

Business Model Canvas as a Basis for the Competitive Advantage of Enterprise structures in the Industrial Agriculture

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The presented article is aimed at studying the specifics of using the relatively new management concept model canvas in competitiveness management and creating the competitive advantages of enterprise structures in the industrial agriculture. On the one hand, agribusiness is an important and major sector of any national economy, but on the other hand, the risks of agribusiness are also significantly high, what prevents many enterprise structures from being competitive. According to the authors of the presented article, enterprise structures in the industrial agriculture could secure their competitive advantages through forming and regular renewal of business model canvas. During the presentation of this work the following main conclusions have been drawn:

a) enterprise structures in the industrial agriculture are the most fragile in the terms of maintaining the competitiveness and the ability for the sustainable development, as the activity of such entities is determined by a large set of internal and external environmental factors;

b) the management concept business model canvas is designed for managing the strategic sustainable and competitive development of the enterprise structures in the context of the turbulent and unpredictable changes in the market environment;

c) using the management concept business model canvas has its own specific application in creating the competitive advantages of enterprise structures in the industrial agriculture, which is due to the features of the production and selling cycle organization.

Key words: strategy, competitive advantages, business model canvas, enterprise structures, industrial agriculture, competitiveness.

Setting up and developing any business requires generating not only a strategy, but also the optimal business model, its key or framework

parameters. The strategic sustainable development of any business is based on understanding its competitiveness. Competition in the markets is an incentive and a driving force for enterprise structures development (Lin, O'Jerry 2011), the business should be able to competitively renew itself in order to maintain its positions (Grablowsky

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2000). In this case, from the second half of the XX century, the competition of enterprise structures have obtained new features (Katkalo 2008). In particular, among the main reasons contributing to the transformation of the business space, the following ones should be identified:

- a) The changes in the specifics of needs and, accordingly, the changes in the structure of the consumer demand, primarily for the unified mass production;
- b) The need for generating new supply, which meets the changing structure of demand (Hamel G., Prahalad 2000; Rumelt 2003).

Such transformations result in that some enterprise structures, including those, which carry out their activity in the industrial agriculture, lose their ground and have to abandon the activity market. On the contrary, the other enterprise structures increase their market share, confirm and expand their dominance. While studying the basis for the sustainable and competitive development of enterprise structures, the main attention is usually paid to the financial, economic and social indicators.

But at the same time, it is overlooked, that the adaptive and seamless business model, which is a holistic concept and the basis for working out the long-term development strategy, is the basis for the competitiveness of enterprise structures. At the stage of the market entry the business model is simplified understanding of four key classical dimensions (Barney 1991; McConnell, Brue 2009):

- 1) “what should be produced”;
- 2) “for whom it should be produced”;
- 3) “which way it should be produced”;
- 4) “with whom it should be produced”.

Put it otherwise, the business model initially describes the product, customer, production and operational aspects of the enterprise. But such enterprise simplification does not always allow, firstly, identifying the sources of the enterprise value creation, and secondly, structuring and adapting the key activity, as well as the key resources required for generating the enterprise value (Dudin 2013). Having the adaptive and harmonious business model is particularly important for the enterprise structures in the industrial agriculture, because this sphere plays a key role in ensuring the national food security, as well as the adequate level and quality of the population life (Norse 2012).

RESULTS

Over the last years, the issue, which solution is reduced to ensuring the competitive and sustainable development of enterprise structures in the industrial agriculture, has become more urgent and more difficult. The recent studies have shown that the global agribusiness ranks fifth among the most promising real markets (extracting and processing the natural resources, construction, manufacturing the industrial products, etc.) in the level of attractiveness for doing enterprise.

Table 1. Matrix of ranking the resources in order of importance and the resource suppliers in order of the reliability level

Resources	Suppliers		
	The Most Reliable Ones	Reliable Ones	Less Reliable Ones
The Most Important Ones (Raw and Other Materials, Energy, Capital Goods, etc.)	The most reliable suppliers should ensure the supplies of the most important resources	The reliable suppliers could be engaged for taking the place of less reliable suppliers	The group of less reliable suppliers should be kept under the constant control
Important Ones (General Economic and General Production Resources)			
Less Important Ones (Other Resources)			

Doing enterprise in the industrial agriculture is attractive because of a set of such conditions as (OC 2013):

- a) The favourable global market conditions of the demand for the raw materials using for food production, which are differentiated with respect to consuming the mass and elite products;
- b) The available state support for opening the agribusiness companies and implementing the socially important projects in this field;
- c) The opportunity for carrying out the full-range production activity (from cultivation of raw materials to manufacturing the finished products) within the same economic entity.

At the same time, it should be realized, that doing enterprise in the industrial agriculture is associated with both the fundamental and strategic risks (Limitovsky 2010). In particular, among the key risks the following ones should be identified:

- a) The risks of the resource (raw material) provision of agribusiness;
- b) The risks of incomplete sales (lack of sales) of the finished products manufactured or raw materials;

- c) The financial and economic risks in the context of the instability of the company and doing enterprise;

- d) The risks associated with the effect of a set of external and internal factors, which determine volatility of both the prices for production resources and the prices for finished products.

Insufficient competitiveness of the enterprise structures, which carry out their activity in the industrial agriculture, is due to some reasons. These reasons could be considered to a certain degree as the objective ones. Thus, for example, the national agricultural policy failure could be considered as the reason for insufficient competitiveness of the enterprise structures in the agricultural sector. Besides, restrictions or difficult access to the financial resources for the enterprise structures in the agricultural sector are the key reason for the absence of timely activity modernization, what adversely affects both the quality and the rates of manufactured products. It is equally important, that the enterprise structures, which carry out their activity in the industrial agriculture, could actively interact with the science and government institutions as to the shift to the innovation-oriented development (OC, 2013).

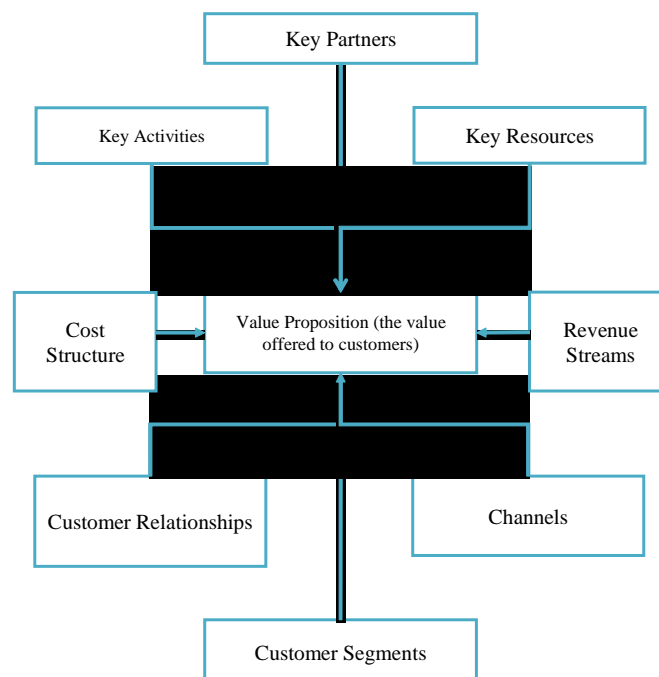


Fig. 1. Diagram Representation of the Management Concept business model canvas

The above mentioned reasons are the objective ones and require the system public decisions on ensuring the competitiveness of the national industrial agriculture. But there are some reasons, which are the subjective ones and also have the negative impact on the competitiveness of the enterprise structures in the agricultural sector. Among those reasons the following main reasons should be identified (OC 2013):

- a) Insufficient or limited background and applied knowledge of the enterprise entity management, what does not allow building an adequate development strategy;
- b) The failure of the enterprise entity management to identify properly the changes taking place in the external environment and to detect timely the problems in the internal environment;
- c) The absence of the growth reserves determined by the inefficient and unsustainable management decisions taken in the prior periods.

Thus, it is obvious, that on the one hand, the competitiveness of the enterprise structures in the industrial agriculture is composed of many different conditions, but on the other hand, the competitive position of these entities in the external environment is determined by a large set of factors. In the general sense, the competitiveness of the enterprise entity should be thought of as its ability to compete favourably with the producers (sellers) of the similar product (goods, works, services) with the superior characteristics. Through the effective and optimal use and allocation of resources for ensuring the activity, which does not adversely affect the equilibrium and stable (strategic sustainable) development of this entity in the external environment (Dudin 2014).

Upon the aforesaid it could be inferred, that in the context of the unstable external environment (market environment), ensuring the competitiveness of the enterprise structures, which carry out their activity in the industrial agriculture, requires the development, adaptation and use of the modern management tools. These tools should be able to solve the dual task: identification of the reserves for the sustainable development and the ability of the enterprise structures to compete in the market due to a better product price.

DISCUSSION

The academic and practice researches in the field of the strategic sustainable and competitive development of enterprise structures, including the industrial agriculture, have already allowed creating some reliable and effective management tools.

For example: the balanced index system (Norton, Kaplan 2003), value creation (Stewart 1991; Stern, Shiely 2001), total quality management, strategic business planning (Geroski, Gugler 2004), building a hierarchy of enterprise processes (Teece 2002), controlling (Mann, Mayer 1992), etc.

An important role among them is played by the concept of business model canvas. This concept has been developed within the paradigm of “lean production”. The “lean production” paradigm is a special management approach focused on the regular identification and elimination of losses, setting the production processes of the client-oriented quality. Some researchers suggest that, the paradigm of “lean production” is a desire to reach the complete integrity of a company, doing and managing enterprise. But it should be realized, that there could be no integrity and perfection in enterprise, because the ideal state is a state of extreme or marginal stability, what in turn means recession, stagnation and failure of the enterprise to develop further. The concept of business model canvas, which is focused on identifying the problem areas in functioning and developing the enterprise entity, as well as finding the new growth points, mediating the further sustainable enterprise development over a long period, is based on it.

The enterprise structures in the industrial agriculture are the most fragile in the terms of maintaining the stability and competitiveness of the development because of some objective reasons:

- a) Firstly, agribusiness is one of the capital-intensive fields of the economic activity;
- b) Secondly, the investment attractiveness of the industrial agriculture is not high enough, it is of low profitability and of a long period of return on investment;
- c) Thirdly, the so-called “lack of personnel”, what is a consequence of the low popularity of these entities, as the employers, in the national and international labour markets,

is typical for the enterprise structures in the industrial agriculture;

- d) Fourthly, for the enterprise structures in the industrial agriculture, which operate in the segment of the organic production (organic food production), the most difficult is to compete for the consumer because of the high cost of production (price) in the context of the demand purpose to minimize the costs.

Thus, enterprise structures in the industrial agriculture require regular renewal of the strategic activity concept by identifying the most significant problem areas and finding the growth points. Therefore, the use of the management concept business model canvas in the management of competitive, sustainable and long-term development of the enterprise structures in the industrial agriculture is not without reason.

The concept of business model canvas is proposed by A. Osterwalder and I. Pigneur (Osterwalder, Pigneur 2010) in order to improve the efficiency of enterprise management in the context of the turbulent changes in the market environment. The concept business model canvas fundamentally contains nine main blocks (ref. Figure 1).

The central place in the concept is taken by a value proposition or the value offered to customers (Clark *et al.* 2012). Here it should be realized, that the value is not an offer of the product itself, as a result of the enterprise entity activity (goods oriented on meeting the demand). The value is the ability of the enterprise entity to solve the consumer problems by offering any given product (goods), as well as by differentiating the offers by the customer segments. In fact, business model canvas allows developing the personalized offers of goods, works and services for the specific consumer groups (stratifying the latter in order of importance for the agricultural product sales).

The Management concept business model canvas also suggests, that the enterprise entity should set its own customer priorities, in particular - allocate a pool of the key, i.e., the most important customers (consumers, generating the basic enterprise income) and a common pool of customers (consumers, which generate the residual enterprise revenue).

It is very difficult for the enterprise structures in the industrial agriculture, which

operate in the mass consumer segment (turn out the universal or uniform products of mass consumption), it is a little bit easier for the enterprise structures, which are focused on one segment (for example, on the organic production or the organic food production). This is due to the fact, that in the second case the products offered to the market are in the upper price segments (premium products or luxury products), what makes it inaccessible to the mass market. Taking into account, that the concept business model canvas is suggested to be studied concerning the whole industrial agriculture, we believe, that while developing this management concept it is necessary to identify the key consumer groups, which are in any market segment.

The ABC analysis based on the Pareto Principle is optimal for it

- a) "A" customer group is the most important customers (the consumers of the products manufactured by this enterprise entity), who bring the first 80% of profit or basic income;
- b) "B" customer group is the customers of medium importance (the consumers of the products manufactured by this enterprise entity), who bring another 15% of profit or basic income;
- c) "C" customer group is the troubled and inactive customers (the consumers of the products manufactured by this enterprise entity), who bring the remaining 80% of profit or basic income.

Such a ratio of percent just due to the Pareto rule: the key customers (consumers), who generate 80% of the basic income of this enterprise entity, and the customers (consumers), who generate the remaining 20% of the basic income, are identified. It is important to strictly and properly control the changes in the "A" customer group behaviour for the enterprise structures, which carry out their activity in the industrial agriculture. As to the "B" and "C" customer groups the control of the customers' (consumers') behaviour could be occasional or irregular, because these customer groups are of little importance in generating the economic benefits from selling the products of a particular enterprise entity.

It is also necessary to maintain permanent relations with customers, as well as to review regularly and to optimize the value distribution

channels in order to allow the enterprise entity to promote its values. Optimization of the distribution channels is particularly important for the enterprise structures in the industrial agriculture because of the following main reasons:

- a) Firstly, not all the products manufactured in the industrial agriculture have a long shelf life, so the supply chain could not be long (or infinitely long);
- b) Secondly, reducing the supply chains is important both in the terms of structuring the costs (we shall consider it a little bit later), and in terms of structuring the revenue (the shorter the supply chain is, the greater the benefits are received by the enterprise entity).

The relations with customers and optimizing the channels depend on, including the interaction of enterprise structures and its key partners, suppliers, contractors of the retail segment. In the industrial agriculture interaction with the key partners has its own features.

First of all, it is necessary to pay attention to the fact, that there are two types of enterprise structures in the industrial agriculture: the companies of full and partial production cycle. The full-range enterprise structures control the entire chain of the marketable product manufacture and supply, which embodies offering the value to the market (value creation chain). In this case, there is no risk of the production cycle failure upon the refusal to work of at least one of the key partners. But on the other hand, such enterprise structures are less adapted to the changes in the external environment; it is more difficult for them to diversify their enterprise, and their enterprise model in general.

On the contrary, the enterprise structures in the industrial agriculture, which are of the partial production cycle, are more imposed to the risks of the supply chain failure (in the value creation chain). For these enterprise structures it is important to optimize the interaction with both the suppliers and distributors. Therefore, while using the concept business model canvas by the enterprise structures in the industrial agriculture, firstly, it is recommended to specify the list of the resources in order of their importance for value creation and secondly, to rank the resources obtaining in order of the suppliers' reliability based

on the matrix represented in the Table 1.

It is obvious, that the most important supplies of the resources, which are the most important for value creation, should be carried out by the most reliable suppliers. The supplier's reliability level could be evaluated using the expert, point or rating methods. In this case, we believe, that the key criteria of the suppliers' reliability could be as follows:

- 0) supply stability within the stipulated period;
- 1) guaranteed scope of resource supplies;
- 2) guaranteed quality of resources (low rejection rate);
- 3) guaranteed selling price for resources;
- 4) other services provided by suppliers.

Except suppliers, many enterprise structures in the industrial agriculture interact with the distribution or retail segments. Because competition in the industrial agriculture market is very high, and by average the selling price for products is the same for the same products (except for the premium brands and products), thus, dealing with distributors or the retail segment is very complicated. Here the most relevant criterion is the criterion of not the reliability, but the integrity of the enterprise entity partner. The integrity criteria for the distributors or sales managers should include:

- 0) timely payment for the supplied products;
- 1) absence of manipulation with the goods (products) quality;
- 2) guaranteed purchase amount (over a certain period of cooperation);
- 3) the earliest production awareness of changes in the purchase and sales policy of a partner.

Returning to the interaction between the enterprise entity and suppliers, it should be noted, that the resources obtained from the suppliers play a significant role in creation the offer value:

- a) Firstly, it is necessary to identify not only the reasonably important resources, but also the level of their marginal cost, which in turn will determine the ability of the enterprise entity to generate profit;
- b) Secondly, it is important to evaluate the need and the susceptibility to displacement of the most expensive resources by less expensive ones, and the impact of this

displacement on the ability of the enterprise entity itself to create value for their customers.

It follows that while building business model canvas it is necessary to structure both the cost streams and the revenue streams of the enterprise entity. The cost streams generate the product value for the enterprise entity itself, in turn, the revenue streams determine the product value for the consumer.

For the enterprise structures in the industrial agriculture, which activity, as it has been shown above, is of high capital intensity, the issue of cost structuring is the most relevant. It should be realized, that the activity of the enterprise structures in the industrial agriculture is significantly influenced by the seasonability index. This implies an important management rule: the cost stream and structure at any current time should be reconciled with the predictable and planned revenue stream by the amount and profitability level. This aspect determines not only the sustainability of the enterprise entity development, but its ability to compete in the industrial agriculture market.

CONCLUSION

In conclusion, it should be noted, that the concept business model canvas is an effective management tool.

At the same time, it is important, that enterprise structures develop not only one business model and its canvas, but several business models, in order to increase the performance of the tools. For example, for the enterprise structures in the industrial agriculture, which activity is of the full production and selling cycle, it is important to develop the alternative business models subject to the following possible and potential changes:

- a) Taking into account the increase or decrease in yield of vegetable raw materials or procurement of livestock raw materials, and also taking into account the changes in the production (purchase) cost of these raw materials;
- b) Taking into account the changes in the consumer demand for the most important value proposition;

- c) Taking into account the new needs of key customers or the occurrence of new technologies for value creation.

For the enterprise structures of the partial production and selling cycle a list of the alternative models extends. In addition to these aforesaid business models of providing raw materials and optimal production techniques the enterprise structures of partial cycle should develop optimal alternative business models. These business models could have their own features, including as follows:

- a) To reflect the transformation in the distribution segment;
- b) To reflect the potential transformations in the suppliers' segment;
- c) To show the potential changes in the channels.

Besides, in the enterprise structures of both full and partial production and selling cycle the business models, reflecting the scenarios of the further development and the changes in competitiveness level depending on the stability of revenue streams, cost structure reformation, global reengineering of enterprise processes, etc., could be developed.

Thus, using the examined concepts allows building an optimal business model canvas, on which basis the required management decisions, intended to ensure the sustainability and competitiveness of the enterprise structures in the industrial agriculture, will be made in future.

The work sets forth the general characteristics of developing business model canvas of the enterprise structures in the industrial agriculture. Specification of certain blocks of this business model in the enterprise structures, as well as approaches to finding the growth points of these entities is to be analysed in the following works by the authors.

REFERENCES

1. Lin, J-S & O'Jerry J. R., A study on supply chain value-added logistics based. *International Journal of Electronic Business Management*, 2011; 9(1): 58-69
2. Grablowsky, B., Management Hand Book. Management of the small Enterprise. Ways, problems, decisions, 2000.
3. Kat'kalo, V.S., Evolution of strategic management

- theory. Spb: ID SpbGU, 2008.
4. Hamel, G., & Prahalad, C.K., The Core Competence of the Corporation. Harvard Business Review, 1990.
 5. Rumelt, R.P., What in the World Competitive Advantage? *Policy Working Paper*, 2003; **1**: 25-34.
 6. Barney, J., Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 1991; **17**: 99-120.
 7. McConel, K.R. & Bru, S.L., Economics. M.: Info, 2009.
 8. Dudin M.N., Ljasnikov, N.V., Kuznecov, A.V. & Fedorova I. Ju., Innovative transformation and transformational potential of socio-economic systems. *Middle East Journal of Scientific Research*, 2013; **17**(10): 1434-1437.
 9. Norse, D., Low carbon agriculture: Objectives and Policy path ways. *Environmental Development*, 2012; **1**: 25-39
 10. Rau, V.V., Food safety of Russia in the context of globalization. *Nikon reading*, 2013; **18**: 188-192.
 11. Limitovskiy, M.A., The steady growth of the company and the effects of leverage, *Russian Management Journal*, 2010; **2**(8): 35-46.
 12. Parfenova, M.J., Babishin, V.D., Yurkevich, E.V., Sekerin, V.D. & Dudin, M.N., Methodology making management decisions based on a modified Ramsey model. *Asian Social Science*, 2014; **10**(17): 292-301
 13. Kaplan, R.S. & Norton, D.P., Balanced Scorecard. M.: Olympus Business, 2003.
 14. Mann, R & Mayer, E., Controlling. M.: Finance and Statistic, 1992.
 15. Stewart, G.B., The Quest for Value. NY: Harper Business, 1991.
 16. Stern, J.M., Shiely J.S. & Ross I., The EVA challenge: implementing value-added change in an organization. John Wiley & Sons, Inc, 2001.
 17. Geroski, P. & Gugler, K., Corporate growth convergence in Europe. *Oxford Economic Papers*, 2004; **56**(4): 597-620.
 18. Teece, D.J., Dynamic capabilities. The International Encyclopedia of Business and Management. London: Thomas Learning Publisher, 2002.
 19. Osterwalder, A. & Pigneur, Y., Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers Paperback. John Wiley and Sons, 2010.
 20. Clark, T., Osterwalder, A. & Pigneur, Y., Business Model You: A One-Page Method For Reinventing Your Career Paperback John Wiley and Sons, 2012.