

*Zhu Haoyu, Kozhushko R.*

*Kyiv National University of Technologies and Design*

### THEORETICAL AND METHODOLOGICAL ASPECTS OF FORMATION OF ENTERPRISE'S BUSINESS MODEL

**Abstract.** The article presents the results of the study on adaptive methods of enterprise management in modern economic conditions. It is proven that traditional methods of business management become less effective every year in a rapidly changing business environment and increasing competition. It is identified and justified that for a company operating in the face of growing uncertainty and a dynamic external environment, one of the key factors for creating competitive advantage is effective development. In this regard, an effective business model for domestic enterprises has been identified and modeled.

**Keywords:** business modeling; management; competitiveness; business environment; business units; external and internal environment.

*Чжу Хаоюй, Кожушко Р.Ю., к.т.н., доц.*

*Київський національний університет технологій та дизайну*

### ТЕОРЕТИЧНІ ТА МЕТОДОЛОГІЧНІ АСПЕКТИ ФОРМУВАННЯ БІЗНЕС-МОДЕЛІ ПІДПРИЄМСТВА

**Анотація.** У статті викладено результати дослідження щодо адаптивних методів управління підприємствами в сучасних умовах господарювання. Доведено, що традиційні методи управління підприємством з кожним роком стають менш ефективними в умовах швидко мінливого бізнес-середовища та посилення конкуренції. Визначено та обґрунтовано, що для компанії, яка працює в умовах зростаючої невизначеності та динамічного зовнішнього середовища, одним з основних факторів створення конкурентних переваг є ефективний розвиток. У зв'язку з цим визначено та змодельовано ефективну бізнес-модель для вітчизняних підприємств.

**Ключові слова:** бізнес-моделювання; управління; конкурентоспроможність; бізнес-середовище; бізнес-одиниці; зовнішнє та внутрішнє середовище.

*Чжу Хаоюй, Кожушко Р.Ю., к.т.н., доц.*

*Киевский национальный университет технологий и дизайна*

### ТЕОРЕТИКО-МЕТОДОЛОГИЧЕСКИЕ АСПЕКТЫ ФОРМИРОВАНИЯ БИЗНЕС-МОДЕЛИ ПРЕДПРИЯТИЯ

**Аннотация.** В статье изложены результаты исследования адаптивных методов управления предприятиями в современных условиях хозяйствования. Доказано, что традиционные методы управления предприятием с каждым годом становятся менее эффективными в условиях быстро меняющейся бизнес-среды и конкуренции. Определено и обосновано, что для компании, которая работает в условиях растущей неопределенности и динамической внешней среды, одним из основных факторов создания конкурентных преимуществ является эффективное развитие. В связи с этим определена и смоделирована эффективная бизнес-модель для отечественных предприятий.

**Ключевые слова:** бизнес-моделирование; управление; конкурентоспособность; бизнес-среда; бизнес-единицы; внешняя и внутренняя среда.

**Formulation of the problem.** During Ukraine's integration into the global economic system one of the most important tasks that confronts entities is to provide efficient and stable functioning under conditions of uncertainty. Today, it is a common view that only companies which have significant financial resources can successfully compete in the market. However, the fact that financial resources for competition in the market in the most successful

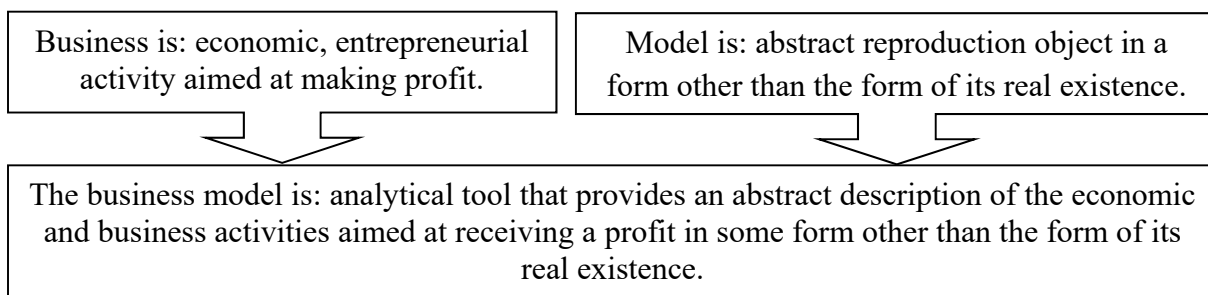
companies may be much smaller than in their competitors is obvious. Nevertheless, they are quite competitive and are characterized by stable and dynamic growth. In such cases we may talk about an effectively formed company's business model.

**The purpose of the article is** analysis theoretical and methodological aspects of formation of enterprise's business model.

**Analysis of recent research.** The main elements of the business model of the company and the conditions under which it should be changed, has been studied by L. Ganushchak-Efimenko, O. Nifatova, A. Osterwalder, Y. Pigneur, H. Kahermann, C. Christensen, N. Revutska, Z. Mokrynska, V. Shcherbak.

**Presenting main material.** Let us look at the appearance and development of the definition "business model".

The term appeared in 1970, but the interest of scientific community towards the concept developed from the mid 90-ies of XX century. In the late 1990's the scientific literature used the concept of the business model as a synonym of the term "e-commerce" and it was tied to the emergence of so-called "new economy". However, today there is a need for business models both in manufacturing industries and in services. Therefore, there is a need for an expanded interpretation of the term "business model", which can be seen as a combination of two categories: "business" and "model" (Figure 1).



Source: [3].

Figure 1. Connection between categories "business", "model" and "business model"

Summarizing the existing scientific provisions, we suggest examining a business model as a simplified display of the mechanism for conducting certain economic activities related to the production (sale of goods, services) that are valuable to the consumer and ensure a profit.

More deeply the essential characteristics of the business model of an enterprise can be explained through its functions, the main of which include the following:

- statement of the mission, strategic vision and prospects of the company in current and perspective markets;
- study of future consumers' priorities;
- ensure optimal distribution of existing and orientation on the mobilization of new (potential) strategic resources of the company;
- organization of effective business processes system;
- formation, use and development of company's intellectual capital;
- identification and implementation of key competences;
- attracting investor capital;
- increase of market value and profitability of the company;
- improvement of competitiveness and ensurement of company's uniqueness on the market [4].

Effectively formed business model improves the efficiency and stability of the company in the market by:

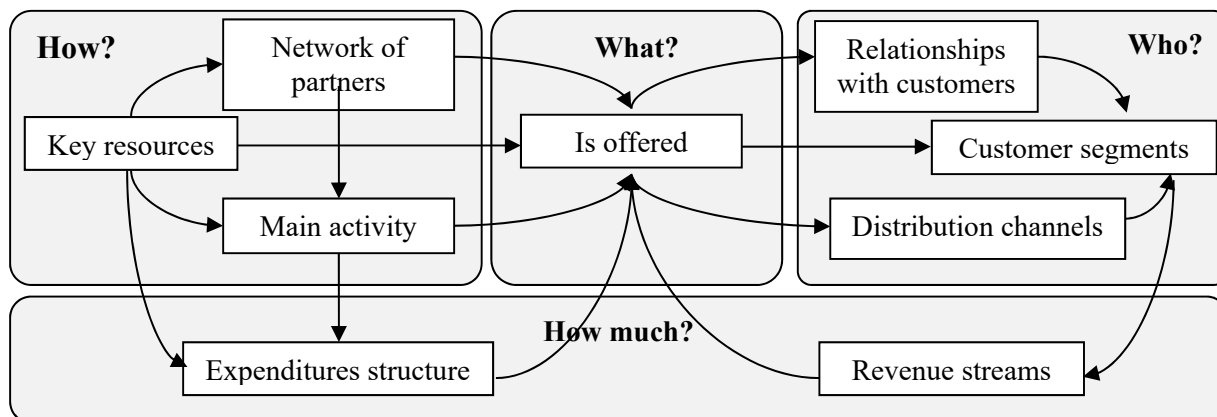
1. Increasing competitiveness.
2. Increasing flexibility of the organization.
3. Effective interaction with the external environment.
4. Effective interaction of business units of the company.
5. Minimizing costs and optimizing investments.

Having understood the essence of the concept of "enterprise's business model" we should look at the structure and elements of the business model and also at methods of its evaluation.

By Osterwalder's definition, business model is an abstract conceptual model that illustrates the logic of added value (profit). The scientist believes that the effectiveness of the company's business model depends on the interaction of its main elements. In his works he describes a business model using nine standard elements:

- customer segments – one or more client groups that are covered by the business model;
- proposed benefits – a set of benefits that the company is ready to offer the consumer. For example: innovation, productivity, custom manufacturing, design, brand / status, price, cost savings, risk reduction, accessibility, usability / applicability;
- distribution channels – channels through which customers are found and through which offering of value is provided;
- relationships with customers – personal support, self-service, automated service, joint creation;
- revenue streams – streams through which the company receives profits from its customers for creation of the value. For example, sales of assets (goods), rent / lease, license, broker interest, advertising;
- key resources – material, financial, human and intellectual;
- main activity – a set of operations that form the business model. For example, Microsoft's main activity is the development of software, Dell's – managing relationships with suppliers, McKinsey – problem solving;
- network of partners – agents that the company operates and cooperates with. There are three main reasons of creating partnerships: optimization and savings in production, reducing risk and uncertainty, supply of resources and joint activities;
- expenditures structure – all expenditures that are associated with company's activity. The structure of the expenditures may be divided into the following categories: fixed costs, variable costs, economy of scale, diversification effects [4].

Figure 2 shows the main elements of the business model of the company and the interaction between them.



Source: [5].

Figure 2. The interaction between the main elements of the business model

In order to assess the level of development of components of company's business model and its resource securement scientists propose to introduce a system of indicators (Table 1), where k – weight (rank) of each element in the business model.

Table 1

**Indicators that characterize the components of basic business structure of the enterprise**

#	Indicators
1	2
1. Financial component (k = 0,09)	
1.	Financial stability.
2.	Solvency.
3.	Business activity.
4.	Profitability.
2. Social component (k = 0.12)	
1.	The ratio of wages to the average in the area or region.
2.	The level of debt of paying out wages.
3.	Structure of personnel (age, qualification, national).
4.	Staff turnover.
5.	Socio-psychological climate in the team.
3. Operating component (k = 0,09)	
1.	Sales revenue.
2.	The share of overhead in net cost structure.
3.	Labor productivity.
4.	Capital-labor.
5.	Capacity utilization.
6.	The efficiency of usage of company's production potential.
7.	Efficiency and intensity of usage of fixed assets.
4. Technological component k = 0,09)	
1.	State of fixed assets.
2.	Age structure and technical resource of vehicles and equipment park.
3.	The share of products that correspond to the best world analogues or exceed them.
4.	The share of new technical level equipment, corresponding to the best world standards.
5.	The level of certification.
6.	Product quality.
5. Innovation component (k = 0,12)	
1.	Innovation activity.
2.	The level of patent protection of innovations.
3.	Number of implemented innovative projects.
4.	Inventive activity (the number of patent applications for inventions).
5.	Share of total R & D in the total amount of work.
6.	The number of licenses sold and bought.
7.	Correlation between received and paid license payments of the enterprise.
8.	Number of patents that are available to the company.
6. Marketing component (k = 0,10)	
1.	Market share.
2.	The competitiveness of products.
3.	Assortment policy.
4.	Brand level.

Continuation of the Table 1

1	2
7. Investment component (k = 0,10)	
1.	Attractiveness to the investors.
2.	Return on investment.
3.	The ratio of investment growth to the rate of growth in gross revenue.
4.	The amount of assimilation of private investors' money.
8. Information component (k = 0,09)	
1.	Indicators of enterprise's information openness and ability of entering into external information space.
2.	Indicators of information resources securement and level of their development.
3.	The level of information training of the personnel.
4.	Organization of information security of the enterprise.
9. Management component (k = 0,12)	
1.	Quality management.
2.	Corporate culture.
3.	Conflictness of the organization.
10. Environmental component (k = 0,08)	
1.	Level of company's security.
2.	Evaluation of potential security of industrial facility during normal exploitation.
3.	Assessment of excess harmful effects compared to normative.
4.	Evaluation of recipients of harmful effects in the territorial aspect.
5.	Complex integrated assessment of the level of environmental hazard of the industrial facility.
6.	The level of usage of environmental equipment (% ratio of equipment that has environmental devices).
7.	The level of usage of safe materials and environmentally sound technologies (especially waste).
8.	The degree of compliance with environmental requirements of industrial facilities that are stated in Ukrainian legislation.
9.	Environmental payments of the enterprise.

Source: [4].

According to the results of element study of basic business structure of the company, array of data, that is characterized by different quality content (absolute figures, in hryvnias, points, pieces and ratios: rates, percentages, etc.) which makes their direct comparison impossible, is formed. To bring the calculated indicators of the business model in the comparable type the use of matrix is proposed. It sets the degree of importance of each component of the business model for the overall welfare of the company (determined by the so-called "weight") and provides an expert assessment of components by 10-points scale. This expert assessment reflects the level of each type of basic structure of the company and is based on the group performance indicators calculated and diagnosed earlier.

The final result for each component is determined by the following formula:

$$R_i = W_i * E_i, \quad (1.1)$$

where  $W_i$  – weight;  $E_i$  – evaluation;  $i = 1, \dots, 10$ .

Results obtained for each component of the business model are the initial data for the calculation of the integral index of the business model of the company. Calculation proposed to be carried out by the following formula:

$$\sum_{i=1}^{10} R_i = \sum_{i=1}^{10} W_i * E_i, \quad (1.2)$$

where  $R_1, R_2, \dots, R$  – results obtained during the evaluation of the safety of basic structure element.

Calculated integral index of business model of the company allows us to make a conclusion on the overall situation in the company, to determine the need and scope of changes, to set directions of restructuring as means of protection [6].

The next step is to determine the need and choice of optimal direction of restructuring the business model and further assessment of its effectiveness.

According to the methodological approach of T.O. Zagorna and A.O. Kolomyitseva [6], the determination of the need for restructuring of the business model is implemented by the following algorithm:

1. Evaluation of the main components of the business model of industrial enterprise on the basis of calculation of indicators that are listed in Table 1.

2. The calculation of the integral index according to the formula (1.2).

3. Comparison of integral indicator with a scale of indicators of safe level. The range of values integral index ranges from 1 to 10, wherein:

- if the integral index is less than 3.5 points, inclusively, the company needs a complete full restructuring of the business model;

- if the integral index is in the range from 3.5 to 7.0, inclusively that means that in general the business model requires partial restructuring;

- if the level of the integral index exceeds 7.0 the whole business model of the company should be recognized as effective, but it may require some changes.

4. Development of possible options of structural changes, taking into account peculiarities of a specific enterprise.

5. Evaluation of the effectiveness of the developed restructuring program on the basis of the value gap, meaning the difference between the current value of the business and its value, that will be reached after the restructuring of the business model. This valuable gap should be only positive. Otherwise, the restructuring is inappropriate.

N.V. Revutska for complex evaluation of the effectiveness of company's business model offers to use one of modern methods of concept of strategic measuring, namely, the Balanced Scorecard (BSC). BSC includes four modules: "Finance", "Marketing", "Personnel" and "Business processes". In order to form a set of performance indicators for each of the four modules, senior managers of confectionery companies were questioned, weight of specific indicator was defined in the final decision-making process and on the basis of this the summary the table in which each module BSC is measured by five indicators was formed (Table 2).

Indicators formed in such a way will be the basis for a complex assessment of the efficiency of company's functioning for the period. The results are compared to normative or generally accepted figures for the industry.

Another method of assessing the business model of the company is the financial analysis of the company. Based on analysis of financial condition you can understand how successful the company is at the national and international markets, how efficiently it uses its resources both in general and for a certain period of time.

In today's world of globalization and constant growth of competition, every business model should be oriented primarily to the needs of society. That is why, today, more and more companies are beginning to think about the idea of social responsibility.

Table 2

**Key figures of modules of complex evaluation of the effectiveness  
of the business model based on the BSC**

BSC Module	Indicators that are used for the evaluation of the module
1	2
Module «Finance»	1. Coefficient of autonomy (concentration of equity) $C_a$ 2. Financial dependency ratio (RFD) 3. Return on assets (ROA) 4. Return on investment (ROI) 5. Return on equity (ROE)
Module «Marketing»	1. Gross Profit Margin (GPM) 2. Net Profit Margin (NPM) 3. Coefficient share costs of sales ( $C_s$ ) 4. Coefficient of renewal goods (services) ( $C_n$ ) 5. The share of the enterprise on the market of a particular product ( $S_p$ )
Module «Business-processes»	1. Capital productivity ( $C_p$ ) 2. Return on production assets ( $R_p$ ) 3. Synergy effect of business processes integration of individual business units ( $ROI_{sinerg}$ ) 4. The capacity for innovation in business processes ( $IN_{bp}$ ) 5. Efficiency of company's internal information ( $E_{info}$ )
Module «Personnel»	1. Average annual output per worker ( $Q_r$ ) 2. Coefficient of employees creativity ( $C_{ec}$ ) 3. Creating databases ( $D_b$ ) 4. Management potential of the company ( $P_m$ ) 5. Capital earnings per manager ( $K_E^m$ )

Source: [5].

Social responsibility of the business is a responsible attitude of the company towards their product or services, customers, employees, business partners; it is company's active social position in society which aims to improve the welfare and quality of people's life. Today corporate social responsibility enables companies to receive additional income. Therefore it appears as a motivator of any organization's activity.

During the study of international and domestic business experience, it was found that the use of socially responsible business, as a structural element of the business model, has several advantages: improvement of business reputation, competitiveness increase, productivity increase, reduce of operating costs and increase of economic efficiency. In addition, CSR is a way towards sustainable development and a better future for all mankind.

As to the enterprise's development, the social responsibility as an integral part of the business model has an impact on its overall economic performance. But it is achieved only when company's activities in the field of CSR are permanent and are not carried out only once.

The authors has formed a general model of social responsibility for a medium-sized enterprise (Figure 3).

This model of CSR demonstrates on the basis of what corporate social responsibility is formed, its direction in the company and the expected results of CSR in the company. Commitment to social responsibility principles will become a significant step for the company towards improving economic efficiency.

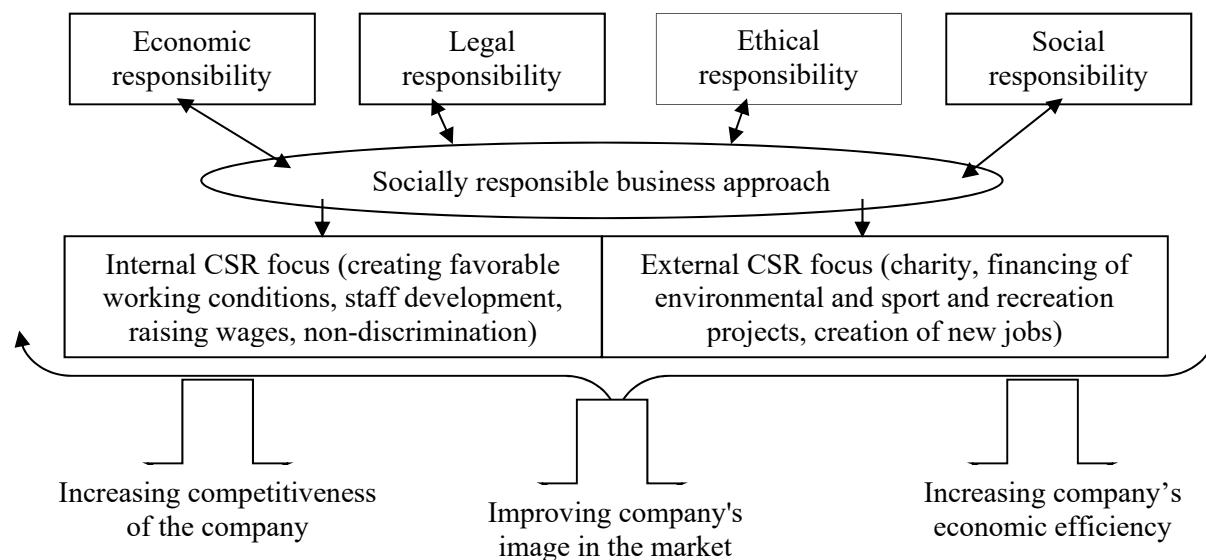


Figure 3. Model of CSR for a medium-sized enterprise

**Conclusions** While summarizing it should be emphasized that business model allows us to create a clear and complete picture of the business, to conduct its systematic analysis and diagnosis. Analysis of business model allows us to understand how positive result was received and to understand how to repeat it regularly. Business model allows us to establish criteria for the evaluation of various strategic and tactical decisions of managers. It allows us to identify the need for changes in the conditions of dynamic changes in the market environment.

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