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## **INNOVATIVE PRICING POLICY FOR TRANSPORT SERVICES**

**Summary:** The article draws particular attention to the innovative approach in the process of price management, based on dynamic and behavioral pricing. In addition, attention has been drawn to the possibility of price discrimination and the price determinants have been presented. At the beginning of the study, the currently used strategies in the management of prices in transport enterprises have been described and evaluated. Then, based on a literature review, an attempt was made to identify innovative practices in terms of the pricing policy and their use was suggested in the process of development of pricing strategies by the companies providing transport services.

**Keywords:** pricing policy, transport, dynamic and behavioral pricing, price discrimination.

### **Introduction**

The global economic downturn, recorded in the period of 2007-2010, was noticeable in almost every sector of the economy. It also affected the undertakings providing transport services [Kłos, 2009]. The crisis forced companies to undertake effective measures aimed at maintaining the sales volume of their services, as well as maintaining their current market positions. The development of new technologies and broad access to information changed the basis of competitiveness and led to a revolution in management. Currently, a chance to stand out in the market is provided by an innovative pricing policy because, as emphasized by Nigel, Piercy and Cravens [2010], price offers a powerful strategic capability. According to researchers, price is the most neglected element of the

marketing mix, despite its significant impact on profitability. Even small changes in its level may have a significant impact on the revenues of a company. Furthermore, this is the only element of the marketing mix that is easy to implement and does not necessitate significant expenditure. In the era of Internet companies, it is easy to get to know clients' needs and adjust the prices accordingly. At the same time, they can compare their offers with the ones of their competitors and prepare the possibly most attractive proposition. This is the reason why price management is so important.

According to a study by Simon-Kucher & Partners in 40 countries, mainly from Europe, both Americas and Asia, the data from almost 1,600 managers shows that many companies have a huge problem with achieving the assumed profits. The main cause of this state of affairs is thought to be the fact that enterprises tend to ignore key issues related to pricing management and marketing issues. Only 10% of the analyzed companies are introducing new profitable products and innovations. These innovations relate, inter alia, to the issues related to prices. Leaders integrate pricing and marketing with other processes occurring within the enterprise. They also use tools and software that allows them to measure the achieved results in prices, and thus better and more quickly understand the value provided by their products/services to the customers. The authors of the study suggest that professional price management and involvement of the management personnel in this process will enable companies to achieve the expected profit [Simon-Kucher & Partners, 2014].

## **1. Review of the literature**

Both in economic theory and business practice, the basic principles of pricing tend to be cost-oriented (the price includes the unit costs incurred by the company to produce services, as well as a price margin), competition-oriented (the price is determined on the basis of price analysis of competing services), or demand-oriented (the basis for determining the price is the existing or anticipated demand) [Cravens and Piercy, 2009]. Many companies use the traditional approach to pricing, balancing costs with competitor prices.

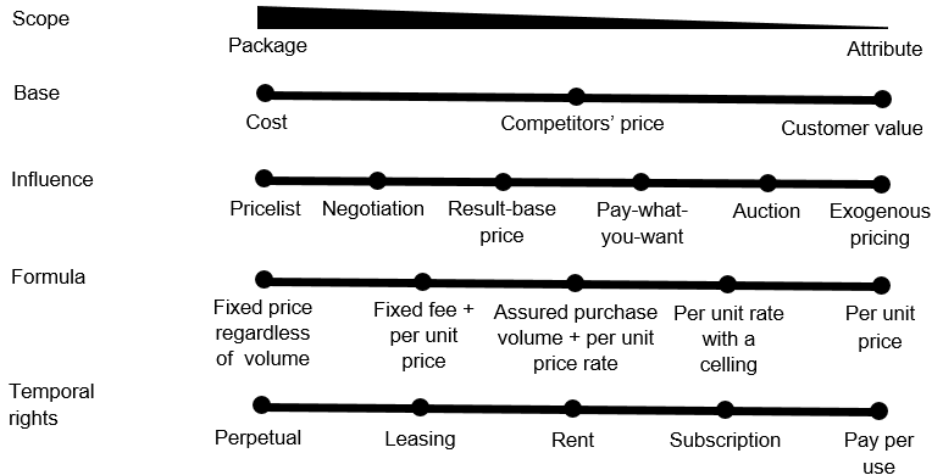
Usually, transportable calculation – in author's opinion – is based on the model of "cost plus". Cost-based pricing guarantees the valuation of services in such a way as to cover the costs associated with the provision thereof and to achieve the target return. However, sometimes it is difficult to determine in advance the cost per unit because unit costs fluctuate along with the volume of

sales. Such an approach leads to overpricing in weak markets and underpricing in the case of a strong demand [Collins and Parsa, 2006]. The cost plus model has a few advantages, but also disadvantages. On the one hand, such a model guarantees financial security (the price guarantees the coverage of the costs and provides the necessary income) and this method is easy to use. However, its disadvantage is the fact that the price is based only on costs and ignores the external relations, for example it does not take into account the influence of consumers or the competition [Jarocka and Ryciuk, 2016]. Furthermore, according to many researchers [Hinterhuber, 2004; Ingenbleek, 2007; Hinterhuber and Liozu, 2013; Sokolowska and Schultz, 2014], using only one of the methods of price calculation can have negative consequences.

Currently, in the literature much attention is given to the new approaches to pricing. The development of pricing strategies is strongly influenced by the latest achievements in the field of information technology. Real time computational abilities, intelligent agent technologies, and database marketing are becoming key elements of the innovative pricing policy. The Internet is a source of customer information, so that companies can use pricing strategies such as auctions, revenue management, price bundling, as well as product and price customization. Thanks to intelligent agent, companies can have access to competitive information, and then use it to mark their competitive advantage [Dixit et al., 2005; 2008].

The examples of creative pricing strategies, which are particularly appropriate return during economic declines and recovery, have been presented by Nigel, Piercy and Cravens (2010). One of those strategies is the one used by the British drug company Janssen-Cilag, a subsidiary of Johnson & Johnson, the so-called Payment-by-Results strategy used in the case of medicines. In 2007, the company has made the price of a medicament for cancer dependent on whether the patients felt better after its application. If there was no improvement, the company offered to cover the cost of the £ 25,000 cancer drug. Another example of an innovative strategy, cited by the authors, is the so-called a La Carte pricing strategy used by airlines. For example, US airlines charge for checking baggage, selling pillows and bottled water. Such an offer is attractive to those customers, who are not interested in “add-ons”. On the other hand, it benefits the company if there are people willing to take advantage of the additional products or services proposed during travel. In turn, Ryanair charges a fee for luggage, as well as for airport check-in.

Another innovative pricing model has been developed by a group of Swedish researchers and the Ericsson company – the SBIFT model [Iveroth et al., 2014]. The authors argue that companies can differentiate by price along five dimensions, namely: scope, base, influence, formula and temporal rights (Fig. 1).



**Fig. 1.** The SBIFT model

Source: [Iveroth et al., 2013].

The first dimension is the scope. At the one end of the spectrum, there is a complete package of products and services. At the other end – each attribute or lowest-level unit of the offer. For example, Ryanair proposes different products, such as flight, priority in boarding, luggage allowance, beverage and car rental. The next dimension – base – concerns a type of information base which underlies the pricing decisions. A premise for pricing can be the cost of developing, producing, distributing and selling products and services. This alternative is most common. The other two are the prices determined on the basis of competitors' prices and customer value. Considering the third dimension, referred to as influence, the price can depend on the degree of influence that a seller or buyer have on the price. There may be a situation where only the seller (pricelist) or only the buyer (pay-what-you-want) determine the price of the product or service. These entities may also, to the same extent, affect the price (negotiation), or none of them can make a decision on this issue (exogenous pricing or result-based prices).

Another dimension of the SBIFT model is associated with the formula that subjects the price to the sales volume. The price may remain at a constant level, regardless of volume. Next on the axis, fixed fee plus a per unit rate is located. In this case, the price includes two components: a fixed fee plus a price per unit. In the middle of the axis is the type assured purchase volume plus the per unit rate. Here, the price consists of a fixed fee and a fee per unit, which is charged only after exceeding the amount assigned to the fixed fee. Another solution pro-

posed by the authors of the model is the per unit rate with a ceiling, under which a charge per unit is applied, provided that it is charged only until reaching a certain level, after which the fee does not increase any more. The last type under this dimension is the type per unit price. The price is determined by purchase units.

The last dimension of the proposed model, referred to as temporal rights, includes the right to use the offer in the context of time. The more to the right side of the axis, the shorter the period for the client to use the purchased product or service. On one side of the axis there is the perpetual. The customer purchases the goods. On the other side of the axis there is the opposite of this solution (pay per use), in which the buyer pays for every single purchase of a product or service. Between these possibilities there are: leasing, rents and subscription. Leasing and rents involve using the offer for a certain period, and in the framework of rents the buyer has to return it when the rental period is over. The last solution is subscription. In this case, there is also the transfer of rights to use a product or service, while the seller undertakes to update and improve their functionality.

## **2. Description of the problem**

Many companies determine the price in advance and do not update their price lists in response to changing market conditions. However, due to the development of new technologies, the emergence of advanced software, and the emphasis on the training of managers in the field of quantitative methods, in recent years, attempts are being made to improve the traditional pricing strategies [Grewal et al., 2011]. The paper proposes new innovative pricing strategies, which – according to the author – may be applied to the sector of transport services. Particular attention was paid to pricing models, such as the dynamic pricing model or the behavioral pricing model. The strategy of price discrimination was also treated as an innovation in pricing policy.

## **3. Price innovations for transport services**

### **3.1. Dynamic pricing**

In connection with the access to specialized software and the ability to work on large databases, the concept of a new pricing model was developed, called the dynamic pricing model. According to the Business Dictionary, dynamic pricing is “the process of determining a product’s value in commercial transactions in

a fluid manner, depending on current market conditions” [www 1]. Dynamic pricing, also referred to in the literature as yield management or revenue management, is a set of pricing strategies aimed at increasing profits [McAfee and te Velde, 2007]. This model is based on the changing supply or demand characteristics [Thomas et al., 2010]. This allows the company to adjust their prices to the changing market demand.

Dynamic pricing is already a common practice in the hotel industry [Abrate, Fraquelli and Viglia, 2012], on the electricity market [Jia and Tong, 2016], traveling [Malighetti, Paleari and Redondi, 2009], medical services [Yabin, Xiaohui and Congdong, 2015] or in the management of parking space [Mackowski, Bai and Ouyang, 2015]. A pioneer in the development and implementation of new pricing strategies is the aerospace industry. An example in this case is the company American Airlines, which changes half a million prices per day [McAfee and te Velde, 2007]. Also the low-cost carriers, for example Ryanair, have revolutionized the air passenger transport industry [Malighetti, Paleari and Redondi, 2009]. Their innovative business model is focused on cost reduction through waiving additional services during the flight. In addition, cheap airlines owe their success to dynamic pricing and alertness to “latent demand” [Mackowski, Bai and Ouyang, 2015]. Due to the pricing strategy adopted by those companies, customers can buy a plane ticket even for under 10 Euros.

In addition, in order to increase the attractiveness of dynamic pricing in the market of transport services, it is possible to use new technologies, such as radio frequency identification (RFID), wireless networking, and global positioning (GPS). Grewal [Grewal et al., 2011] gives the example of the Progressive Casualty Insurance Company, which offers different prices determined on the basis of data (for example, speed, distance travelled) transmitted from the devices that are connected to the diagnostic ports of vehicles operated by MyRate customers.

### **3.2. Behavioral pricing**

An innovative pricing policy should be based on the knowledge of customers, the analysis of their needs and expectations, as well as the understanding of the mechanisms influencing their purchasing decisions. The activities associated with the identification of customer needs may contribute to the increase of sales of their services. Enterprises should use the assumptions of behavioral economics in their innovative pricing policy. They explain, among other things, the fact that the purchasing decisions, alongside logical arguments, are influenced also by the situations in which the customer found himself at the moment of

making a particular purchase decision [Nowak and Gorzen, 2013]. Behavioral pricing, therefore, involves managing the price in such a way as to take into account customer behavior during various shopping situations.

### **3.3. Price discrimination**

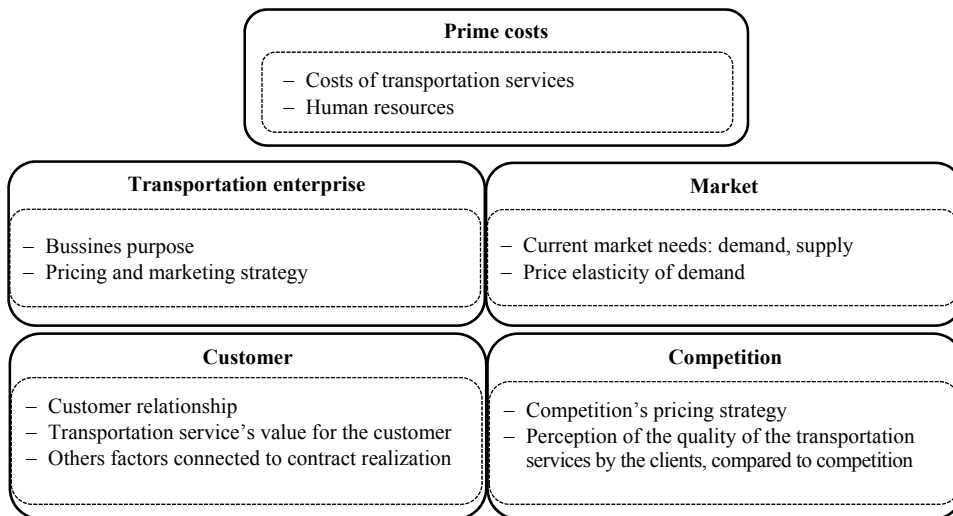
An innovative approach in the process of determining the level of prices is also their differentiation [Mindur and Rosa, 2014]. Price discrimination of transport services comes down to the determination of prices of the same service for different customer groups. The prices should also depend on such factors as customer loyalty/long-term cooperation, the client being new or of key importance. Moreover, the strategy of price discrimination for cargo transportation could be dependent on [Jarocka and Ryciuk, 2016]:

- nature of transportation (compact or distributed),
- client localization,
- frequency of ordered services,
- number of ordered services,
- size of a single contract,
- due date,
- time of the transportation service realization,
- seasonality,
- speed of the transportation service realization.

Price differentiation has become common practice in the airline industry. For example, according to Obeng [2008] the major sources of price variation are: peak departure times, in-flight time, layover time, number of discount seats and plane capacity on the originating flight used as a proxy for demand.

### **3.4. Determinants of price**

Researchers Shipley and Jobber [2001] proposed the so-called pricing wheel, which may be useful in the development of the pricing policy of the company. One of the elements of the wheel is the assessment of all pricing determinants. According to the author of this work, the identification of all the factors affecting the price is an important issue in the process of its determination. It is important for the transport companies to be aware of the fact that the price of their services depends on many factors (Fig. 2).



**Fig. 2.** The determinants of prices for railway transport

Source: [Jarocka and Ryciuk, 2016].

The prices of transport services depend largely on the cost incurred for the provision of these services. However, the level of the prime costs should constitute only a starting point in the process of determining the final price. Its final level should fluctuate in price range, which is determined by the factors classified into 4 groups: transportation enterprise, market, customer, and competitors. The factors affecting the price of the transport service have been widely described in the work of Jarocka and Ryciuk [2016].

According to the author, businesses, in order to maintain or attract new customers, will be forced to determine the value of the services, perceived by the customer. As observed by Antonowicz [2014], the identification and monitoring of consumer value constitutes marketing innovation in transport. The researcher points out that the value for the customer in the transportation services is presented by: costs, security, availability, quality, reliability, complexity, punctuality and convenience. Identification of the value of services, from the point of view of the customer, can provide a basis for market segmentation. In turn, the results of market segmentation can be used to implement the strategy of the personalization of prices.



## Conclusions

In the conditions of growing market awareness of customers, their requirements, and global access to information, one of the main strategic objectives of each company providing transport services should be the development and implementation of an effective pricing policy. Comprehensive, innovative, and creative management of service prices may in fact contribute to the strengthening of the competitive position on the market, acquisition of new customer groups, creating a credible image of the company, and consequently to generating more profit. An innovative pricing policy comes down not only to the determination of the level of prices, but above all to defining and implementing innovations both within the pricing strategy, within the method of calculating prices and in the organization of the company itself.

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### INNOWACYJNA POLITYKA USTALANIA CEN USŁUG TRANSPORTOWYCH

**Streszczenie:** W warunkach rosnącej świadomości rynkowej klientów oraz globalnego dostępu do informacji jednym z głównych celów strategicznych każdego przedsiębiorstwa usług transportowych powinno stać się opracowanie i wdrożenie efektywnej polityki cenowej. Kompleksowe, innowacyjne i kreatywne zarządzanie cenami usług może bowiem przyczynić się do wzmocnienia pozycji konkurencyjnej na rynku, pozyskania nowych grup klientów, wykreowania wiarygodnego wizerunku firmy, a w konsekwencji do wygenerowania większego zysku. Innowacyjna polityka cenowa sprowadza się nie tylko do ustalenia poziomu cen, ale przede wszystkim do określenia i wprowadzenia innowacji zarówno w ramach strategii cenowej, w metodzie kalkulowania cen oraz w organizacji samego przedsiębiorstwa. W artykule zaproponowano innowacyjne podejście w procesie zarządzania cenami, oparte na dynamicznym i behawioralnym prycingu. W pracy omówiono również koncepcję nieliniowego prycingu oraz wskazano katalog determinant cen usług transportowych.

**Słowa kluczowe:** polityka cenowa, transport, dynamiczny i behawioralny prycing, różnicowanie cen.