

## Tadeusz Chruściel

Social Academy of Sciences in Łódź  
Off-site department in Szczecinek  
orcid.org/0000-0002-8470-1204  
e-mail: apromodeni@wp.pl  
phone: +48 606 832 747

## Rafał Tyszkiewicz

WSB University in Wrocław  
Faculty of Finance and Management  
orcid.org/0000-0003-1525-0697  
e-mail: rafal.tyszkiewicz@wsb.wroclaw.pl  
phone: +48 662 011 174

## Monika Tyszkiewicz

WSB University in Wrocław  
Faculty of Finance and Management  
orcid.org/0000-0001-6785-966X  
e-mail: monika.tyszkiewicz@wsb.wroclaw.pl  
phone: +48 665 685 665

# Influence of Changes in the Environment on the Business Model of Municipal Enterprises

**Abstract.** *Urban development largely depends on the effectiveness of the service offer of municipal utilities that carry out their own tasks of local government units. The ongoing and uninterrupted satisfaction of residents' needs requires municipal enterprises to develop a business model that takes into account the turbulent changes in the external environment of enterprises in the long run.*

**Keywords:** *change, business model, municipal enterprise*

## 1. Introduction

The processes of changing the business model are still an unparalleled phenomenon occurring in municipal enterprises in Poland. Changing the business model may not be an easy mission for enterprises, however, the constant need to adapt to changing conditions forces the necessity of transformations in specific areas. All market participants, regardless of their specialization or sector, are facing turmoil, are more or less vulnerable to changing trends, new technologies,

increasingly sophisticated needs and expectations of customers. Therefore, it seems that only those entities that are able to design the organization to capture the most important values for the company in a changing reality, which will create the most adapted business model, will be able to increase their resources and maintain competitive advantage in the most effective way.

The measure of the competitive advantage of the commune is the dynamic economic development of the region, which reflects the quality of life of its inhabitants. Access to green areas, parks, their aesthetics and development is undoubtedly an asset. Similarly, good road infrastructure, an extensive network of bicycle paths, the way they are maintained, the possibility of using modern public transport, access to water and heat management, high-level waste management and utilization are factors that shape the residents' satisfaction. However, it should be emphasized that the ongoing and continuous satisfaction of the collective needs of the population by providing publicly available services can be attributed to municipal enterprises that operate in the field of public utilities.

Pursuant to the Act on commune self-government, satisfying the collective needs of the community is the commune's own tasks. In particular, own tasks include the following matters:

- spatial order, real estate management, environmental and nature protection, and water management,
- municipal roads, streets, bridges, squares and traffic organization,
- water supply and water supply, sewerage, municipal sewage disposal and treatment, maintenance of cleanliness and order and sanitation, landfills and disposal of municipal waste, electricity and heat supply, and gas.<sup>1</sup>

Meeting the needs defined in these areas, guaranteeing at the same time a permanent increase in the standard of living for the residents, and an increase in the economic potential for the region, requires municipal companies to develop a business model that will take into account market turbulence and turbulence in the long run.

Rational actions taken already at the stage of creating a business model, taking into account various situations, will allow the municipal enterprise to go more gently through previously anticipated scenarios. In other words, decisions made in the past very often cast a shadow on the scope of the company's activities and often associated with a change in the business model [Chesbrough, Rosenbloom 2002: 529-555].

However, how to interpret the business model in the context of a municipal enterprise whose goal is to effectively provide technical services and not to maximize benefits for owners [Falencikowski 2017: 91-98]. The literature on the subject does not have a uniform definition of the business model, it is captured

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<sup>1</sup> Act of 8 March 1990 on commune self-government, Journal of Laws 2019, item 506.

by many authors and in many ways. Mark W. Johnson expressed it as a representation of how business creates and delivers value to both customers and the enterprise [Johnson 2010: 22].

From the perspective of strategic management, it can be considered that the business model should be seen as an manifestation of the organization's strategy, which is externalized by modeling the value chain in order to effectively use and reconstruct resources and skills [Porter 2006: 45]. On the public utility level, the above-mentioned aspects of the business model approach in municipal enterprises will be strongly correlated with the uninterrupted satisfaction of the collective needs of municipal residents.

Polish enterprises are increasingly changing the business model to improve competitiveness, quality policy, restructuring or cost reduction. Changes made in organizations are to ensure their stability, development and a higher level of quality of their functioning. Unfortunately, there is a phenomenon of implementing ill-considered changes in enterprises. There is also the effect that after a short time the company gives up implementing the change in the light of subsequent changes.

Internal changes repeatedly slow down the employees of the enterprise themselves, who perceive this type of process as a threat to themselves and often approach each occurring change in a passive manner.

The role of the manager, i.e. the change promoter, who initiates the changes, tries to ensure their implementation and inspires employees participating in the process of change in the enterprise is unquestionable in this process.

According to Ramon Casadesus-Masanell and Joan Enric Ricart business model is a reflection of the implemented strategy, i.e. one of the possibilities (options) specified in the multi-variant strategy [Casadesus-Masanell, Ricart 2010: 195-215]. Therefore, it contains a set of managerial choices, as well as the consequences of these choices. Therefore, changing the business model requires well-thought-out managerial decisions made especially in the past, because in the long term they affect the market condition in the future.

The purpose of the article is to identify the impact of changes in the environment on the business model of municipal enterprises from the West Pomeranian Voivodeship.

The article poses research questions: how are the processes of changing the business model in municipal enterprises, as well as what determinants and mechanisms affect the processes of changing the business model.

Defining the purpose of the article and research questions allowed to adopt the research hypothesis, which reads: the more susceptible to changes the business model of municipal enterprises carrying out the municipality's own tasks, the higher the quality of municipal services provided that affect the development of the local government unit.

The research was carried out using literature data and the diagnostic survey method was used. The study was of a pilot nature and is just the beginning of empirical research on the specificity of the business model of municipal enterprises in Poland.

## **2. Change and the organization's business model**

The activity of enterprises in a turbulent environment requires constant monitoring of changes. The variability and negligible predictability of customer expectations as service recipients triggers the need to track changes in the exogenous environment, to verify the strategy and the assumed business model. The algorithm adopted in this way (this approach), designed to keep up with the observed changes, results in the need to adapt the organizational structure, and thus prepare resources for the implementation of business processes. Human resources play a special role in service processes, hence the effectiveness of the changes depends on the ability to adapt employees to new conditions of exogenous but also endogenous environment: customer expectations, technologies used, internal communication, configuration of organizational structure, acquisition and processing of information, new skills and qualifications. Such crew preparation can be determined by the ability or readiness to change. Therefore, the ideal solution would be to overtake the preparation of human resources, e.g. in terms of the necessary knowledge to carry out new tasks.

The essence of the functioning of every enterprise is development and generating income to achieve it, every enterprise must be prepared to constantly adapt to changing external conditions. These conditions change in a turbulent manner, and the enterprise which is a closed system is exposed to increasing chaos in accordance with the principle of entropy. Trends characterizing the turbulence of the environment can be divided into Józef Machaczka [1996]: increase in the intensity of change, increase in the intensity of the environment, increase in the speed of change, increase in the complexity of the environment.

Change is defined as a process taking place over time, transferring an enterprise from a given state to another state, with the involvement of resources. Change takes place in an economic, social and technological context. The purpose of the change is to improve the company's operating efficiency. The change concerns areas such as vision, mission, goals and strategy, culture, structure, staff, technology [Ouang Tien 2012: 18].

The motives for changes in enterprises are different and most often result from necessity (forced changes), but the literature on the subject is divided into two main causes from the point of view of the origin of their creation [Grouard, Meston 1997: 16-17]:

– external causes originating from the company's environment, originating in the field of contact with the client or in competition with competitors. External factors also include all legal restrictions on operations, technological progress, geopolitical and demographic situation,

– internal reasons resulting from the need to develop or willingness to build your own brand. It should be remembered that the primary goal of every enterprise is to earn money, therefore any changes should be considered in terms of improving the financial result of the organization.

The following classification of determinants of changes in enterprises is also encountered:

– imposed (forced) changes resulting from the need to introduce. The direction of changes determines the environment, the organization is forced to adopt a specific scenario,

– spontaneous changes (voluntary, independent) most often resulting from the need or desire to improve results, develop the enterprise or the manager's vision [Zajac 2015: 316].

Research on the business model was initiated by the development of enterprises in the late 90s. According to Jan Brzóska, the most important guidelines in building business models are based on the following theses and principles of approach to business: ensuring proper marketing and innovation relations, productive use of resources, innovative creation of added value and value for the client, gaining a competitive position on the market, the imperative of achieving profit [Brzóska 2009: 12-17].

Hence the business model is a system consisting of interrelated and interacting over time the following elements: the value offered to customers by the company in the segment to which the company directs this value, the necessary activities related to the provision of the offered value, the scope of the product offer along with the price policy, sources of income, organizational possibilities creating the basis of activity, skills and projects enabling to maintain and sustain all aspects of competitive advantage [Brzóska 2009: 12-17].

Elements of the business model indicated by Jakub Drzewiecki are: proposed values for clients and customer relations, economic business model, network of partners, target market, value chain structure [Drzewiecki 2013: 67].

A broad definition of the business model according to Chesbrough is given by Marek Jabłoński, indicating the functions:

- articulating value propositions for clients,
- identifying and determining market segments,
- revenue generation mechanisms,
- defining the structure of the value chain for creating and distributing the offer and complementary assets to support positions in the value chain,
- cost structure and potential profit,

- formulating a competitive strategy,
- description of the company's position in the network connecting suppliers and customers [Jabłoński 2014: 738].

In general, business models should mean a plan or structure that helps explain what value is provided by the company and its network partners to clients [Casadesus-Masanell, Ricart 2010: 529-555]. Nevertheless, business models must be adapted to the changes introduced and be profitable, especially in the context of changing conditions in the enterprise environment [Amit, Zott 2012: 41-49].

Changing the business model seems to be a requirement for enterprises to be able to realize opportunities related to services [Kastalli et al. 2013: 169-180].

### **3. The determinants of changes in the business model of municipal enterprises**

In the group of public utilities, despite apparent stability, one can notice the growing dynamics of changes that is difficult to clearly identify, and the growing turbulent environment makes it necessary to analyze the environment.

The specificity of the functioning of municipal enterprises consists in performing their own tasks of local government units in order to meet the needs of the local government community. According to Zbigniew Grzymała, municipal economy, implemented by municipal enterprises, includes public utility tasks. Their purpose is ongoing and continuous satisfaction of the collective needs of the population by providing publicly available services [Grzymała 2010: 20].

Elżbieta Weiss lists the objectives of municipal entities according to five categories, which are summarized in Table 1.

Table 1. Objectives of municipal entities

Goal category	Specification
Social goals of the commune and residents	Social acceptance of prices of municipal services, quality of services, diversity of service offerings
Economic goals of the commune	Minimization of budget expenditure with a constant scope and quality of services, additional budget revenues from new solutions
Economic goals of the municipal enterprise	Possibility of making a profit by: reducing costs, creating new service markets and expanding existing markets, making profit protects stakeholders and secures development in investment
Ecological goals	Preservation and improvement of the natural environment, shaping the level of awareness and ecological attitudes of the inhabitants
Social goals	Creating efficient mechanisms for carrying out tasks through privatization and activation of the local community

Source: own study based on Weiss 2001: 121-122.

The objectives of municipal entities listed in Table 1 refer to a large extent to service operators, which most often are self-government municipal enterprises. These enterprises are responsible for responding to changes: legislative, expectations of residents, quality and costs of services provided, environmental effects, and finally the opinions of residents about the management of municipal property. A survey of 19 self-government municipal enterprises with a multi-task service structure and a diverse organizational and legal form, operating in the West Pomeranian Voivodeship, conducted in 2018 with interview questionnaire, confirmed the importance of premises, external and internal factors of environmental changes, and thus analyzes and verification of the strategy and business model.

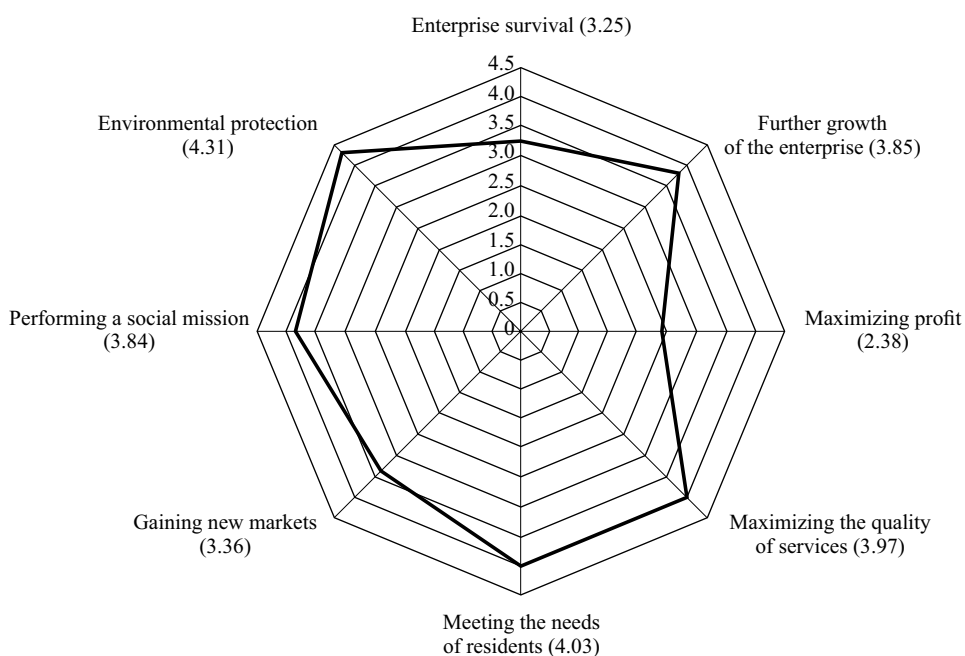


Diagram 1. Premises for changes in municipal enterprises of the West Pomeranian Voivodeship

Source: own study.

The average values obtained of indicators in 19 surveyed enterprises, using a five-point Likert scale, allow to state that the dominant premise is an increase in the level of environmental protection, followed by: satisfying the growing needs and expectations of residents, improving the quality of municipal services offered, further development of the enterprise and fulfilling the social mission.

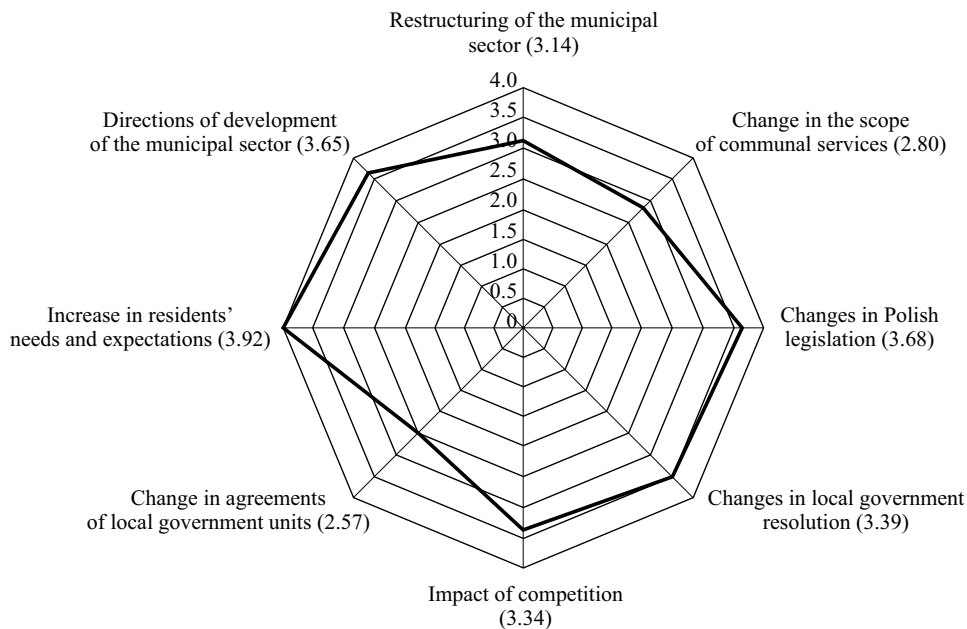


Diagram 2. Exogenous factors of change in municipal enterprises of the West Pomeranian Voivodeship

Source: own study.

The exogenous factors of change in the examined municipal enterprises, shown in Diagram 2, were: an increase in the needs and expectations of residents, legislative changes and directions of development of the municipal sector, the impact of competition, and the restructuring of the municipal sector. To a lesser extent, external factors of change were changes in the scope of services or changes as a result of agreements of local government units.

In addition to external factors of change, internal factors, which are presented in Diagram 3, are equally important.

Referring to the internal factors of change in municipal enterprises, the importance of: orientation to the external customer (resident), improvement of the company's efficiency, improvement of the financial situation, improvement of communication, introduction of a process approach, improvement of internal customer service, application of IT technologies should be emphasized. The diversification of services, change of technology and finally the implementation of ISO quality standards are less important.

Assuming the significance of a given factor above 60% (value above 3.0 on the five-point Likert scale), it should be noted that the vast majority of the examined premises as well as external and internal factors of change affect the change of strategy and business model in municipal enterprises.



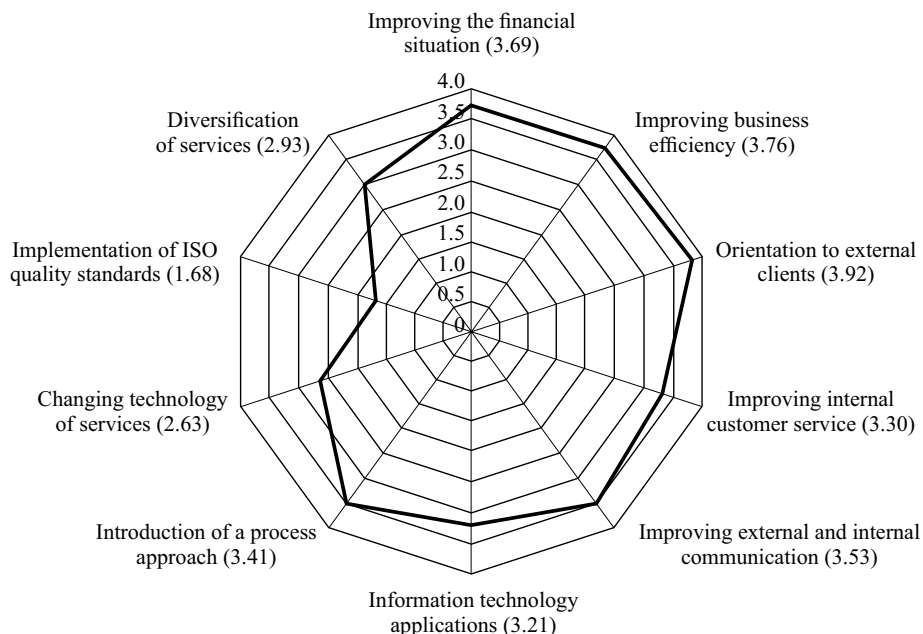


Diagram 3. Endogenous factors of change in municipal enterprises of the West Pomeranian Voivodeship

Source: own study.

Table 2. Impact of causes and factors of change on elements of the business model in local-government municipal enterprises of the West Pomeranian Voivodeship

Causes and factors of change	Elements of the business model
Performing a social mission, focusing on an external customer, protecting the natural environment, meeting the needs of residents, increasing the needs and expectations of residents	Values offered to residents
Directions and development of the municipal sector, change in the scope of municipal services, agreements between local government units	Range of activities
Changes in Polish legislation, changes in local government resolutions, application of IT technologies, introduction of a process approach, improvement of internal and external communication	Organizational possibilities
Enterprise survival, financial improvement, service diversification, municipal sector restructuring, gaining new markets, improving internal customer service, maximizing profit, further enterprise growth	Cost structure, revenue and profit generation
Impact of competition, improvement of operational efficiency, implementation of ISO quality standards, change of service technology, maximization of service quality	Formulating a competitive strategy

Source: own study.

The synthesis of the most important causes and factors of change affecting the elements of the business model in local-government municipal enterprises of the West Pomeranian Voivodeship is presented in Table 2.

The presented elements of the business model, taking into account the values offered to clients (residents), scope of operations, organizational possibilities and formulation of a competitive strategy, as well as generating revenues, cost structure and making a profit at a level ensuring further development of municipal enterprises were influenced by a number of reasons and factors of change in the examined enterprises municipal economy operating in the West Pomeranian Voivodeship.

#### 4. Conclusions

Increasingly higher requirements imposed on municipal enterprises by local authorities in terms of effectiveness in meeting the growing needs of residents, quality and competitiveness of services provided, imply the need to adapt the business model to changes.

The development of cities largely depends on the effectiveness of the service offer of municipal utilities, implementing the own tasks of the local government unit. The ongoing and continuous satisfaction of the residents' needs requires the development of a business model that takes into account market turbulence and turbulence in the long run. Individual elements of the business model are influenced by changes in the environment, which was confirmed by the presented research results. Correlations between the business elements of municipal enterprises with the causes and factors of environmental changes, presented in Table 2, exhaust the most important research assumptions.

Economic practice proves that the more susceptible to changes the business model of municipal enterprises implementing commune's own tasks, the higher the quality of public space affecting the development of the local government unit. The assumed volume of the article does not allow to develop this hypothesis.

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## **Wpływ zmian w otoczeniu na model biznesu przedsiębiorstw komunalnych**

**Streszczenie.** *Rozwój miast w dużej mierze zależy od skuteczności oferty usługowej przedsiębiorstw gospodarki komunalnej, które realizują zadania własne jednostki samorządu terytorialnego. Bieżące i nieprzerwane zaspokajanie potrzeb mieszkańców wymaga od przedsiębiorstw gospodarki komunalnej opracowania modelu biznesowego, który na dłuższą metę uwzględni burzliwe zmiany zachodzące w otoczeniu zewnętrznym przedsiębiorstw.*

**Słowa kluczowe:** *zmiana, model biznesu, przedsiębiorstwo komunalne*