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Private Student Housing Market - Current State and Development Prospects on the Example of the Tri-City Market

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ABSTRACT

Purpose - to show the character of the private student housing market and to assess the development potential of this market in Poland from the perspective of the local Tri-City market.
Design/methodology/approach - in the course of achieving the objective of the article, student PBSA (Purpose Built Student Accommodation) market in Europe and Poland was presented. On this basis, factors that may have an impact on the development of the private PBSA market in Tri-City were identified and analysed. In the article the following methods have been used: deductive inference, simple statistical methods, and the internal rate of return (IRR) method.
Findings - conducted analyses show that the prospects for the development of the market of private PBSA in Tri-City are good. This is demonstrated by the dynamic increase in the number of foreign students, the low standard of much of public PBSA and the relatively low rate of the number of beds to the number of full-time students, indicating the existence of a supply gap. A positive element that should stimulate the development of this market are relatively high rates of return on investment in PBSA in Tri-City.
Research limitations - rents in private PBSA are much higher than in public PBSA. For this reason, it should be analysed whether students of Tri-City universities would be able to afford higher prices in exchange for better living conditions offered in private PBSA. The study did not address the topic of student accommodation preferences.
Research implications - conducted research concerns the development potential of the private PBSA market. It indicates factors which can stimulate it, but also those that can slow it down. Such knowledge may be useful to investors who want to realize such investments in Tri-City.

Keywords:	student housing market; PBSA; investment; universities
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INTRODUCTION

The capital resources of Polish universities are limited. The decreasing number of students, and consequently lower government subsidies and an increase in the cost of living mean that Polish universities must use their resources more intensively (Rymarzak & Trojanowski, 2015, p. 192). This is particularly important now, in 2020, when the COVID-19 pandemic is spreading around the world, causing negative effects on the economy and creating a real threat of governments (including Polish) introducing budget cuts, which may affect higher education. In these circumstances, universities should start searching for opportunities of financial support from private funds (Sułkowski, 2016, p. 19). One area where it seems possible is student accommodation. Polish universities can transfer the burden of financing highly capital-intensive investments on the student housing market to private entities, as is the case in some European countries. The funds saved in this way can be used for more basic university functions related to teaching and research (Newell & Marzuki, 2018, p. 537). For this reason, Polish universities can significantly benefit from the development of the private student housing market.

Polish investors may also be interested in the development of this market. Capital allocation on the real estate market, in particular the residential market, is becoming more and more popular in Poland. These types of investments are seen as an alternative to low-interest bank deposits. PBSA (Purpose Built Student Accommodation) market, as shown by experience of other countries, offers higher rates of return than the classic residential market and can be an attractive alternative to it (Tostevin & Hyett, 2018, p. 21).

Given the relatively broad group of entities interested in this market, the hypotheses and the purpose of the article were formulated. It is assumed that the development potential of the private PBSA market in the Tri-City (Gdańsk, Gdynia, Sopot metropolitan area) is high. The verification of the hypothesis translates into the aim of the article, which is to show the character of the private student housing market and to assess the development potential of this market in Poland from the perspective of the local Tri-City market. To achieve this purpose the article presents the state of the PBSA market in Europe and Poland. On this basis, it was possible to compare markets and identify factors that could affect the development of the private student housing market. The analysis of the Polish market was based on the data from the 2018/2019 academic year, while information on

European markets, due to the lack of available sources, was based on the data from 2017/2018 academic year. The verification of the hypothesis and the implementation of the aim of the article were achieved on the basis of deductive inference. In addition, in this publication simple statistical methods were applied, and the IRR method, which was used to assess the effectiveness of building a private PBSA in the Tri-City. The analyzes carried out in the article were based on the literature on the subject, commercial institutions' reports, data obtained from universities and from private PBSA investors.

LITERATURE REVIEW

The beginning of academic studies is often associated with a change of the students' place of residence. One of the basic accommodation options are student houses, both those belonging to the university and private ones (Rutledge, 2012, p. 10). According to the definition, a student house is a facility intended for housing students as a way of providing material assistance, run by a university (GUS, 2019a). Another definition says that a student house is a form of housing intended for students, which is strongly associated with a specific educational institution (Hauschildt, Vögtle & Gwosc, 2018, p. 200). It should be emphasized, however, that a student house is not just a facility designed to meet the housing needs of students. The functions it should fulfill are much wider. Living in a student house is an important experience for young people. It is often associated with lifestyle change to a one during which they will have to share rooms with other students, and thus learn to compromise, tolerate others and experience independent living, which can be considered a transition towards adulthood (Ghani & Suleiman, 2017, p. 1014). Student houses have an impact on students' lives. Therefore, they should provide adequate comfort for activities related to learning, but also for recreation and entertainment (Jaglarz, 2016, p. 63). For this reason, educational institutions designing new buildings are in a way responsible for providing attractive facilities for the student population and creating appropriate conditions for learning (Rutledge, 2012, p. 10). Satisfactory housing can lead to a sense of comfort and convenience, as well as high scientific achievements. On the other hand, unsatisfactory housing can be the cause of many health-related issues, such as stress and depression among students, which may negatively translate into their academic performance (Ghani & Suleiman, 2016, p. 166). Housing conditions are therefore an important aspect of the quality of students' life and cannot be ignored (Yu & Sun, 2016, p. 1). Universities around the world recognize the importance of housing conditions and, therefore, they treat them as a competitive advantage in the recruitment process and adapt their housing resources to the preferences of students, providing them, among others, with greater privacy (Brown, Volk & Spratto, 2019, p. 280).

Student housing is primarily associated with a building belonging to the university, located on the campus. The undisputed advantage of such a model is the control over students performed by the university, which is aimed at maintaining discipline among them, as well as ensuring them adequate security (Hammad, Musa, Rishi & Ayuba, 2013, p. 551). Due to the fact that public resources for investments in new academic facilities are significantly limited, universities have begun to use alternative sources, namely private funds. Many investments are implemented under public-private partnership (Samuels, 2008, p. 29). On the market there are also projects built by private investors without consulting or cooperating with universities. This article is devoted to models that use private capital in the process of financing investments on the PBSA market. They are widespread on the European market and seem to be the most favourable for use in Polish reality (Rymarzak & Trojanowski, 2017).

STUDENT HOUSING MARKET IN SELECTED EUROPEAN COUNTRIES

In Europe, a significant increase in the number of students has been observed in recent years. In the European Union alone, their number increased from 18.9 million in 2014/2015 to 19.8 million in 2017/2018 (Eurostat, 2018). Due to this fact the demand for accommodation is increasing. The number of places available on the market in public student housing is insufficient. Opportunities for earning potential in this market were noticed by the private sector which started investing in student housing. Foreign students are an important driving force for development in this sector. According to research, in most European countries foreign students are the largest percentage of PBSA residents (Hauschildt, Vögtle & Gwosć, 2018, p. 206). They expect their place of residence to be of a good standard at a reasonable price provided by a university or a private agency (Arambewela & Hall, 2009, p. 563). In 2017/2018, the number of foreign students in the European Union was 1.7 million. Compared to the previous year, it increased by 6.25% (Eurostat, 2018). The wide range of English Taught Programmes (ETPs) offered by European universities has had a great impact on the growth of the number of foreign students. The leader in this matter is the Netherlands, with 1034 courses provided by major universities in the country (Paddy, Dyer & Smith, 2018, p. 4).

The degree of development of the PBSA market in different European countries varies. Table 1 shows selected data on the student housing market in countries with the highest share in the European market (Hillman, 2017).

Table 1. Student housing market in selected European countries in the 2017/2018 academic year

	UK*	Germany	Netherlands	France
Full-time students	1840 k	2860 k	683 k	2630 k
Foreign students	397 k	394 k	75 k	343 k
PBSA total	660 k	274 k	125 k	340 k
PBSA private	about 330 k	43.5 k in the 30 largest centres	no data	about 175 k
Monthly average rent	618€ (2019/2020)	488€ (2019/2020)	427€ (2018/2019)	200€-1200€ (2017/2018)
Rate of return	4.50%	3.80%	4.75%	4.25%
Annual investment in private PBSA in 2015-2018	4586 mln €	637 mln €	443 mln €	342 mln €
Total PBSA/Full-time Students	35.9%	9.6%	18.3%	12.9%

* 2018/2019

Source: own study based on (Paddy, Dyer & Smith, 2019; Feeney & George 2019; Tostevin & Hyett, 2018; Tostevin & Roberts, 2018; Tostevin & Hyett, 2019; Schenk, 2019; Wilberts, Schellekens & Kleemans, 2019; Koczara, Dziurzyńska-Leipert & Hejduk, 2019).

Great Britain is recognized as the most mature student housing market in Europe, where the ratio of the number of beds in dormitories to the number of full-time students is 35.9%. This is the highest rate in Europe. Generally, in the years 2014-2019 the supply increased by 29.5% on this market, which means that this market grew by 5.3% per year on average (Forrest, Kingham, Denbee & Kingdom, 2019, p. 12). 50% of places belong to the private sector and this ratio increases year by year. In the 2019/2020 academic year with 32 thousand of new beds 87% were those provided by the private sector (Feeney & George 2019, p. 21). Despite the high supply on the British market, it is projected to still lack more than 370 thousand places. Germany is also one of the fastest growing student housing markets. On this market, the ratio of the number of beds to the number of students in 2017/2018 was 9.6%. It was relatively low, but the student housing market in Germany, especially private, has been growing dynamically. The forecasts for the coming years are also optimistic. The average annual increase in the supply of places in private PBSA is expected to grow by 11.08% in the 30 largest academic centres in the period 2018-2022. For 2018/2019 7,938 beds were planned to be handed over, which meant that the private sector's share in the German market would be 27%. It is worth emphasizing that newly built accommodation in Germany in 92% consists of one-bedroom apartments with a size of 22.2 m^2 (Schenk, 2019, p. 3). The next country discussed, which is dynamically developing in the area of student housing, is the Netherlands with the PBSA/number of students in 2017/2018 at the level of 18.3%. About 42% of this market's resources are owned by non-profit organizations, while the rest belongs to universities and private investors. In 2016 and 2017, private investors delivered 6,344 and 8,403 places respectively in 18 largest cities. For the 2018/2019 academic year, they were to provide another 4,588 beds. Although 19 thousand places are still under construction, it is forecast that in 2025/2026 there will be a shortage of supply in the amount of 33 thousand. What may seem interesting, in the Netherlands, investors are more and more often building dorms for which the target group is not only students but also young professionals (Wilberts, Schellekens & Kleemans, 2019, p. 5). Moving to France, it should be emphasized that it is one of the largest European markets in terms of the number of full-time students (2.6 million). PBSA is provided for 12.9% of them. Most beds are provided by private investors who are offered tax benefits by the state. About 51% of available places are their resources. Others belong to the non-profit organization CROUS. Demand on the French market significantly exceeds supply, so it is planned to create about 60 thousand beds until 2022 (Paddy, Dyer & Smith, 2019, p. 27).

POLISH STUDENT HOUSING MARKET

Despite the constantly growing number of students in Europe, statistics in Poland trend downwards. In the academic year 2018/2019, a total of 1230 thousand individuals studied at Polish universities. Compared to 2014/2015, this number decreased by 19.43% (GUS, 2019c, p. 14), which was associated with the demographic decline. The decline in the number of students began in 2005 and is likely to continue until 2022. In this year, people born in 2003, i.e. the year with the historically lowest number of births recorded (GUS, 2019b, p. 250), will start their higher education. In the following years the number of students should stabilize or even return to the upward trend. As in other European countries, the percentage of foreign students in Poland is growing. In 2018/2019, the number of studying foreigners amounted to 78.3 thousand, which means that it increased by 69.76% compared to 2014/2015 (GUS, 2019c, p. 131). Further growth is forecast for subsequent years

(Kirejczyk, Sztejter, Kuniewicz & Mendel, 2018, p. 22). Students in Poland can benefit from over 400 study programmes in English, which are attractive to foreign students due to their high quality and relatively low tuition fees (Sztejter & Mendel, 2016, p. 8).

The supply of PBSA in Poland is limited. In the 2018/2019 academic year, 124 thousand beds were available for about 809 thousand full-time students (15.3% of students) (GUS, 2019c, p. 235). It is worth emphasizing that the number of places available in student houses is decreasing year by year. In 2018/2019, it decreased by 1.3% compared to the previous academic year. This is due to the shutdown of some buildings due to their technical wear or modernization works. In addition, in some dormitories, 3-4 bed rooms are converted into 1-2 bed rooms (Kroczak & Pawłowska, 2019). Although the number of students far exceeds the number of places in dorms, there are vacancies on the market. The reason for this may be the mismatch between the PBSA standard and the needs of students (Rymarzak & Trojanowski, 2017, p. 23). The average total occupancy rate of public and private PBSA in Poland is at the level of 76%. In private student houses, the level is generally higher and amounts to about 80% (Metropolitan Investment, 2019).

The private PBSA market in Poland is still relatively underdeveloped. In 2018, about 100 private student houses were available in Poland, which provided 6.5 thousand places (5% of the market). It is forecast that by 2021 the number of beds in private PBSA will increase to 16.5 thousand (Kowa, Roberts & Wojtczak, 2019, p. 5), which will result in a significant increase in the private sector's market share (CBRE, 2019). However, it is estimated that this increase will not completely fill the gap between supply and demand. In Warsaw, even after completing all implemented projects, the demand for student accommodation will be at about 43 thousand (CBRE, 2019).

Current status and development prospects for the Tri-City private student housing market

The number of students in Tri-City, similarly to the total number in Poland, is decreasing. In the 2018/2019 academic year, the number of students was 76.5 thousand, which meant a decrease of 15.7% compared to 2014/2015. The dynamics of the number of students coming from abroad is quite the opposite. During this period, it increased from 1.9 thousand up to 3.4 thousand (78.95%) (Gdańsk, 2019). This means that the growth dynamics of foreign students amount was higher in Tri-City than in the whole of Poland (69.76%). This is a favourable situation for the Tri-City private student housing market, as foreign students, as already mentioned, constitute the basic target group for this market.

When analysing the number of foreign students, one should also refer to the current situation related to the COVID-19 pandemic. It caused the lack of mobility between countries. If this situation persists in the long term (e.g. 2-3 years), it will limit the flow of foreign students to Polish universities, which will negatively affect the demand on the private PBSA market. However, Polish students, who won't go to study at foreign universities and decide to study in Poland, can alleviate this unfavourable situation. Every year, around 25,000 Poles study outside of Poland (UNESCO Institute for Statistics, 2020), which means that in relation to incoming people they constitute 32%. In this way, the negative effects associated with limited mobility could be mitigated. Tri-City universities could count on the inflow of this group of students. It can be assumed that they would choose the best universities in Poland, and two out of ten research universities (Gdańsk Medical University and Gdańsk University of Technology) are located in Tri-City. These are the universities that have the best research development projects in Poland (Minister of Science and Higher Education, 2019), which makes them seem the most attractive for this group.

The supply of places in student PBSA in Tri-City, as in Poland, is relatively low. Universities had 6,912 places in the 2018/2019 academic year. Table 2 shows the number of beds at individual universities' student houses.

Table 2. Number of beds in PBSA at Tri-City universities in 2018/2019

University	Number of beds
Gdańsk University of Technology	2321
University of Gdańsk	1716
Medical University of Gdańsk	1125
Naval Academy	285
Maritime University	856
Academy of Physical Education and Sport	365
Academy of Music	202
Academy of Fine Arts	42
Total	**6912**

Source: own study based on (Academy of Music, 2019; Academy of Fine Arts, 2019; Academy of Physical Education and Sport, 2019; Gdańsk University of Technology, 2019; Maritime University, 2019; Medical University of Gdańsk, 2019; Naval Academy, 2019; University of Gdańsk, 2019) and information obtained from universities.

In addition to universities, also private investors began to present their accommodation offer to students in 2018/2019. A private student house Gdański Harward was launched for the summer semester, offering about 90 places. It was the first private student house in Tri-City. Several projects are to be completed in the following years, the specifics of which are presented in Table 3.

Table 3. Current status and forecasts for the construction of private PBSA in Tri-City, as of the end of 2019

Investor	Facility name	Number of beds	Number of rooms	Launch year
Metropolitan Investment	Gdański Harward	about 90	60	2019
Metropolitan Investment	Olimpijskie Apartamenty	about 58	39	2020
Silver Rock Investment	Collegia	538	476	2020
Silver Rock Investment	Collegia 2	no data	200	no data
Griffin Real Estate	Student Depot	no data	347	2020
Zatoka	New Port	33	16	no data
BC Sopot	BaseCamp	no data	500	no data

Source: own study based on (Collegia, 2019; Metropolitan Investment, 2019; Student Depot, 2019) and information obtained from investors.

The mentioned Gdański Harward belongs to the Metropolitan Investment company and is located near the Gdansk University of Technology. It was created through modernizing an old dormitory into modern micro-apartment facility ranging from 12 m^2 to 23 m^2 (Metropolitan Investment, 2019). The common characteristic of all investments presented is their high standard. They offer students mainly single rooms equipped with kitchenettes and bathrooms. In addition, the facilities have laundries, utility rooms and parking spaces. In some of the presented projects, other amenities are planned, namely: common work rooms, fitness rooms, recreation rooms, restaurants, cafes (Collegia, 2019).

The presented Tri-City student PBSA, both public and private, provided accommodation for approximately 14.9% of full-time students (GUS, 2019c, p. 237). The value of the indicator was at a relatively low level. By comparison, this ratio for Poland, the Netherlands and Great Britain was 15.3%, 18.3% and 35.9% respectively. Lower level ratio was found in Germany (9.6%) and France (12.9%), where, as analyses showed, there was a high shortage of student accommodation available. Taking the value of the Great Britain indicator as the optimal value for the market, one can estimate the supply gap for Tri-City (based on: Tostevin & Hyett, 2019, p. 20). It amounted to around 9.8 thousand places. This means that even after all planned private investments have been completed, this gap will not be filled.

Another element that will be presented are the costs of rent in student housing in Tri-City. Table 4 presents them.

Table 4. The cost of accommodation in private and public PBSA in Tri-City in the 2018/2019 academic year

Type	The monthly cost of rent					
	One-bed room		Two-bed room		Three-bed room	
	from	to	from	from	to	from
Public PBSA	360 PLN	1140 PLN	275 PLN	570 PLN	285 PLN	380 PLN
Private PBSA	1200 PLN	1450 PLN	625 PLN	850 PLN	not available	

Source: own study based on (Academy of Music, 2019; Academy of Fine Arts, 2019; Academy of Physical Education and Sport, 2019; Gdańsk University of Technology, 2019; Maritime University, 2019; Medical University of Gdańsk, 2019; Naval Academy, 2019; University of Gdańsk, 2019; Metropolitan Investment, 2019) and information obtained from universities and investors.

Due to the high quality, standard and variety of facilities offered, fees for a place in a private PBSA are much higher than the prices in PBSA belonging to a university. Especially if the minimum prices are compared. It should be emphasized, however, that due to much lower standard of public student houses, they are not the greatest competition for private PBSA. It seems that flats are more competitive, especially the one-bedroom and two-bedroom flats. For this reason, Table 5 shows the average cost of renting a flat in selected districts of Gdańsk, located near Tri-City universities.

Table 5. Monthly average rental prices together with the operating costs of flats in Gdańsk in the 2018/2019 academic year

District	One-bedroom flat	Two-bedroom flat
Przymorze	1900 PLN	2500 PLN
Żabianka	1800 PLN	2500 PLN
Oliwa	1700 PLN	2000 PLN
Wrzeszcz	2000 PLN	2650 PLN
Zaspa	1900 PLN	2300 PLN
Śródmieście	2500 PLN	2900 PLN
Average	**1967 PLN**	**2475 PLN**

Source: own study based on (Gratka.pl, 2019).

Average rental prices of flats in Gdańsk are higher than the cost of accommodation in private PBSA. Even if we assume that more people can live in flats (maximum 2 people in a one-bedroom flat and 4 in a 2-bedroom flat), the costs per inhabitant will be lower than in private student house only with four students and a two-bedroom flat. It is worth considering the standard of the flats. It is very diverse and often differs from that in the private PBSA. Many flats rented to students on the Tri-City market are located in the 70-80s buildings. For example, in the Przymorze district, a significant proportion are the flats in falowiec buildings (falowiec is a wave-shaped building), where the standard is often low.

Finally, it is worth mentioning the question of investment profitability, which may also be one of the key factors in the development of the private PBSA market. According to information provided by Metropolitan Investment, their estimated profitability was around 7%. For the purposes of the article, an analysis of the profitability of the hypothetical investment in Tri-City, in the vicinity of Tri-City universities, was also conducted. The details of this project are presented in Table 6.

Table 6. Assumptions and effectiveness of the private PBSA construction project on the Tri-City market (May 2019)

Type	Value
Project budget	13 417 909 PLN
Loan share in financing	65%
Number of beds	90
The rental price of one-bed room	1200 PLN
The rental price of two-bed room	1700 PLN
Average occupancy in the academic year	85%
Average occupancy during the tourist season	55%
IRR	**7.72%**

Source: own study.

The analyses showed that the IRR of the investment was 7.72%. This is a relatively high level, especially if we compare it to that obtained on the European market (Table 1). The location of Tri-City has had a significant impact on the high level of the indicator. Due to the fact that it is a seaside agglomeration, in summer periods, when the student residence is not occupied by students, it is possible to assume renting rooms for tourists. In the estimates made, such use of the PBSA was assumed, which increased the investment IRR altogether.

CONCLUSION

Analyses of the Tri-City market of private PBSA have shown that the prospects for its development in Tri-City are positive. The main impact on the favourable assessment of the market potential is the dynamic increase in the number of foreign students (higher than for the whole country), the low standard of many public PBSA and the relatively low ratio of the number of beds to the number of full-time students, indicating a supply gap of about 9.8 thousand places. In addition, a relatively high level of return on investment in student housing in Tri-City is an incentive that should stimulate market development. Therefore, it can be concluded that there are no grounds for rejection of the research hypothesis of the article assuming that the development potential of the private PBSA market in the Tri-City is high.

It should be emphasized, however, that this market also presents some threats that may slow down its development. The major one is the steady decrease in the number of students at Tri-City universities, which has been observed for several years and which, due to the demographics of the Polish population, will persist in the next few years. In addition, the prices of renting rooms in private student houses are much higher than in public ones. Therefore, the question arises whether the students will be able to afford them and whether they will not look for cheaper alternatives. As the research on the Krakow market indicates, the most important decision criterion for students seeking a place of residence are rental costs (Głuszak & Małkowska, 2017, p. 41). Therefore, subsequent studies in the subject should examine whether the high standard of private PBSA makes it attractive enough for the students to be prepared to pay a higher rent for it. Finally, it is worth highlighting the risk associated with the COVID-19 pandemic. The economic crisis expected in its aftermath may delay the development of this market. In addition, if the pandemic continues and due to this most universities retain online learning for several years, the demand for student accommodation will decrease significantly. It seems that there are many unknowns associated with the pandemic and as of today it is difficult to assess its effects.

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