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CONDITIONS FOR THE FUNCTIONING OF REGULATED COMPETITION ON THE PUBLIC URBAN TRANSPORT MARKET IN POLAND

Abstract

The public urban transport market takes the form of a natural monopoly. In some cases, especially in the situation of supply of a relatively large volume of operation work, the implementation of competitive solutions may result in: improving the quality of services or reducing the cost of vehicle-kilometers. The purpose of the article is to present the determinants of functioning of regulated competition on the public urban transport market in Poland. The conducted analysis focuses on the issue of market openness and access to participation in competitive procedures of private operators. The research covered urban transport markets in cities over 200 000 inhabitants and their characteristics in the scope of: the model of public transport organization (with particular emphasis on the level of opening of markets), the level of competition on the operator market and the method of selecting operators. On the basis of the conducted research, the scope of applying pro-competitive solutions in the scope of contracting services by the largest organizers of public urban transport in Poland was characterized.

Keywords: public transport market, competition, natural monopoly

Introduction

Competition is regulated by one of the models of public urban transport market organization in Poland. This model assumes the selection of operators in competition proceedings, using the public procurement procedure. The limitation of competitive solutions on the public transport market results from the existence of a natural monopoly, in which one entity is able to realize the total demand in a more effective manner than in the case of competition. The natural monopoly

is related to the size of the market, because in the case of low demand, it is difficult to maintain the scale of production effect. The article presents models of functioning of the public transport market in the largest Polish cities (over the population of 200 000). Due to the size of the operational work needed to provide transport services to large urban centers, the use of competitive procedures seems feasible. On the basis of the plans for sustainable development of public transport and data obtained from the organizers of public urban transport, the openness of the market was defined, while the analysis of data on tendering procedures for transport services made it possible to characterize the type and intensity of competition.

1. Organization of the public urban transport market

One of the main factors influencing the choice of the public transport market organization model is the occurrence of a natural monopoly. This structure is defined as a state in which market conditions make it unprofitable for a larger number of enterprises¹. In the conditions of limited demand, the presence of large entry barriers and due to the production scale effect, one company is able to meet needs in a more cost-effective manner than in the case of competitive impacts. The reduction in the volume of demand takes place primarily in smaller cities, where the public transport network is relatively small, which determines the lower demand for operational work. The existence of a natural monopoly is strongly linked in the case of urban transport with the size of the market². High costs of entering the market, which in the case of transport is equated with a relatively high share of fixed costs, cause that the first supplier in a given market gains a definite competitive advantage over potential competitors³. A barrier to market access outside costs may also be preference for the public sector and not allowing private enterprises to the operator market. The organizer of public transport may also be the owner of the operator performing transport. In this situation, the admission of the private entity causes concerns about the proper performance of services. In the case of owner dependencies there is a greater possibility of the organizer's influence on the decisions and actions of the operator than in a situation in which mutual obligations are governed only by the contract for the transport. An additional barrier on the implementation of competitive solutions is the effect of production scale. In the situation of natural monopoly, there is a conflict between cost effectiveness and competition⁴. In terms of model, competition should be conducive to lowering the price, but the lack of the possibility of achieving economies of scale will be conducive to the increase in unit cost. However, in a natural monopoly, the economies

¹ A. Mas-Colell, M.D. Whinston, J.R. Green, *Microeconomics Theory*, Oxford University Press, New York 1995, p. 570.

² H. Kołodziejcki, *Istota, formy i intensywność konkurencji w komunikacji miejskiej* [in:] *Gospodarowanie w komunikacji miejskiej*, ed. O. Wyszomirski, University of Gdańsk Publisher, Gdańsk 2002, p. 164.

³ B. Fiedor, *Regulacja państwowa a monopole naturalne*, Prace Naukowe Akademii Ekonomicznej im. Oskara Langego we Wrocławiu 1991, 598, p. 35.

⁴ S. Miecznikowski, *Formy oraz intensywność konkurencji w transporcie miejskim* [in:] *Transport miejski. Ekonomika i organizacja*, ed. O. Wyszomirski, University of Gdańsk Publisher, Gdańsk 2007, p. 195.

of scale achieved by the company allow it to satisfy all demand in a given market, at a lower average cost than in any other case⁵.

The existence of a natural monopoly, affects the organization of the public transport market and explains the low level of competition. Undoubtedly, along with the intensification of urbanization processes and metropolization in many urban areas, there is an increase in the volume of operational work, which favors the implications of competitive solutions in the selection of the public transport operator. Assuming the separation of the organizer and operator functions (this solution is now common), two solutions are possible⁶:

- a dominant operator controlled by the transport administration;
- competition regulated by the transport administration.

Both forms of organization come to the issue of operator selection. In this regard, the Legislator provides for the following possibilities of contracting public urban transport services⁷: conclusion of a single-source contract (used for orders up to EUR 1 million or 300 000 transport vehicles per year), establishment of an internal entity (based on EC Regulation 1370/2007), conducting competitive proceedings (in accordance with the Public Procurement Law). The organizer has the option of using either an unrivaled mode (internal entity), competitive or hybrid solutions based on the fact that part of the market is reserved for an internal entity and some are subject to competitive proceedings. The privileged position of an internal entity is connected with the following restrictions: it must be the property of local government (100% of shares), it can provide public urban transport services only within the area of one organizer while strongly limiting other commercial activities.

Regulated competition involves the application of the Public Procurement Law⁸ (PPL). The selection of the contractor should take place using: equal treatment of contractors, fair competition, impartiality and objectivity, legalism, openness, written procedure and priority of tender procedures. The evaluation and selection of the best offer is based on specific criteria. Initially, along with the introduction of the PPL, it was permissible to use only the price criterion, and as a result the cheapest offer meeting certain requirements won. Over time, the Legislature sought to limit the role of prices and increase the importance of non-price criteria. The Act in its current wording (March 2018) indicates that the share of the price in the bid evaluation process may not exceed 60%. Other criteria with a total weight of 40% have not been defined and their selection and subsequent verification have been passed on to the ordering parties. In the group of price criteria, in general public procurement in Poland (in the period from June 2016 to March 2017) prevailed: the deadline (30%), terms and time of the guarantee (25%) and payment terms (10%)⁹. This list shows

⁵ W.J. Baumol, A.S. Blinder, *Economics: Principles and Policy (12th Edition)*, South-Western Cengage Learning, 2011, p. 220.

⁶ R. Tomanek, *Problemy ustalania wielkości dopłat do transportu zbiorowego w warunkach integracji* [in:] *System dopłat do publicznego transportu zbiorowego w komunikacyjnych związkach komunalnych w Polsce*, eds.. R. Janecki, W. Starowicz, PiT Publisher Cracow, Cracow 2009, p. 25.

⁷ Act of December 16, 2010 on public collective transport (Journal of Laws of 2011, No. 5, item 13).

⁸ Act of 29 January 2004 on Public Procurement Law (Journal of Laws of 2004, No. 19, item 177).

⁹ I. Fundowicz, W. Michalski, *Stosowanie kryteriów oceny ofert w postępowaniu o udzielenie zamówienia publicznego* [in:] *Funkcjonowanie systemu zamówień publicznych – aktualne problemy i propozycje rozwiązań*, eds. M. Stręciwilk, A. Panasiuk, Public Procurement Office, Warsaw 2017, p. 13–14.

that the ordering parties marginalize non-price aspects in terms of content, using criteria that are easy to meet and do not directly affect the quality of the order.

In the case of regulated competition on the public transport market, it is assumed that there will be a market verification of unit prices¹⁰, and competition between operators will reduce the unit cost. Over the years, the operator market in Poland has developed significantly and has also become attractive for entities with foreign capital. In spite of this, the following factors limiting the effectiveness of regulated competition are indicated in the literature: limitation of the functions of public transport boards, failure to put in real competition in transport and over-regulation of activities in the sphere of public utilities¹¹. In the following parts of the work the organization model and the scope of competition on the public transport market will be discussed in the largest cities in Poland.

2. The model of organization of the public transport market in the largest Polish cities

In accordance with the provisions of the Local Government Act, and the Act on public transport, the collective transport organization was included in the municipality's own tasks. The organization of public urban transport in the area of the commune may be implemented: by the commune in its area, by the commune in its area and in the area of other communes by agreement, by an inter-commune or metropolitan union (to which this commune belongs and entrusted to it by way of resolution competence in the field of organization of public urban transport).

The development of the metropolization process has caused the fact that especially in cases of large urban areas their so-called functional area is considered. The urban functional area includes the core city and the associated urbanized area. These connections take on the character of: transport (travels between work and home), spatial planning and the flow of goods and services of diverse character¹². The need to provide an adequate public transport offer means that cities must organize public transport in a large area, which results in a high volume of operational work. Table 1 identifies Polish cities with a population of over 200.000 and the model of organization of public urban transport adopted by them.

¹⁰ G. Dydkowski, *Integracja transportu miejskiego*, Publisher of the University of Economics in Katowice, Katowice 2009, p. 187.

¹¹ K. Grzelec, *Restrukturyzacja miejskiego transportu zbiorowego w Polsce. Od monopolu do... monopolu*, *Transport Miejski i Regionalny* 2012, 12, p. 35–36.

¹² D. Kociuba, *Miejskie obszary funkcjonalne – wyzwania planistyczne*, *Studia Miejskie* 2015, 18, p. 41.

Table 1. Characteristics of the organization of public urban transport in cities with over 200 000 residents

City	Numer of residents (1 st January 2017)	Organizer of public urban transport	Market model	Volume of annual operating work ordered by the organizer (bus transport) [million vehicle km]
Warsaw	1 753 977	the city's budget unit	domination of the internal entity	115.1 (2016)
Krakow	765 320	the city's budget unit	domination of the internal entity	37.8 (2016)
Łódź	696 503	the city's budget unit	domination of the internal entity	29.7 (2015)
Wrocław	637 683	the organizational unit in the city office	domination of the internal entity	24.0 (2015)
Poznań	540 372	the city's budget unit	domination of the internal entity	33.2 (2015)
Gdańsk	463 754	the city's budget unit	domination of the internal entity	17.2 (2016)
Szczecin	404 878	the city's budget unit	domination of the internal entity	No data
Bydgoszcz	353 938	the city's budget unit	domination of the internal entity	15.2 (2016)
Lublin	340 466	the city's budget unit	domination of the internal entity	No data
Katowice	298 111	the communal union	regulated competition	68.4 (2016)
Białystok	296 628	the city's budget unit	domination of the internal entity	16.6 (2015)
Gdynia	246 991	the city's budget unit	domination of the internal entity	14.3 (2016)
Częstochowa	226 225	the city's budget unit	domination of the internal entity	10.8 (2015)
Radom	215 020	the city's budget unit	domination of the internal entity	9.6 (2016)
Sosnowiec	205 873	the communal union	regulated competition	68.4 (2016)
Toruń	202 521	the city's budget unit	domination of the internal entity	9.7 (2015)

Source: own elaboration based on: Local Data Bank of the Central Statistical Office; Public transport in numbers, 2/15, IGKM 2016; data provided by the organizers and the provisions of relevant plans for sustainable development of public mass transport

The analysis of the organization of public transport in the largest Polish agglomerations indicates that there is a separation of the organizer and operator functions and the domination of the internal entity. In most cases, the city president via a specialized budgetary unit, organizes public urban transport within the city and neighboring municipalities under relevant agreements. The advantage of this solution

is the integration of public transport within the entire functional area of the city. Two areas can be excluded from this trend: the Upper Silesian agglomeration (among others Katowice and Sosnowiec) and the Tri-City agglomeration (Gdansk and Gdynia). In the first case, the organizer of public transport is the Communal Municipal Association which groups 28 municipalities that ceded the organizer's duties to the association (currently the competence of Communal Municipal Association is taken over by the relevant metropolitan union unit: Upper-Silesian Metropolitan Area). The second polycentric area indicated in Table 1 is the Tri-City agglomeration, where despite the independence of Gdansk and Gdynia, in the field of collective transport organization, the Metropolitan Union of the Gulf of Gdansk has been created to perform integrating functions.

The analyzed cities differ in terms of the volume of performed operation work in bus transport (tram transport in this work was omitted due to the clear natural monopoly in this market segment). However, the predominant model of transport organization is entrusting part or all of the market to an internal entity. On the basis of the provisions of transport plans and data obtained from the organizers of public urban transport, the following shares of internal entities in individual markets can be indicated¹³: Warsaw 76%, Krakow 86%, Lodz nearly 100%, Wrocław 88%, Poznań 100%, Gdansk 85%, Szczecin nearly 100%, Bydgoszcz 75%, Lublin 85%, Białystok 100%, Gdynia 75%, Częstochowa 100%, Radom 75%, Toruń 100%. On the basis of the above data, it is possible to indicate the organizers' reluctance to use tender procedures in the process of selecting the operator. In the group of analyzed organizers, the share of private entities reaches a maximum of 25%, in the competition mode, the operators of suburban, agglomeration and night lines are very often selected. Tasks related to internal service of the city are left for municipal operators. In the provisions of plans for sustainable development of public urban transport, in most cases the organizers see the advantages of competition, reflecting the records indicating that in the next few or twenty years approximately 20–30% of the market will be subject to free competition. The results of the tests carried out and the analysis of documents give the basis for indicating the following conclusions:

- the model based on the dominance of the internal entity is most often found in the largest Polish cities;
- in strategic documents, the organizers in the long-term plan to choose an operator in competitive proceedings, but the service of the vast majority of the market will still be outsourced under the entrustment agreement;
- the organizers explain the maintenance of the high share of the internal entity with the insufficiently educated private market and the risk of improper quality of services provided by these entities.

Only in the case of the Communal Municipal Association market, the regulated competition model is fully implemented. The scope of tendering procedures is varied, they concern the operation of one line or packages of several to a dozen or so

¹³ For Warsaw, Cracow, Bydgoszcz, Gdańsk, Gdynia, and Radom detailed data for 2016 provided by the organizers, in other cases data based on the provisions of plans for sustainable development of public mass transport and websites of the organizers.

lines of communication. Both municipal entities and private enterprises compete on the market.

3. The scope of competition on the public transport market

The legal framework for competition on the public urban transport market is determined by public procurement law. The tender procedure requires the contracting authority to prepare and place a tender notice, prepare and disclose the specification of essential terms of the order and, if necessary, provide answers to questions asked by potential contractors. As part of the description of the order conditions, in addition to specifying the service, the ordering party indicates how to choose the best offer. This choice is based on specific, measurable and objective criteria. Subsequent amendments to the Public Procurement Law limited the application of the price criterion, in 2014 the necessity to apply a minimum of one non-price criterion, while in the amendment of 22nd June 2016, the price criterion was limited to a maximum of 60% of the share evaluation. In the context of the development of competition on the public urban transport market, two aspects are particularly important: the volume of services ordered in one proceeding and the criteria for selecting the best offer¹⁴.

Determining the volume of services purchased by the organizer in one tender procedure is in contradiction with the effect of economies of scale. On the one hand, a large order allows for a better negotiating position, a long-term contract covering a large package of bus lines is more attractive for operators and will be willing to lower the price. On the other hand, too much concentration of orders reduces the level of competition, and high requirements as to the number of rolling stock units (in order to handle a large order) constitute a barrier to entry. The entry barrier may also be too precisely described (narrowing the number of potential contractors) transport service being the subject of the proceedings. The contracting party faces a dilemma – whether at the specification level specify very high requirements (e.g. age of rolling stock, comfort etc.) while marginalizing non-price criteria for selection of offers, or allow operators having an older fleet park to conduct, rewarding additional points with age and other qualitative rolling stock parameters at the stage of offer evaluation.

The Communal Municipal Association market has been subject to a detailed analysis of the results of tender proceedings, where competitive impacts are the most advanced. In 2016 38 operators operated on the market and the operation of consortia, mainly private enterprises, is a common practice. The tendering procedures usually included one or several dozen lines. Businesses from the former operational plants of the Voivodship Transport Enterprise in Katowice and private entities compete on the bus operators market. The dominant market share at the level of approximately 67% (2016) was owned by the three largest municipal operators. In 2013–2016, a total of 131 orders were awarded as a result of tendering procedures.

¹⁴ See: G. Krawczyk, *Ocena funkcjonowania systemu zamówień publicznych przez operatorów transportu zbiorowego w Polsce*, Zeszyty Naukowe Wydziału Ekonomicznego Uniwersytetu Gdańskiego. *Ekonomika Transportu i Logistyka* 2017, 74, p. 245–254.

The Communal Municipal Association made the selection of the best offer in the analyzed proceedings dependent on the amount of the price. Until the implementation of the provisions resulting from the amendment of the Public Procurement Law from 2014, the price criterion was 100% of the assessment. In the next period, one non-price criterion – payment terms began to be taken into account. This criterion had a weight of only 5%, which could be obtained in the situation of settling all receivables for a given month within 10 days from the date of receipt of the invoice. As a result of the amendment of the law in 2016, the share of the price criterion for payment terms was reduced, adopting the layout in the assessment process: 60% price, 40% payment deadline. The non-price criteria used in this case are not reflected in the quality of services and are relatively simple to meet. Most of the analyzed documents on the selection of the best offer indicated that the maximum number of points obtained by the bidders in this respect. It should therefore be recognized that the nature of rivalry between operators is only of a price nature. Strong competition exists between private entities. In the analyzed period, only 34 cases were submitted by municipal and private entities. In most cases, orders were awarded to private operators who declared a lower price for the service. Municipal entities won only in 5 tenders, however their market position is very strong. It strengthened as a result of the 2013 procedure, under which the operator of 181 public bus lines was selected. The high volume of orders, implying the need to have a large fleet park, meant that the offer was submitted only by one entity – a consortium of the three largest municipal operators. The example of the Communal Municipal Association indicates that even in the case of regulated competition, the dominant share is held by municipal operators, and ordering a large package of services in one proceeding favors market concentration and limits competition. Despite the increased market concentration as a result of the tender for 181 lines, it should be pointed out that the previous practice of the Communal Municipal Association has allowed for a significant development of the operator market in the national dimension. Many of the operators who start operating in this market successfully compete and handle transports at the request of other organizers.

Conclusions

Competition on the public transport market is carried out under specific conditions. Natural monopoly is an obvious barrier to competition, but in large agglomerations it is difficult to talk about the inability to achieve economies of scale by more than one entity. The example of Communal Municipal Association indicates that regulated competition can be implemented and the operator can be selected on the competition basis. Despite this, in the case of most agglomerations in Poland, there is a clear reluctance to open up the market. If such solutions are already in place, then the tendering process involves outsourcing of less important tasks such as night or suburban lines. The reluctance to open the market may result from the fact that it is convenient to have own operators for whom actual competition could result in a limitation of activity.

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