seminar/LandPropertyTaxation.pdf>; accessed 8.04.2020.

¹¹ *Ibidem*.

Regardless of the tax base, however, improper management of property tax collection may result in a decrease in revenues to municipal budgets. “Zombie” properties can contribute to this in three different ways. The first form may be tax arrears or even tax crimes (unwillingness to pay taxes). Such arrears can be a motive for abandoning properties in a neighborhood, and then tax collection will decrease even further.¹² It can also be an incentive for neighboring property owners not to pay taxes.¹³ The second reason is the decline in property value. The owner does not show interest in the abandoned property, so it becomes technically and functionally worn. In countries where property taxes are charged on its value, this is particularly evident. The third reason is that an abandoned property reduces the attractiveness of the location, the quality of life of residents, *etc.* This, in turn, reduces the demand in this area; thus, sales prices decrease. Then the losses of local governments are even greater.¹⁴ The subject of the decline in municipal income from property tax caused by abandoned properties, including “zombies,” was presented by Adams Kirshner (2019), Gottdiener, Hohle, and King (2019), and Fisher, and Fox (2019). Additionally, lower revenues to municipal budgets result in reduced spending on infrastructure or services necessary for residents,¹⁵ and collecting overdue property tax can also be expensive both in administrative and financial terms for municipalities¹⁶.

In the context of property tax in Poland, in the case of real estate developed with buildings, property arrears arise only as a result of non-payment. Declines in property value do not matter here. Despite this, even if an external effect is not as noticeable here as in countries with taxes based on property values, the lack of recognition of any external effects of the phenomenon of “zombies” in the real estate market in Poland is the reason to examine this problem. In this article, the author poses the following problem questions:

¹² **J. Alm, Z. Hawley, J.M. Lee, J.J. Miller**, *Property tax delinquency and its spillover effects on nearby properties*, *Regional Science and Urban Economics* 2016/58, pp. 71–73.

¹³ **M. Chirico, R. Inman, Ch. Loeffler, J. MacDonald, H. Sieg**, *Deterring Property Tax Delinquency in Philadelphia: An Experimental Evaluation of Nudge Strategies*, NBER Working Paper Series, Working Paper 23243, National Bureau of Economic Research, Cambridge 2019.

¹⁴ *Vacant Properties. The True Costs to Communities*, The National Vacant Properties Campaign, Washington 2005, pp. 3–10.

¹⁵ See: **D.T. Kraut**, *Hanging out the no vacancy sign: eliminating the blight of vacant building from urban areas*, N.Y.U., Law Review 1999, pp. 1142–1156.

¹⁶ **J. Alm, Z. Hawley, J.M. Lee, J.J. Miller**, *Property tax delinquency...*, p. 72.

1. Does the problem of lower municipality incomes because of unpaid property tax by zombie objects in Poland exist at all, and if so, what is the scale?
2. How can this external effect of abandoned properties be measured in Poland?
To achieve the intended goals, the analysis of existing data in the form of literature queries and case study method were used.

2. Methods and materials

In Poland, there is a lack of statistics on abandoned or vacant properties, except for municipal stock. Therefore, it is difficult to find any information about zombie properties, significantly hindering any analysis of the external effects of this phenomenon. Nevertheless, this article attempts to examine the external effect of zombie or abandoned properties in the form of reduced municipal income for non-payment of property tax.

Firstly, a linear regression model was estimated (using the income of municipalities from property taxes as the dependent variable, and the unemployment rate, housing losses, “building gap” in private construction and “building gap” in development construction as explanatory variables). Unfortunately, the study was not successfully completed for several reasons. First, it was a pilot study. In other countries, where the tax base is most often the value of a property, the relationships between municipality incomes (or the amount of tax arrears) and real estate prices are examined using hedonic models, for example. However, there are no similar studies for tax systems based on the area of real estate, so it is difficult to say what kind of method would be effective here. Additionally, although a better dependent variable would be the amount of tax arrears, there is no such data in Polish statistics. Such information can be collected based on reports on the budgets of individual municipalities, meaning that quantitative research at the national level based on such a variable would not be possible. In addition, short time series are a problem. The third symptom of the failure of the quantitative study was that out of the four explanatory variables, only two statistically significant variables remained after the sequential elimination of the variables. Unfortunately, they were difficult to interpret logically. Also, the results of testing this model were not satisfactory, e.g., a high R^2 coefficient could indicate a problem with the stationarity of variables, and the p-value in the Durbin-Watson test was in the inconclusiveness range. Therefore, the lack of similar studies, the lack of appropriate variables (that illustrate the problem), and also short time series constitute a significant barrier to quantitative research in this area in Poland.

Therefore, it was decided to discuss case studies. The case study is a qualitative method that comprehensively describes a particular phenomenon.¹⁷ It is empirical because it describes and analyzes real-world phenomena and uses a variety of techniques and tools for collecting and analyzing data, e.g., observations, interviews, surveys, documentation of the examined organization, press sources, the internet, and available databases. Based on the collected information, the case study method allows an in-depth analysis of the problem and presenting its specific.¹⁸ In this article, the case studies are:

- 1) the “Lucień” leisure and conference center in the Gostynin Municipality (land and mortgage register PL1G/000053**/*);
- 2) the Wisła-Bryka factory in Włocławek (land and mortgage registers WL1W/000454**/* and WL1W/000409**/*);
- 3) The palace and park complex in the Sława Municipality (land and mortgage register ZG1W/000083**/*).

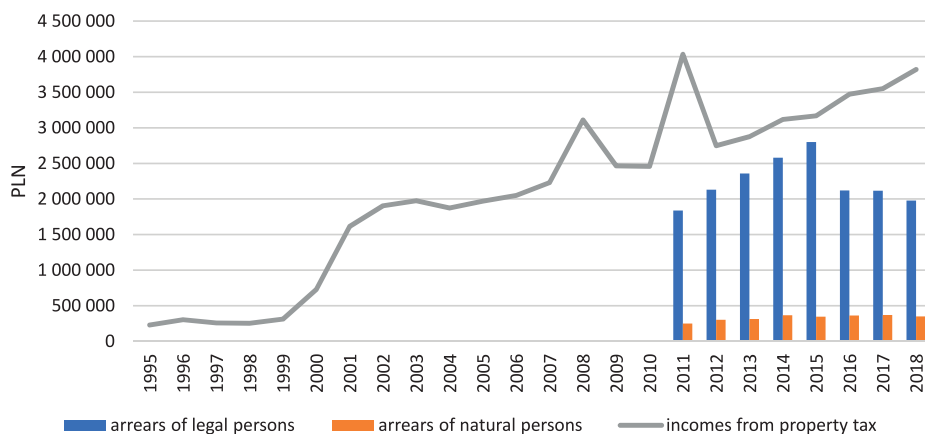
3. Research results

3.1. “Lucień” leisure and conference center in the Gostynin Municipality

The Gostynin Municipality is located in the Mazowieckie Voivodeship, not far from Płock, Włocławek and Kutno. On May 28, 2019, the municipality was inhabited by 12,077 people, and 899 business entities were registered – they all are property tax payers. Figure 1 shows that the municipal income from property tax increased for most of the analyzed years, although a downward trend is visible in 2004, 2009–2010 and 2012. In those last two periods, many enterprises went bankrupt, so the municipality may have had more problems collecting tax arrears, which is also shown in this chart. One of the large debtors of Gostynin Municipality was the “Lucień” leisure and conference center in Miałków.

¹⁷ M. Kosterka (ed.), *Organizacje w praktyce. Studia przypadku dla studentów zarządzania*, Poltext, Warszawa 2011, quoted after: W. Grzegorzczak, *Studium przypadku jako metoda badawcza i dydaktyczna w naukach o zarządzaniu*, in: W. Grzegorzczak (ed.), *Wybrane problemy zarządzania i finansów. Studia przypadków*, Wydawnictwo Uniwersytetu Łódzkiego, Łódź 2015, pp. 9–14.

¹⁸ W. Grzegorzczak, *Studium przypadku jako metoda badawcza i dydaktyczna w naukach o zarządzaniu*, in: W. Grzegorzczak (ed.), *Wybrane problemy zarządzania i finansów. Studia przypadków*, Wydawnictwo Uniwersytetu Łódzkiego, Łódź 2015, pp. 9–14.

FIGURE 1: *The amount of property tax and arrears collected in Gostynin Municipality*

Source: author's own elaboration based on Local Data Bank (LDB) and reports on the implementation of the budget of the Gostynin Municipality, 2011–2018.

It was a recreational facility located on Lake Lucień, built by the Żyrardów Flax Industry Factory for its employees. It consisted of three residential pavilions with 120 rooms, one reception building with a canteen, and a social building. There was a football pitch along with basketball, volleyball, and tennis courts, a summer horse stable, and even a parking lot for 150 cars. In 1997, the factory went bankrupt¹⁹ and was sold to a private company – Ośrodek Wypoczynkowo-Konferencyjny “Lucień” Sp. z o.o. However, around 2006–2007, the center ceased to operate, and the owners stopped paying property tax.²⁰ In 2010, the center's arrears amounted to PLN 1,564,121.55 + interest.²¹ The reasons why the property was abandoned are not fully known. However, it may have been due to the wear and tear of the building and a lack of funds to modernize it; thus, it was not able to fulfill its intended function with the tenants' ever-increasing requirements. As there was no central heating in the building, each room was heated by an electric

¹⁹ **M. Orłowska**, *Ludzie wstali od stolów, z tapczanów i nagle... wyparowali. Tajemnica okrągłaków w Miałkówku*, <https://plock.wyborcza.pl/plock/7,95996,21266944,ludzie-wstali-od-stolow-z-tapczanow-i-nagle-wyparowali.html>; accessed 3.04.2020.

²⁰ *Rozdzwoniły się telefony w sprawie okrągłaków w Miałkówku...*, <https://plock.wyborcza.pl/plock/7,35681,21450660,rozdzwonily-sie-telefony-w-sprawie-okraglakow-w-mialkowku.html>; accessed 3.04.2020.

²¹ *Sprawozdanie z wykonania budżetu Gminy Gostynin za rok 2010*. Załącznik nr 1 do Zarządzenia 19/2011.

heater, and given the rising electricity prices, it is not surprising that maintaining such a facility became unprofitable. Meanwhile, there was no central heating grid nearby. The costs of connecting to it would also be too high.

Over the years, the buildings remained intact. Apart from functional and technical wear due to time and weather damage, everything looked as if it remained occupied.²² Today, however, “Lucień” is dilapidated. The windows are broken, there is graffiti on the walls, and many items have been stolen. Moisture entered the building, so the walls began to crumble, and the area is overgrown. In 2016, the property was put up for a bailiff’s auction, but no one was interested apart from Gostynin Municipality.²³ Finally, in December of the same year, since the municipality was the main creditor (in Section IV KW, there are eight mortgages securing unpaid property taxes totaling PLN 2,324,223.19), the court awarded it the property in question, i.e., the right of perpetual usufruct of land with an area of 7.81 ha (perpetual usufruct right until December 5, 2089) and the right of ownership of the buildings on it. Initially, the municipality did not want to dispose of the property – it was hoping that there would be an investor who, in the formula of public-private partnership, would help restore the building’s splendor or demolish it and put something new in its place. The lack of cooperators contributed to the municipality adopting a resolution on February 26, 2020, to approve the sale of the right of perpetual usufruct of the land together with the ownership of buildings by oral tender. The building is degraded, and the municipality bears not only direct costs (e.g., perpetual usufruct fees)²⁴ but also indirect costs (police patrols).²⁵

3.2. The “Wisła-Bryka” factory in Włocławek

Włocławek is a city located in the Kujawsko-Pomorskie Voivodeship, inhabited by 108,561 people in 2020. In the same year, there were 10,972 business entities operating there.²⁶ In Włocławek, property tax revenues are growing steadily,

²² **M. Orłowska**, *Ludzie wstali od stołów, z tapczanów i nagle...*; accessed 3.04.2020.

²³ **P. Mrówka**, *Urząd Gminy szuka inwestora dla Miałkówka. I odradza “dzikie” wizyty*, <https://gostynin.info/informacje/urząd-gminy-szuka-inwestora-dla-mialkowka-i-odradza-dzikie-wizyty/>; accessed 3.04.2020.

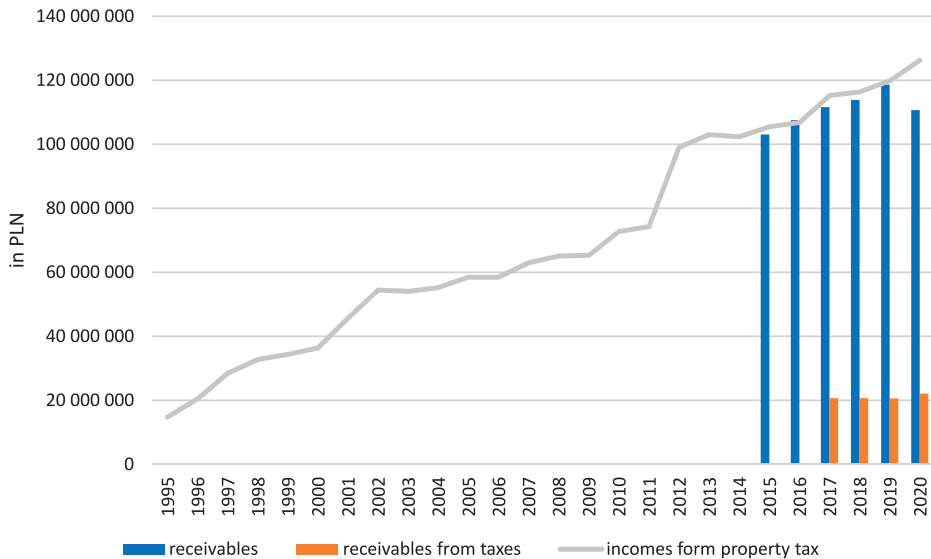
²⁴ **P. Mrówka**, *Rada Gminy: Okrągłaki w Miałkówku i prawie 8 ha na sprzedaż*, <https://gostynin.info/informacje/rada-gminy-okraglaki-w-mialkowku-na-sprzedaz-w-uzytowanie-wieczyste/>; accessed 3.04.2020.

²⁵ **M. Orłowska**, *Ludzie wstali od stołów, z tapczanów i nagle...*; accessed 3.04.2020.

²⁶ Local Data Bank, <https://bdl.stat.gov.pl/BDL/dane/podgrup/temat>; accessed 25.09.2021.

but the receivables²⁷ (arrears) due are equally high. Tax receivables, including property tax, constitute nearly 1/5 of all these receivables (Figure 2).

FIGURE 2: *The amount of property tax and arrears collected in Włocławek*



Source: author's own elaboration based on LDB and reports on the implementation of the budget of Włocławek, 2015–2020.

One of the zombie objects that generate tax arrears in this city, and thus cause an external effect for the municipality in the form of lower property tax revenues, is the former “Wisła-Bryka” factory. The factory has about 150 years of tradition, having produced machinery for construction, heating, waste recycling, sugar and other industries. In 2000, it was privatized.²⁸ However, in the hands of the new owner, it was glorious for a short time. The first compulsory mortgages due to arrears in property tax were entered in the land and mortgage register in 1999 and 2001. A few years later, the problems of the enterprise began to

²⁷ Undisputed receivables whose payment deadline for the debtor has expired and are not time-barred or canceled (Rozporządzenie Ministra Finansów z dnia 4 marca 2010 r. w sprawie sprawozdań jednostek sektora finansów publicznych w zakresie operacji finansowych, Dz.U. z 2014 r., poz. 1773).

²⁸ **B. Szmajter**, *Prezesa nie ma, a “Wisła-Bryka”...*, <https://pomorska.pl/prezesa-nie-ma-a-wislabryka/ar/6856267>; accessed 28.09.2021.

affect the entities that leased some of the buildings,²⁹ and in 2007, the company's liquidation bankruptcy was announced.³⁰ Although many people were interested in buying the property for years, it was not sold until March 2021, for just over PLN 4.2 million (the value had been estimated at PLN 6.5 million).³¹

The property consists of three plots of land with a total area of over 2 ha, in perpetual usufruct until December 2089, on which there are warehouse, production and office buildings, as well as a residential building, car repair shop and garage.³² The factory was unused and unsecured for many years and was, therefore, in extremely poor condition. Unwanted tenants (homeless people) and youths who would congregate there only accelerated devastation process, e.g., they often lit fires. Intervention costs are borne by the city, so this is also an external effect of the zombie property. Unsecured protruding elements pose a threat to human health and life.³³ Despite the sale of the property, as of September 28, 2021, five mortgages because of arrears in paying property tax for a total of nearly PLN 2 million are still entered in the land and mortgage register (the last one entered in 2020).

3.3. A palace and park complex in the Sława Municipality

The Sława Municipality is located in the Lubuskie Voivodship, between Zielona Góra and Leszno. According to LDB, in 2020 it was inhabited by approx. 12,600 people, and there were 1263 business entities registered at that time.

The municipality income from property tax, as in the previous cases, is growing annually. However, tax arrears have also increased. Property tax accounts for a significant portion of these receivables. The palace and park complex in Sława Municipality seems to be one of the major debtors.

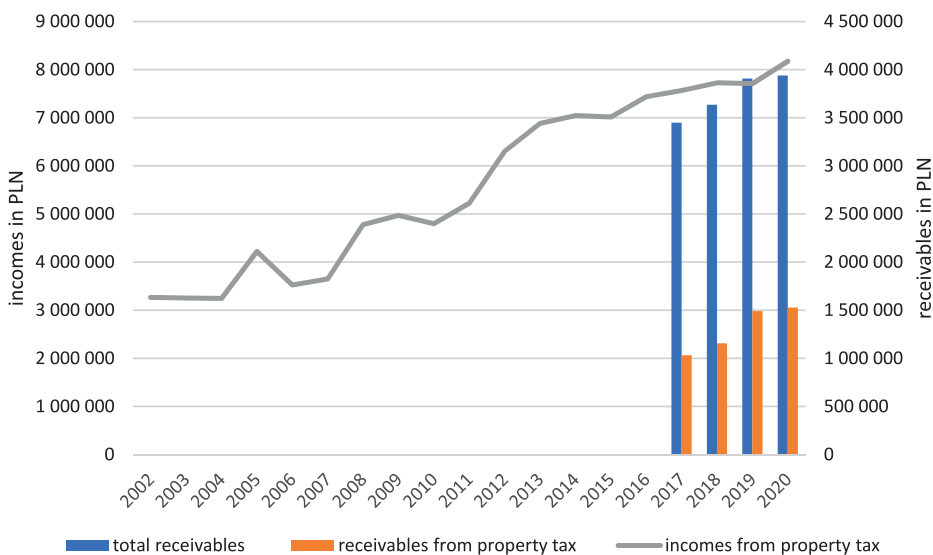
²⁹ B. Szmajter, *Prezesa nie ma...*; accessed 28.09.2021.

³⁰ *Wniosek o udzielenie interpretacji indywidualnej w sprawie zdarzenia przyszłego*, Syndyk Masy Upadłości Fabryki Urządzeń Technicznych "Wisła-Bryka" Sp. z o.o., 2014, http://archiwum.mst-wloclawek.rbip.mojregion.info/www.bip.um.wlocl.pl/wisla_wniosekdbcc.pdf?id=8990; accessed 27.09.2021.

³¹ *Krzysztof Grządziel kupił budynki i tereny po bylej fabryce "Wisła-Bryka"*, <https://www.portalwloclawek.pl/wiadomosci/4711,krzysztof-grzadziel-kupil-budynki-i-tereny-po-bylej-fabryce-wisla-bryka>; accessed 27.09.2021.

³² *Obwieszczenie w sprawie GP KM 1774/18 o drugiej licytacji nieruchomości*, https://www.wloclawek.sr.gov.pl/bip_pdf/rejestr-1610982321.pdf; accessed 28.09.2021.

³³ *Krzysztof Grządziel kupił budynki i tereny po bylej fabryce "Wisła-Bryka"...*; accessed 2.09.2021.

FIGURE 3: *The amount of property tax and arrears collected in Sława Municipality*

Source: author's own elaboration based on LDB and reports on the implementation of the budget of the Sława Municipality in the years 2017–2020.

The Palace in Sława has a very rich history. Built on the site of a former castle, it was first mentioned in 1468 when it became the property of Melchior von Rechenberg. The castle burnt down in 1721 and it was then decided to rebuild the property in the baroque style. From 1886, the palace belonged to the counts von Haugwitz. During World War II, it was owned by the Third Reich.³⁴ A detachment of the SS, called the H-Sonderkommando, was stationed there.³⁵ Between 1957 and 1969, the palace underwent a major renovation and was converted to an orphanage.³⁶ This, in turn, was closed when laws came in requiring the creation of smaller entities.³⁷ The palace was sold to a private entity that intended to transform it into a holiday resort, but this did not happen. The next owner also failed to modernize the palace. His financial problems contributed not only to the

³⁴ M. Kłaczowska, *Pałac Rechenbergów*, on: <https://zabytek.pl/pl/obiekty/slawa-palac-rechenbergow>; accessed 27.09.2021.

³⁵ <https://opencaching.pl/viewcache.php?cacheid=69728>; accessed 28.09.2021.

³⁶ M. Kłaczowska, *Pałac Rechenbergów...*; accessed 27.09.2021.

³⁷ K. Chudzik, *Pałac w Sławie sprzedany! Licytacja zakończona w piątego 13-go. Przez lata popadał w ruinę*, <https://glogow.naszemiasto.pl/palac-w-slawie-sprzedany-licytacja-zakonczona-w-piatego-13/ar/c1-8408175>; accessed 26.09.2021.

damage of the facility,³⁸ but also the emergence of significant arrears due to property tax. In section IV of the land and mortgage register, several mortgages due to property tax arrears are entered. For the period from October 1, 2014, to December 31, 2019, it totals is over PLN 1 million with interest. The first bailiff auction of the property was to take place in November 2018. The property was valued at nearly PLN 3.5 million,³⁹ but no one paid the deposit. Finally, on August 13, 2021, the palace was sold to MTM Industries from Wielkopolska through a second auction (the starting price was PLN 2.4 million).⁴⁰ The palace and park complex are located on Sławskie Lake, on a property with an area of nearly 4.7 ha. It consists of a residential part with an area of 2,700 m² and a utility part (866.4 m²). The property has access to the water, sewage, power, and gas networks.⁴¹

The above examples of zombie properties show that although a real decrease in property tax revenues in those municipalities does not occur (increased rates, more and more taxable entities), significant tax arrears of zombie objects probably have a negative impact in their budgets and hence, their investment activities. This means that the problem of zombie properties in Poland has negative external effects for municipalities, although the problems are different. At this point, it is worth looking at the share of the tax arrears of the zombies in question in the total arrears for the municipality. In Lucień in 2010, they accounted for over 60% of all Gostynin Municipality arrears (both from legal and natural persons). In Włocławek, the arrears of the Wisła-Bryka factory for 2020 accounted for nearly 1/20 of all tax receivables (not only on property tax). Meanwhile, in Sława, in 2019, the share of the palace's tax arrears accounted for 1/3 of all liabilities due to property tax. Thus, it can be stated, with some caution, that the externalities of zombie properties are greater in small municipalities.

³⁸ *Pałac w Sławie sprzedany! Poszedł za ponad 2,3 mln zł! Barokowa perelka ma już nowego właściciela*, <https://myglogow.pl/palac-w-slawie-sprzedany-poszedl-za-ponad-23-mln-zl-barokowa-perelka-ma-juz-nowego-wlasciciela/>; accessed 26.09.2021.

³⁹ **E. Gniewek-Juszczak**, *Pałac w Sławie. Jest termin drugiej licytacji i niższa cena. Czy tym razem uda się sprzedać zabytek nad Jeziorem Sławskim?*, <https://gazetalubuska.pl/palac-w-slawie-jest-termin-drugiej-licytacji-i-nizsza-cena-czy-tym-razem-uda-sie-sprzedac-zabytek-nad-jeziorem-slawskim/ar/13903646>; accessed 26.09.2021.

⁴⁰ **K. Chudzik**, *Pałac w Sławie sprzedany! Licytacja zakończona w piątego 13-go...*, accessed 26.09.2021.

⁴¹ **E. Gniewek-Juszczak**, *Pałac w Sławie. Jest termin drugiej licytacji i niższa cena...*, accessed 26.09.2021.

4. Conclusions

To sum up, three important conclusions can be drawn based on the literature analysis and case studies. First of all, the external effect of reduced municipal income from property tax can be a big problem for municipalities, especially in countries where the tax is estimated based on the value of real estate. In countries such as Poland, where the tax is based on area, abandoned properties contribute to the tax arrears of a single property. Even if its presence in the environment causes a decrease in the value of neighboring properties, this does not have a direct impact on the amount of taxes collected. Secondly, the possibilities of estimating the scale of this problem in Poland are limited due to the lack of relevant statistical data and other similar research on this issue in countries where area is the tax base. Thirdly, although such a decrease in municipality income from property tax was not observed in the examples discussed, tax arrears of zombie objects are an external effect for these municipalities, especially smaller ones. The arrears in Gostynin resulting from one zombie property were as high as its average annual property tax income in 1995–2018. It is as if the municipality did not generate any income from this tax in one year, although, of course, the arrears were created for years.

Despite this, the scale of the problem for small municipalities seems to be significant. Therefore, it is necessary to streamline the collection of property tax in Poland to eliminate or at least reduce the external effect of abandoned properties in the form of limited municipal revenues. This obviously requires improved efficiency of public finance management, but in the event of the abandonment of property, this may not be enough. Additional solutions should be introduced in Poland to increase tax collection, e.g., financial penalties for abandonment, non-maintenance of real estate, the possibility of bidding tax burdens, or faster judgments of properties for the municipality – not after ten years. A solution would also be to regulate issues related to zombie property proceedings (securing, taking over, a database of such properties). However, this topic requires separate studies.

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Agata ANTCZAK-STĘPNIAK

SPADEK DOCHODÓW GMIN Z TYTUŁU PODATKU OD NIERUCHOMOŚCI JAKO EFEKT ZEWNĘTRZNY ZJAWISKA ZOMBIE NA RYNKU NIERUCHOMOŚCI W POLSCE

Abstrakt

Przedmiot badań: Efekty zewnętrzne na rynku nieruchomości są zjawiskiem powszechnym. Nieruchomości porzucone i niszczone przez lata powodują negatywne efekty zewnętrzne dla gmin w postaci obniżenia ich dochodów z tytułu podatku od nieruchomości. W literaturze zagranicznej temat ten był już podejmowany, podczas gdy w Polsce zjawisko zombie na rynku nieruchomości pozostaje w zasadzie niezrozpoznane.

Cel badawczy: W związku z powyższym celem niniejszego artykułu jest zbadanie problemu efektu zewnętrznego nieruchomości zombie w postaci zmniejszonych dochodów gminy z tytułu podatku od nieruchomości w Polsce.

Metoda badawcza: Wykorzystane metody badawcze to analiza danych zastanych oraz metoda *case study*.

Wyniki: Możliwości szacowania skali efektu zewnętrznego w postaci zmniejszonych dochodów gminy z tytułu podatku od nieruchomości w Polsce są ograniczone, ze względu na brak odpowiednich danych statystycznych. Jednak studia przypadków pokazują, że choć jako taki spadek w dochodach z podatku od nieruchomości nie został zaobserwowany w omawianych przypadkach, to zaległości wywołane przez nieruchomości zombie są efektem zewnętrznym dla tych gmin, w szczególności tych mniejszych.

Słowa kluczowe: podatek od nieruchomości, nieruchomości zombie, efekty zewnętrzne.