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Applied Financial Mathematics

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Zubarev I.S. Analysis of the stability of modern enterprises in conditions of instability of external factors

Zubarev Ilya Sergeevich

associate professor, department of finance, credit and economic analysis

Federal State budgetary educational institution in the Perm state agricultural Academy, Perm

zubarevilya@mail.ru

Abstract: The economic stability of an enterprise becomes one of the determining factors of its functioning in modern conditions. In this regard, the role and importance of analysis and the search for factors of increasing economic stability for the enterprise itself and its counterparties significantly increase. Economic instability of enterprises has a negative impact on the state of the economy, entails non-payments and a slowdown in business activity as a whole. Therefore, it is necessary to prevent the unsustainable situation of enterprises as early as possible. This is possible due to the timely identification of factors that affect the level of economic sustainability, as well as timely analysis and the adoption of specific measures to restore the economic sustainability of enterprises. Economic sustainability serves as the basis for a stable position of the enterprise and a guarantee of its survival. Problems of economic sustainability of enterprises are caused by the fact that operational measures, usually carried out in changing conditions, allow for a short time to keep the state of the enterprise stable, but do not change the situation drastically. This means that they are connected, on the one hand, with a poor vision of the development prospects of the enterprise, and on the other hand, with the narrowness of the applied approach to diagnosing the existing situation and predicting the change in external factors.

Keywords: stability, solvency, payment of debts, capital, finance

1. Introduction.

The concept of financial stability of enterprises from the point of view of their functioning and working capacity attracts more attention from the theory of the study of the issue and practical application. This becomes especially important for the organizations of the Russian economy due to the deteriorating conditions of foreign trade relations, the introduction of restrictions on the sale and purchase of goods from neighboring foreign countries and, as a consequence, the depreciation of the national

currency. The introduction of non-lax financial sanctions has become a lever for stimulating the activities of commodity producers at the level of the regions of the country. The adaptation of production enterprises to the changing conditions of the external environment was facilitated by the often changing conditions in the field of accounting and reporting. This, in particular, attracts the analysis of such indicators as financial stability and solvency indicators.

The broad application of the term «sustainability» was originally obtained in the natural sciences (mathematics, physics, chemistry, biology), as well as to characterize the work of technical systems, where the main thing is to maintain the constancy, invariability of the system after some initial perturbation. Later, this concept was applied to economic systems of different levels (including enterprises), the main feature of which is the functioning in a dynamic environment under the influence of a large number of random factors, which causes the complex nature of their behavior and management of such systems [1].

The main condition for the stability of the system is its ability to self-regulation, adaptability, ie, adaptability to the changed conditions of the external and internal environment. In this regard, an important feature of the concept of «sustainability» in relation to an industrial enterprise as an economic system is that it reflects the ability of an economic entity to maintain its integrity as a system and simultaneously develop (progress), despite the impact of external and internal factors.

2. Materials and methods.

In other words, the term «enterprise sustainability» can be considered as «viability», which means the enterprise's ability to withstand negative external and internal influences, leading to a loss of stability of its functioning. Of course, an important factor influencing the life activity of an economic entity, under conditions of changing external

conditions, is a managed factor that depends on the leaders and governing organizations — these are internal factors. The most understandable internal factor remains the staff of the organization, only from the correct moral and material incentives, as well as increasing its labor qualities, it is possible to achieve a greater financial result based on the performance of the enterprise.

Many authors of modern economic literature consider some as external factors:

— general economic factors, in particular, the decline in the national income, the growth of inflation, the slowing of payments, the instability of the tax system, the instability of the regulatory legislation, the decline in real incomes of the population, rising unemployment;

— market factors, such as a decrease in the capacity of the domestic market, increased monopoly on the market, a significant decrease in demand, an increase in the supply of substitute goods, a decrease in the activity of the stock market, instability of the foreign exchange market;

— Other factors, this group will include political instability, negative demographic trends, natural disasters.

On the basis of the dynamics of external factors, the strengths and weaknesses of the position of the enterprise in the conditions of the developing market are determined, advanced measures for its development are developed and appropriate managerial decisions are made.

Internal factors modern economists subdivide into some directly dependent on the activity of the enterprise and include such groups as:

— Operational factors: marketing, the structure of current costs (share of fixed and variable costs), the level of use of fixed assets, the size of insurance and seasonal stocks, product range, production management;

— investment factors: stock portfolio, investment resources consumption, planned project profit amounts, investment management;

— Financial factors: financial strategy, asset structure (liquidity), the share of borrowed capital, the share of short-term sources of borrowed capital, accounts receivable, the cost of capital, the level of financial risks, financial management.

3. Results and Discussion

Therefore, we consider it important that the most attention should be paid to a group of internal factors, because ensuring the optimal relationship between fixed and variable costs, choosing the type of activity and product structure, efficient management of circulating assets, ensuring a rational capital structure and producing competitive products are factors that are completely Or in most cases depend on the organization and style of its management and they are easier to «play», they are easier to «tune» than external ones.

However, it is important to remember that the bankruptcy of the enterprise «... is the result of simultaneous negative joint action of external and internal factors» [2]. The economic sustainability of an enterprise is a multifaceted concept that is related both to factors of the external environment and to internal factors. Therefore, ensuring economic sustainability requires the enterprise not only to control the actions of suppliers, competitors, management and accounting organizations, but also to continuously analyze the external environment, to study and forecast greater opportunities or potential threats, the impact of new trends and technological changes [3].

At the enterprise it is necessary to form an effective system of management of economic stability on the basis of application of methods of forecasting, planning, regulation, control and analysis of economic stability. To do this, it is necessary to carefully analyze the influence of various factors on economic sustainability over a specific period to justify management strategies, make forecasts, and implement plans.

References

1. Zubarev IS, Kuzmina O.V. Analytical procedures as a method of revealing dishonest actions in case of insolvency (bankruptcy) [Text] / I.S. Zubarev, O.V. Kuzmina // Materials of the International Scientific and Practical Conference "The role of young scientists in solving urgent problems of the agroindustrial complex". - 2016. P. 292-294.
2. Fedorova G.V. Accounting and analysis of bankruptcies: a textbook. M.: Omega-L, 2010. 284 p.
3. Tooth A.T. Strategic management: theory and practice: Textbook for high schools. - Moscow: ID FORUM: INFRA-M, 2010. - 415 p.

Economic-mathematical modeling

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Akberov K., Chernyakov M., Chernyakova M. Economic-mathematical modeling of the potential of municipalities

Akberov Kamal Chalu-oglu

Chernyakov Michael Konstantinovich

Chernyakova Maria Michaelovna

1. Candidate of Economic Sciences, Siberian University of Consumer Cooperation

2. Doctor of Economic Sciences, Professor, Siberian University of Consumer Cooperation

3. Candidate of Economic Sciences, Siberian Institute of Management

Abstract: This article provides a mathematical model to evaluate the production efficiency and minimize its costs. The application of the law of diminishing marginal product is considered

Keywords: economic-mathematical modeling, a potential, economic model, management, rural area

1. Introduction.

In modern economy are widely used various mathematical methods for solving practical problems, and theoretical modeling of socio-economic processes [1, 2]. Mathematical methods are an integral part of the methods of any section of economic science. The use of mathematical description of economic systems provides new opportunities for economic theory and practice development.

Information technology is a technological framework for the development of organizational and economic potential of rural areas [3-6]. It contains the following structural elements: mathematical modeling and forecasting of economic development, the means and methods of collecting, storing, processing and transmitting information to transactors of rural areas [7-13]. Information technologies, namely, mathematical models of production can evaluate its efficiency and minimize its costs. The most general answer to this question gives the law of diminishing returns, which is also called the «law of

diminishing marginal product,» or «the law of changing proportions.» This law states that when a variable resource (e.g. labor) is successively accessed to a constant (fixed) resource of the firm (e.g., capital or land) incremental or marginal product attributable to each additional unit of a variable source decreases from a certain point. If more workers are involved in the service of a fixed resource of production means, in the short run, the production volume growth will obviously be slower and slower with the increasing number of the workers employed. The law of diminishing returns also works in non-agricultural sectors. Imagine a small joiner's workshop, making wooden frames. There is a certain amount of equipment such as lathe, planer and grinding machines, saws, etc. in the workshop. If the firm hired only one or two workers, total output and the productivity level (output per worker) would be very low. These workers would have to perform many different operations. As a result the advantages of specialization would be lost. In addition, every time you moved the worker from one operation to another, you would lose working time, and the machines would mostly stand idle. In short, the workshop would work understaffed, and production would be inefficient because of the excess of capital compared with labor [14].

2. Materials and methods.

Based on the findings of economic theory, we see that the law of diminishing returns can be also applied within a short period of time. That is, if in the process of producing goods the units of a variable resource are added to fixed factors, from a certain point, each unit of a variable resource will add less value to the total product. In this regard, we distinguish four stages of the socio-economic system functioning within a short period of time..

The first and the second stages are associated with the increasing costs of variable resources and achievement of full employment of fixed resources

The third stage is intensive employment of fixed resources. The fourth stage is characterized by production efficiency decrease due to the use of excessive quantities of variable resources[15].

One should agree with the assertion that this law reflects the need to maintain the resource proportions. It is applicable to all manufacturing processes in socio-economic systems and all variable resources when at least one production resource is fixed. To understand the law and to follow it in conditions of limited resources means to contribute to the effectiveness of production, to achieve maximum output of goods at optimal distribution of factors between social and economic spheres.

Long-run period socio-economic system can change the volumes of all the resources used. Therefore, the function of a long -run production is given in the form of isoquant (Fig. 1).

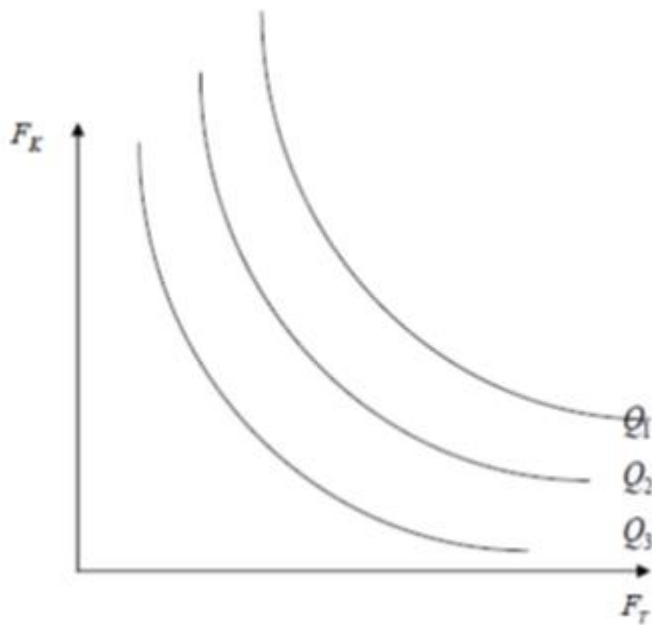


Figure 1. The oquants map of socio-economic system

The graphs, showing the isoquants of different volume of goods production are

called isoquants map. At the same time:

Q_1, Q_2, Q_3 – isoquants of different output;

F_t – labor efforts;

F_k – capital employed.

Shown on the isoquant one and the same amount of goods with different combinations of production factors is achieved due to their interchangeability. When moving along the isoquant from top to bottom and from left to right simultaneously there is an increase of labor use (L), accompanied by a corresponding reduction of capital costs (K), i.e. the substitution of capital with labor. This substitution is characterized by the concept of «marginal rate of technological substitution of» labor's capital:

$$MRTS_{LK} = \frac{-\Delta K}{\Delta L} MRTS_{LK} = \frac{-\Delta K}{\Delta L} \quad (1)$$

or

$$MRTS_{LK} = \frac{MP_L}{MP_K} MRTS_{LK} = \frac{MP_L}{MP_K} \quad (2)$$

Thus, interchangeability is a characteristic of production factors, which determines the possibilities of socio-economic system to choose the cheapest and the most available resource when creating social and economic benefits. These factors should be used to improve the functioning of the socio-economic system of rural areas.

Factors of production are not completely interchangeable, each factor performs its specific function, which another factor can perform worse or cannot perform at all. This implies another property of factors – complementarity. It means that the absence of one or more resources makes the process of goods production impossible

To determine the equilibrium of production it is necessary to study the isocosts (Fig.

2).

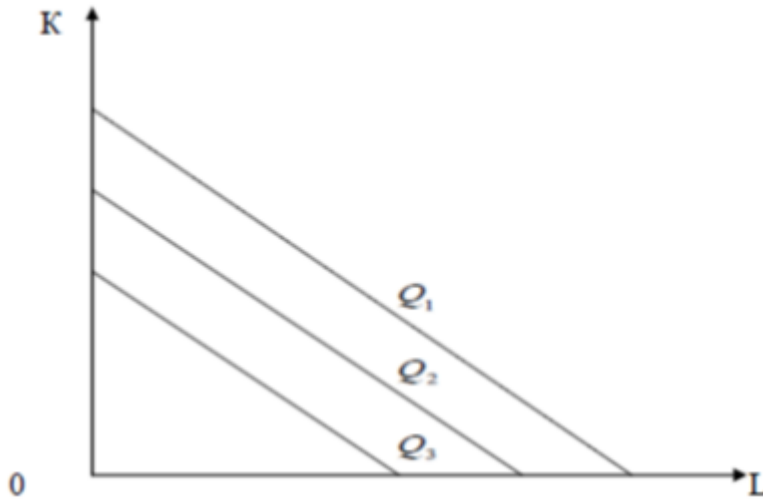


Figure 2. Socio-economic system isocosts

3. Results and discussion

Socio-economic system can spend a fixed amount of money on capital and labor employment because of the budget restraints. The budget system is represented with equation [2]:

$$B = P_K \times K + P_L \times L \quad B = P_K \times K + P_L \times L \quad (3)$$

where B is the budget system to purchase the factors;

P_K — price of a capital unit

K — amount of capital;

P_L — price of a labor unit

L — amount of labor.

Thus, if you have a particular budget system you can theoretically use it to pay for labor services only or to purchase or to compensate capital value. Therefore, the relationship between production costs and the amount of labor and capital employed should be based on the equation of the line which provides the fact that any of these factors

can be zero.

Isoquants and isocosts are combined with to determine the conditions of equilibrium. The point of their intersection is the optimal combination of resources [1, 2].

Taking into account that isoquant and isocost have the same slope at the point of intersection and the isoquant slope is measured by the marginal rate of technological substitution and the slope of isocost is the ratio of resources prices, the equilibrium condition of the producer is written as follows:

$$\frac{MP_L}{MP_K} = \frac{P_L}{P_K} \frac{MP_L}{MP_K} = \frac{P_L}{P_K} \quad (4)$$

Thus, the optimum combination of factors employed in benefits production process are achieved when the last ruble invested in the purchase of each factor yields the same gain in overall production of goods.

If the marginal product of one of the production factors in monetary terms is bigger than the marginal product of other production factors, to minimize the costs of socio-economic system, it is advisable to reduce the quantity of the factor whose marginal product is smaller and to increase the quantity of the factor whose marginal product is bigger.

To calculate values you can use statistical methods, Lagrange multipliers method, and others.

It is advisable to optimize production factors for economic and social goods separately, as the volume of economic and social goods is stipulated not only due to the presence of production factors in rural areas, but also the method of their combination, which allows to describe these goods in two different functions.

It is clear that the status of territory resources depends on the state of its fiscal

position. Therefore, the activity of municipal and state authorities should be directed to creating the conditions providing increase of the resource potential, which means the growth of financial and tax potentials of the territory. These measures will contribute to the growth of the revenue base and budget revenues of rural areas [16]. In such a situation managing position of the administration of the subject of the Russian Federation aimed at increasing areas activity for budget replenishment [17] is of great importance..

We use aggregate indices:

$\frac{3}{4}$ — based on the fact that the increase in labor costs by 1% will provide $\frac{3}{4}$ increase of released goods;

$\frac{1}{4}$ — based on the fact that the increase in capital inputs by 1% will provide $\frac{1}{4}$ increase of released goods.

Let economic benefits in the structure of expenditures be 10%, and social -15%. Accordingly, the total income is 100%. The share of economic goods in the overall structure is 10 and social is 7 social.

Let x_1 – is optimal amount of social goods;

x_2 – is optimal amount of economic goods.

For the two goods a target consumption function is

$$U = (x_1 - 7)^{1/4} (x_2 - 10)^{3/4}$$

The price vector is $P = (15; 10)$; net income is 100.

Marginal utilities — $D = 100$

Necessary optimum conditions give the following system of equations (λ is Lagrange multiplier):

$$((x_2 - 10)^{3/4}) / (4(x_1 - 7)^{3/4}) = 15\lambda$$

$$3/4((x_1 - 7)^{1/4}) / ((x_2 - 10)^{1/4}) = 10\lambda$$

$$15 \times 1 + 10 \times 2 = 100$$

After substituting the first equation into the second we get:

$$3/4((x_1-7)^{1/4})/((x_2-10)^{1/4}) = 10 * (((x_2-10)^{3/4})/(4(x_1-7)^{3/4}))/15$$

Expressed from the third equation, x_1 and substituting in the last equality, we have:

$$3/4((-2/3 \times 2 - 1/3)^{1/4})/((x_2-10)^{1/4}) - ((x_2-10)^{3/4})/(6(-2/3 \times 2 - 1/3)^{3/4}) = 0$$

Solving it relative to x_2 will get: $x_2 = 17/8$

When $x_2 = 17/8$ or 2.125

$x_1 = 21/4$ or 5.25

4. Conclusion

Thus, by setting the initial conditions of social and economic goods under the existing socio-economic system constraints, it is possible to determine their optimal ratio in the structure of consumption.

References

1. Chernyakov M. K. Simulation modeling of economic processes: textbook. - Novosibirsk: Sibupk, 2005.- 132 p.
2. Chernyakov M. K. Modeling of economic processes and systems / Information technology and mathematical modeling. Proceedings of the III all-Russian scientific-practical conference (11-12 December 2004).H.2. – Tomsk: Publishing house Tom.University.; 2004.- P. 164-166.
3. Akbarov K. H-O. The Population as the carrier of the development potential of rural areas: theoretical aspect / K. H-O. Akbarov // Strategy of development of agriculture and rural areas: promising ideas and competitive technologies : proceedings of the international. scientific-practical. Conf., the 50th anniversary of the FEDERAL VNIIOPTUSKH, Moscow, 19-20 February 2015, Moscow: VNIIOPTUSKH, 2015. - 652 p., p. 461 - 463.
4. Akbarov K. H-O. The Siberian model of sustainable development of rural areaP. V. N. Papalo, B. A. Kovtun, K. H-O. Akbarov // APK: economy, management. Monthly theoretical and scientific-practical journal. – 2013. - No. 2-2014. - P. 71-75.
5. Akbarov K. H-O. the Theoretical substantiation of structure of the carriers of the socio-economic potential of rural areas / K. H-O. Akbarov // II international scientific-practical conference of students, postgraduates and young scientists "World economic

system: problems and prospects", Novosibirsk, April 21, 2015 – Novosibirsk: NF FSBEI HPE "REU them. G. V. Plekhanova", 2015. [Electronic resource]. URL: <http://www.nf-rgteu.ru>

6. Akbarov K. H-O. Socio-economic potential of rural municipal district / K. H-O. Akbarov // agricultural science – to agriculture: collection of papers: in 3 vol. / X international scientific-practical conference (4-5 February 2015). Barnaul: ASAU RIO, 2015. - KN. 1. - 298 P. – P. 114-116.

7. Untura G. A. Information and technological approach to the forecasting of the budget / Untura G. A., Chernyakov M. K., Chernyakova M. M. // Vestnik of Siberian University of consumer cooperation. 2011. No. 1. P. 63-69.

8. Akbarov K. H-o Prediction of the development of productive capacities of rural municipal formation / Minenko, A. V., K. H-O. Akbarov // Bulletin of Altai state agrarian University. – 2015. - №3(125). – p. 169-176.

9. Chernyakov M. K. Information technology for economic forecasting budgets / Chernyakov M. K., M. Chernyakov, V., Chernyakova M. M. // In the collection: Information technologies in science, management and education. Materials of all-Russian correspondence scientific-practical conference dedicated to the 60th anniversary of the Siberian University of Consumer Cooperation. 2016. P. 109-113.

10. Chernyakov M. K. Methodology of economic forecasting / Chernyakov M. K., Chernyakova M. M. // Vestnik of Siberian University of Consumer Cooperation. 2013. No. 4. P. 44-48.

11. Chernyakov M. K. Model forecasting in Economics: monograph / Chernyakov M. K., Salanov N... - Novosibirsk: 1997.- 257 p.

12. Chernyakov M. K., the Prediction of the municipal budget by the method of "Potential function" / Chernyakov M. K., K. K. Larska Mathematical methods and models in the study of public and corporate Finance and financial markets: proceedings of all-Russian scientific-practical conference (December 10-11 2015, Ufa). In 2 h. h. I / resp. edited by I. U. zulkarnay. – Ufa: Aeterna. – 2015. P. 278-283.

13. Chernyakov M. K., The Prediction of investment / Modernization Processes in the economy and management: methods, models, tools, / / Collection of articles of international scientific-practical conference (26-27 April 2012). – Novosibirsk: Publishing house "Sibuk": 2012.- P. 208-211.

14. Chernyakov M. K. Techniques for forecasting municipal budget / Mikhail Chernyakov, Maria Chernyakova, Vera Surovceva // British Journal of Educational and Scientific Studies, "Imperial College Press", 2015, № 2 (22). – P. 246-255.

15. Akbarov K. H-O. The change in the capital structure in the conditions of the extension service, and innovative activity/ V. N. Papalo, B. A. Kovtun, K. H-O. Akbarov

// Economics and entrepreneurship. – 2013. - No. 12. - part 3. - . P. 642-646.

16. Chernyakov M. K. Fiscal risks of the municipality / Mikhail Chernyakov, Maria Chernyakova, Vera Surovceva // Australian Journal of Education and Science, “Sydney University Press”, 2015, № 2(16). – P. 177-184.

17. Chernyakov M. K. Improving the system of organization management method "Management by objectives" / Chernyakov M. K., Chernyakov, V. M., Mathematical models and methods in the study of public and corporate Finance and financial markets: proceedings of all-Russian scientific-practical conference (December 10-11 2015, Ufa). In 2 h. h. I / resp. edited by I. U. zulkarnay. – Ufa: Aeterna. – 2015. P. 129-132.

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Sukhorukova I. Economic-mathematical modeling of the optimal use of territories contaminated after the Chernobyl accident

Irina V. Sukhorukova

Doctor of Economics, Professor of the Mathematics Department of the Plekhanov Russian University of Economics, Moscow, Russian Federation,
sukhorukovaira@yandex.ru

Abstract: The consequences of the Chernobyl accident in April 1986 had a significant negative impact on the economy and the environment. Many types of pollution have adverse effects on the environment, but that the contamination is extremely dangerous for the population, the economy, regional ecological and economic systems, including the contamination of agricultural land. In the present study proposed economic- mathematical models that meet the criteria of optimality of agricultural production in the affected areas

Keywords: radiation contamination areas, radionuclide migration, social ecology, optimization of production, the development of econometric models

The consequences of the Chernobyl accident in April 1986 had a significant negative impact on the economy and the environment. Radioactively contaminated 150 thousand square meters. km in the former Soviet Union, mostly in Ukraine, Belarus and Russia. In the Russian Federation contaminated by radiation emissions of about 60 thousand square meters. km to the number of living up to 3 million people.

It should be noted that many types of pollution have adverse effects on the environment, but that the contamination is extremely dangerous for the population, the economy, regional ecological and economic systems, including the contamination of agricultural land [1].

Source of atmospheric deposition of radionuclides on the underlying surface in many situations of contamination, including radioactive, is the initial link migration. Getting on the earth's surface, radionuclides are included in the biogeochemical processes of migration are redistributed in the soil cover, soil systems — ground and surface water,

soil — the plants and later in food and biological circuits.

Speed and direction of migration of radionuclides determined by a combination of factors , primarily , physical and chemical properties of radionuclides and natural conditions (mainly the type and condition of the landscape- geochemical system.

In different situations connected with the incidence of artificial radioactive substances into the environment , radionuclides in plants , including agricultural, tend to occur in two ways: directly on a roll of radioactive substances from the atmosphere to the surface of plants (foliar or «air» way) and the assimilation of radionuclides from the soil mineral nutrition of plants (root , or » soil » way).

For the first time after the beginning of radioactive fallout (in the case of a single emission of pollution) the contribution of the aerial power is particularly high and 50-200 times may exceed the contribution of the soil source.

In the formation of the atmospheric reservoir of radionuclides foliar continues to be the leading way for 2-5 years, then to the extent of purification of the atmosphere, the contribution of both sources is comparable, and further contamination of products will be determined by the root assimilation of radionuclides from the soil.

In separate publications shown that quantitative characteristics of foliar pollution vary more widely than indicators of soil pollution, mainly because of greater variability of the factors influencing the process of foliar pollution: climatic conditions and biological peculiarities of plants during vegetation period [2,3].

Development of agricultural production in the area of radioactive contamination should be based primarily on the principles of social ecology. Given the availability of long-lived isotopes, radioactive and other contaminants, the irrationality implement costly remediation, ecological and economic irrationality production of contaminated products of agriculture, on the territories with contamination level of 5-15 CI/sq. km it is necessary

to drastically reduce and restructure agricultural -to stop the agribusiness . Increase investment in agriculture development of «clean» areas by contaminated would provide additional net production of agricultural products.

In terms of radioactive contamination of the basic requirements of the schemes and land management projects , implementation of specific management systems in agricultural production are to establish definitive criteria for evaluating the radiological situation , which should also include limits contamination of the soil layer with / agricultural land radionuclides and standards for levels of specific radionuclides in crop production and livestock because of its primary completion and processing in the food and feed industry [4].

To do this , first of all , to make a detailed certification of productive land, including forests and shrubs, their classification according to the degree possible economic use , including the imposition of restrictions and exclusion.

Such a sequence of land management actions creates an opportunity for the development of specific parameters and content of activities on land management of agricultural enterprises.

In the process of designing a system of crop rotation and the organization of their territory must take into account many factors that influence the placement of crops in parts of the quantity and quality of the products. Accumulation of radioactive elements in the soil depends primarily on its mechanical structure . Plants , in turn , different react to accumulation of radioactive substances (PB) in the soil. The least ability to accumulate RVs are cereals, most — culture with greater plant mass.

Under these conditions, the organization of the territory of rotations required to design sites, homogeneous on the degree of contamination for the arrangement of the crops with a view to reduce the degree of contamination of the final product harmful

impurities.

In drawing up the plans for the transition to a crop rotation in this case must be considered precursors for the projected areas , keeping in mind that this , in turn, can significantly reduce the level of contamination of the final product . In view of the lack of experience of industrial activity on the radioactively contaminated areas we deemed it appropriate to conduct a more thorough study of the rational organization of agricultural production in the contaminated area.

In the present study , in terms of radioactive contamination of agricultural land, the peculiarities of accommodation crop rotation and crop established their main features , and the first hypothesis about the optimization of production in agricultural enterprises in these areas .

The basic steps for achieving this goal is :

1. Selection of the object of study that meets the conditions in the introduction.
2. Investigation of the influence of radioactive contamination on the placement of crops.
3. The establishment of the factors on which depend the quantity and quality of the products obtained by radioactive fallout contaminated area.
4. The development of mathematical economic models that meet the criteria of optimality of agricultural production in the affected areas.

The object model is a well-known agricultural enterprise at the time of the solution of the structure of production (land and production assets , the direction of specialization , the ratio of branches) located in the contaminated area. In terms of contamination of agricultural land may be considered optimal following two options cropping the following fields:

a) placement, which ensures minimal contamination of the whole (or a selected part) of crop production;

b) placement, which provides maximum profits for crop, provided that the production of each crop contamination is limited to a predetermined level.

In this study, the authors propose to develop two economic and mathematical models appropriate to set out ideas about the optimality criteria of agricultural production in contaminated areas.

The proposed theoretical approaches and methods allow to take into account the environmental factor at all stages of development and management decisions, avoid adverse environmental effects of economic activities and focus on the implementation of the main provisions of the Environmental Doctrine of Russia , in terms of environmental safety of agricultural production and sustainable environmental management.

Developed in the study of economic-mathematical models implemented as a set of programs ZEMR.

ZEMR complex is intended for distribution calculations crops in the fields and optimization models, management and support of the database (DB), containing the information necessary for the calculation. This complex is focused on the user having no special training in the field of programming. User interaction with the complex only occurs in the conversation mode.

In practice, we have developed economic and mathematical models planned to be used for calculations in the interest of several farms in a given region of the country , as well as information support management decision-making in agriculture in conditions of radioactive contamination at the district or provincial level. These circumstances necessitate the organization of a special database for storing information about the region's farms , cultivated in these cultures , the possible radiation environment , etc. The

creation of such a database will not only easily fill a set of models and optimization problems with new components belonging to the same source data , but also provide a relatively easy operation of complex programs, relating to the preparation and input data and parameters.

This study developed and experimentally tested database structure regarding branches of the plant, i.e. cropping and crop rotation in conditions of radioactive contamination of soils. Selecting a base mathematical software was done with the following requirements:

- The possibility of implementing modern information technologies;
- The presence of a high-level programming language with built-in work with databases ;
- The possibility of organizing an interactive data processing in the menu;
- Possibility of displaying graphical information;
- Easy inclusion in complex programs of new features;
- The inclusion of modules developed using well-known universal programming languages;
- The availability of means to communicate with other computers;
- The availability of complete documentation in Russian.

Based on a comparison of available texts programs as a basic software program package was developed modeling system «Inter- Expert». This system is a shell of an artificial intelligence system designed to solve economic problems and integrates three main components: » Data Manager » — the usual means of support and implementation of economic calculations, such as database management, electronic records, business graphics , etc. . ; » expert System » — a means of creating expert systems , rule-based inference conclusions; » natural language » — means of entering queries for information

management and initiating consultation expert system using natural language.

Procedure for drawing up the plan for cropping fields using the simulation results can be schematically represented as follows. With some models generated the best option plan accommodation crops in the fields.

Model version of the plan is subject to the examination of an expert in the field of agricultural production, and then transformed in the direction recommended by the expert. After that the economic evaluation of deviations from the optimal plan transformed. The final decision is based on the results of economic evaluation. Following the procedure described leads to the construction of the final working version of the plan cropping as satisfying as mathematically formalized criteria and intuitive, based on the experience of the expert views.

Reviewed and adapted the criteria for the degree of pollution allowed to ensure the integration of environmental factors in all stages of preparation of decisions (public administration, forecasting of socio- economic development, the rationale for investment , design) . Of great practical importance is the introduction of accounting for pollution of land in the procedures of environmental assessment of economic projects that will increase the responsibility of the investor for the consequences of economic activity area.

References

1. Sukhorukova I. V. Ecological and economic model for use of contaminated land, M.: Monograph, Pktipromstroy, 2000 – 280 p.
2. Zakharov , VM, EJ Krysanov Consequences of the Chernobyl Catastrophe: Environmental Health . Moscow: Center for Russian Environmental Policy , 1996, 170 p.
3. Krivokhatskii AS and other Chernobyl trace accidental discharge of Unit 4 at Chernobyl some areas of the Leningrad , Novgorod and Bryansk regions . Moscow: Radiochemistry , v. 36 , no. 2 , 1994 . - 186.

4. Sukhorukova I.V, Shved E.V. The application procedure of environmental audit in the system of ecological insurance of agricultural enterprises in contaminated areas. Financial Analytics: problems and solutions. 2014. No. 7. Pp. 9-13. Financial Analytics: problems and solutions. 2014. No. 7. Pp. 9-13.

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Borodai V. Modern approaches to branding — processes and priorities

Borodai Vladimir Alexandrovich
Doctor of Social Sciences, Professor
Don State Technical University

Abstract: The technology of branding is considered as a logically established algorithm of actions. It is shown that branding should start not with product visualization, but with the analysis of available and necessary technological capabilities, analysis of consumer behavior, the allocation of segments with similar requirements to the product, analyzing the actions of competitors, and preparing a positioning platform. Recommendations are given on the process of branding in commodity markets, first-price goods markets and long-range goods. The conclusion is made that systems, not brands, compete in the FMCG market, so it is necessary to pay equal attention to the company's commercial policy

Keywords: brand, quality, positioning, competition, marketing, distribution

1. Introduction.

Most Russian companies act as if branding were just a matter of inventing a name and drawing bright packaging. And although many Russian products label is a chaos of graphic garbage, it should not be started from the label and the logo. The label and packaging are nice little things, but this is not the foundation on which you can build a strong brand.

Very often we come across situations in which the word brand, branding, branding sounds. For example:

- it's for us to sell at reduced prices for Range Rover and Jaguar cars;
- this is our «new and improved» from the old one differs only in the inscription on the label;
- this is the price we raise, not because the demand is ahead of the proposal, but

because soon the New Year and everyone will be promoted.

What is branding? What do we mean by this? What kind of work needs to be done?
The main dangers and delusions?

There are a lot of definitions of the term «brand». Under the concept of «brand» in marketing it is customary to understand a certain stable formed attitude of consumers towards a trademark. In Russia, most often in non-specialized publications, «brand» is used in the meaning of «registered trademark». Initially, the idea of branding was to mark and facilitate the consumer the choice of products with higher consumer characteristics, and most importantly — guaranteed quality, stable for a long time [1].

In our opinion, before embarking on branding, it is necessary to restore order in the production sphere, i.e. Where the product or service is produced. Defect-free production is the initial state of any company seeking to implement the branding process. Stably defect-free production for a long time. It is in Russia that manufacturers, after a successful start of production, somehow consider it their duty not to improve but to worsen it, reducing costs and making the recipe of production cheaper, in the hope that consumers will not notice it. An important step in the formation of branding is to ensure a stable quality of the product (service) for a long time. For many it is not difficult to make a single lot well. It is necessary that it remains so, regardless of the weather and equipment breakdown, and this is more difficult. It should be noted that all branding efforts will only make sense if the firm is guaranteed to be able to provide the expected level of quality of products or services that your customers want to see. Then, more precise adjustment to target groups will be made and an attempt to provide a product level that exceeds expectations [2-3].

2. Materials and methods.

In our deep conviction, branding begins with the study of the product, service, consumer, the situation of consumption, the definition of target segments, development, the so-called positioning platform. Target segments are allocated on the basis of a similar requirement for products. Then they describe the consumer segment. Parameters of the description are different, most often found: by behavior patterns (active buyers of brands), by demography (18-24 lonely), by competitors (buy brand X), etc. The worst case is the description of the target audience: «A man + a woman aged 25 to 45 with an average income level.» Such amorphous descriptions do not give anything for pinpointing products and advertising campaigns. It can be compared with the following description of the segment: «A man + a woman aged 45 to 65 with an average income level, having a plot near the city, spend 50% of the time on their farm.» Which target audience will be easier to sell, for example, a cultivator?

Segmentation turns into an unnecessary toy, unless an excellent marketing policy is developed for different segments and the company does not adhere to it. Of course, all marketing communications should be narrowly targeted to a certain segment. It seems that Russian companies have completely forgotten about this, they diligently continue to cover the floors in the entrances with their leaflets. They try to compensate for the low response with poor design and poor quality of paper. It is better to select the segment in such a way that it does not intersect with its main competitors. It would be advisable to choose a target segment of a sufficient size, from 3% to 30% of the market share (in order not to attract the attention of industry leaders). It's great if this segment grows over time rather than decreases. Ideally, if consumers from this segment have clearly expressed similar needs, wishes for a product or service. If a product or service has a successful sales history in a company, you should start by examining the current range of customers. It is necessary to make sure that the available consumers are the most economically profitable segment of

the market [4-5]. How will they behave if the product is cheaper?

The greatest difficulty in branding is the process of developing a positioning platform, which is built on the analysis of existing and necessary technological capabilities, analysis of consumer behavior and analysis / prediction of the behavior of competitors [6].

What is in the proposed product or service such that the consumer will be interested? Is it important for him? What price does he consider reasonable? It is known that in the trading enterprise at the shelf the consumer will be delayed, no more than for 5-10 seconds. In a standard supermarket, up to 30,000 products. What is the chance of your goods being bought? Therefore, the development of the platform is very serious. As a rule, this work begins with the analysis of the commodity category: scrupulously and carefully consider all the competing brands for material and emotional benefits. Conduct a study on the unmet needs of potential consumers. Identify all the problems and dreams of potential consumers. It is important to understand what the preference for brands in a particular segment is based on. At the initial stage, in our opinion, it is necessary to determine the type of positioning: rational or emotional [7]. The latter has become very fashionable in recent years. Apparently, because it is used by brand icons. It should pay attention to some of the data that lead specialists in marketing. For example: dominant positioning in 1950-1960. — material rational — return on investment in advertising 10-15%. Dominant positioning in 1990-2010. — Intangible image — return on investment in advertising 1-4%. If the company is interested in making high-quality branding, you will have to learn to understand and understand what the consumer wants, what he needs, and what he is ready to pay money for. The latter is usually very encouraging. If we recall that satisfaction equals what was received, minus expectations, it turns out that the buyer should always receive more than expected.

If the brand of the company is not the first year on the market, it will be very useful to compare the desired positioning with the actual one. Most likely, all efforts to call for certain necessary associations with the product can drown in the chaos of differently directed advertising messages [8]. It should be tested, make adjustments.

An example of disappointing facts is, for example, the meat processing market, in which 70% of Russian brands do not have any position at all. One gets the impression that marketing executives simply skipped classes at their MBA school when they taught branding («Ostankino is a new standard!» — a new standard of what?, «Nyam, yum, yum — buy Mikoyan» — I want to ask: This is about what?). Not surprisingly, the market share of major players is falling rapidly. It is also not surprising that we see a sea of identical indistinguishable brands in retail network companies and the consumer has no choice but to choose at a price. [9]

Very often in Russian companies, the concept of «consumer characteristics» is replaced by «quality». In fact, the word «qualitative» is a relative term. There is no «quality» in marketing. The fact that for one target audience — an exceptional quality, for another target audience — an ordinary characteristic of the goods. It will be more correct to describe the product in terms of: «quality parameters» or «selection parameters for a certain target group», «important consumer characteristics». And, it is not enough to distinguish them, they need to be ranked according to the importance for different target groups [10]. But this task is extremely difficult and time-consuming. Moreover, different parameters behave differently in the situation «for the same price.» For some parameters, the consumer is willing to pay extra, other parameters he deems necessary to have by default.

«What the boss likes is something that our consumers will like.» Here is quite common, the most incorrect and the most dangerous approach to choosing the target

buyers in Russian companies. You can not allow speculation for the consumer, it's very risky. It is especially dangerous when managers start putting themselves in the place of a consumer. As a rule, they have a different level of life — higher, and they continue to impose their views on how the product should look in their opinion.

One of the well-known automotive companies conducted research on the topic: «For what reason did you buy a car of the X brand?» Expect to hear the answers: outstanding design, modern economical engines, spacious interior, etc. The most common answer was: «The lowest interest on the loan.» Not the most beautiful, not the most reliable, not the cheapest, but the most sold. Therefore, you should always find out why you bought this brand, — it may be that others just did not have time to bring it to the store.

In addition, the above should, in our view, pay attention to two common mistakes of branding.

The first is the phenomenon of commoditization. It is very difficult to brand raw products, such as granulated sugar, flour. However, they can be branded under the condition that there is a real consumer characteristic that is meaningful to the customer. For example, salt and flour, if it's sea salt in cardboard packages or flour pancake with all the ingredients necessary for baking. If such uniquely distinguishable features of the proposed product does not exist, the company will throw money away by engaging in the branding of raw materials.

The second is the copying of the marketing strategies of the giants. Do not look at the brand icons Coca-cola, IBM, Nike, Mercedes, etc. They have their own marketing. You need to learn the rules, not exceptions. Coca-cola, IBM, Nike are exceptions. By the way, how long did Coca-cola have a major marketing success? And whether it is possible to remember the new commercials of the company, or, at least, the new taste of the product

for the last about 10 years. With the loss of rational advantages, even such brand giants as Kodak quickly disappear into obscurity. You can not try to transfer situations with several cultic brands to hundreds of thousands of daily products of the FMCG (fast moving consumer goods) category.

It is necessary to remember and cunning of products of the first price. If a company can afford the lowest price, it will have a slightly different marketing mix. It is necessary, in our opinion, to note that the marketing of FMCG products is very different from the marketing of pre-selection products.

In specialized literature one can find criticism of linear extensions. Many are now intimidated by the phenomenon of cannibalization. It may seem cruel, but if the company does not cannibalize its brand on its own, it will still be done by someone else for it. Therefore, do not be shy to attack your own brand.

In the FMCG goods market, repeated purchases are of particular importance. When conducting research after the launch of a new brand, it is absolutely necessary to pay attention to repeated purchases. It is especially effective to repeat the survey after several weeks of use. The company can learn a lot about how to improve and refine the product.

At the stage of creating a trademark, the company will decide the issue of a fair price, based on the opinion of consumers of its target segment and the competitive environment. Many companies simply can not accurately calculate their costs in terms of trademarks or, even more difficult, in the SKU (nomenclature position) section. Some financiers guard information such as secret weapons. But most often it is difficult to determine exactly the amount of costs even by the financiers themselves. Why do professionals focus on this. Everything is very simple — demand exists only within the price. Despite the pressure of the networks, one can not arrange at the stage of withdrawal of the product of the sale at reduced prices. According to experts, the consumer will

consider this price as the real fair price of the brand being positioned [11-12].

In most marketing plans, some advertising support is expected for the withdrawal of a new product to the market. But from this support, there is always no trace in life. It's easy to say that the company is going to spend two million on advertising. It is much more difficult for the head to sign such a payment. Therefore, it is possible that the new brand will not get the planned advertising support, but the result will still be asked with the responsible service.

But the most recurring mistake managers make is timing. In all Russian companies, the brand is created in an «emergency» mode. Justification is usually an irrepressible desire to catch the mythical season. The charts are always very dense. Many marketers do not have time to return from the general's office, and it's time to release a new brand. Instead of focusing at least a little on creating a new brand, the marketing director deals with operational problems and issues. In rare moments of calm, he tries frantically at least something to do with the new brand. And, finally, something not finished seems to the management, with a timid request to test. A guide filled with testosterone makes a decision to release an unfinished unprotected product. But, alas, the desire at any price to quickly enter the market — the biggest mistake. But most of all in this situation, the behavior of marketing directors is surprising, either they do not understand the actual terms for creating new products, or they really realize that by the time the deadline set by the boss approaches, they will no longer be in the company. Most likely, both the first and second.

For some reason, Russian companies often do not have time to make the brand right at the right time, but then they always have to redo something. As a result of the fact that different managers with different visions work at a different time, multidirectional communications are born, causing irreparable damage to the brand [13]. Experts recommend to lay at least two to three months for each of the three stages. The first is the

research part and planning. The second is the development of a positioning platform. The third one is visualization and communication. If the test shows that the product «did not pass,» you should go back one step. It is better to pre-spend one more month to develop the product, then change something after the withdrawal and explain to distributors that your company will improve.

As practice shows, a trademark never has a second chance to make a first impression. On the expenses of Russian branding of marketing experts, there are many traps. An inexperienced regional producer can easily cater for them.

The fact is that in any market systems compete, not brands. Branding is only part of the system, and not a substitution of the entire system [14].

For example, it is impossible to achieve small success in the FMCG market without having a powerful distribution system. It should be noted that the global trend shows a decline in the influence of brands, and, conversely, an increase in the influence of distribution.). But after passing through this chain of intermediaries, the product will add to the cost and will lose in quality. It is necessary to be able to correctly plan the price on the shelf for the end user, taking into account all intermediaries. The thoughtless hobby for branding of some companies is surprising, which naively believe that branding alone can replace all other parameters of competition.

3. Results and Discussion

Summing up the review of the process of branding, we should draw some conclusions — the so-called branding resume:

— a bright differentiating label and a name corresponding to the category are conditions necessary but not sufficient for the branding process;

— branding should start not with product visualization, but with analysis of existing and necessary technological capabilities, analysis of consumer behavior, the identification

of segments with similar requirements to the product, with analysis of competitors' actions, with the preparation of a positioning platform [15];

— should not, in our opinion, copy the marketing strategies of brand icons; the principle «we do not have so much money, so we have to think» should work;

— it is important to pay enough attention to the rational characteristics of the product or service; simply defect-free production is no longer enough, commodity markets, first-price goods and long-term goods develop according to their own rules;

- it is advisable to set realistic deadlines; It is always necessary to test the product, the service before launch;

- in the FMCG market, systems, not brands, compete, so you need to pay equal attention to commercial policy;

- you should not trust the newfangled techniques that promise an instant result

— marketing magic does not exist.

References

1. Borodai V. Brand of the employer as DNA of corporate culture of service company // European Research. 2017. № 1 (24). C. 34-35. DOI: 10.20861/2410-2873-2017-24-001

2. Sivokoz NV, Borodai VA Facilitation as a factor of an effective management system of a modern service company // Economics and Society. 2016. No. 11-2 (30). pp. 277-280.

3. Borodai VA Increased business potential based on Business Intelligence technologies // Technology Business in Russia: Theory and practice. - IV Int.. scientific-practical. Conf., (27 September 2016), Saratov: Publishing House MTC "Business Academy", 2016. – 46p.

4. Shostenko KS, Borodai VA Strategic management - alternatives to modern toolkit // Economics and society. 2016. No. 2 (21). P. 1330-1333.
5. Savchenko AB, Borodai VA Forming the Future - Designing Stably Functioning Business Processes // Research and Innovation in Russia. Actual questions of theory and practice. - Saratov: TsPM Academy of Business. 2016. pp. 61-64.
6. Zverev VO, Borodai VA Strategic choice as a factor in the institutional maturity of the company's management // Theory and practice of modern science. 2016. № 10 (16). P. 138-141.
7. Borodai VA Emotional competence - cognitive features // Economics of modern society: topical issues of anti-crisis management. - Saratov: Academy of Business. 2015. pp. 28-31.
8. Bondarenko OV, Borodai VA Economic and sociocommunication needs // Humanitarian and socio-economic sciences. 2009. № 3. P. 120-124.
9. Borodai VA Commercial activities and processes of institutionalization in modern Russian economy // Problems and prospects of formation of an innovative economy in Russia. - Krasnodar .: KTSNTI; Krasnodar, 2011. P. 181-190.
10. Dudkina OV, Minasyan LA, Saga AS, Experience in using information and communication technologies in conducting marketing research on the visualization of the tourist potential of the city of Rostov-on-Don // Culture and tourism as tools enhancing the human potential of the nation. The National Academy of Tourism, St. Petersburg, 2016
11. Valyava SO, Borodai VA Temporary determination as a strategic management model indicator // Theory and practice of modern science. 2016. № 10 (16). P. 65-68.
12. Lozitsky IS, Borodai VA Square influence as an effective tool for managing the company's intangible assets // Economics and Society. 2016. № 2 (21). P.1266-1269.
13. Borodai VA. Simulation assessment center in the service of the company as a

factor in the accuracy and validity of the information about the employee // Professional Science. 2017. № 1. C. 22-32.

14. Bezuglova MN, Borodai VA The dilemma of optimization is to do things correctly or to do the right things // Socio-economic aspects of the development of the modern state. - Saratov: Academy of Business. 2014. P. 15-18.

15. Baidak VA, Borodai VA Vectors of development of the company's potential // Economics and Society. 2016. No. 2 (21). pp. 1198-1201.

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Kuzminova M. Intellectual Companion Tutor Mobile Application for English Learning

Kuzminova Margarita Vladimirovna

Ph.D. student, senior instructor, Foreign Languages Department

Kaluga State University named after K.E. Tsiolkovskiy

Abstract: In the article the necessity of computer-, Internet- and mobile learning is discussed. The reasons for CALL (Computer-Assisted Language Learning) and MALL (Mobile-Assisted Language Learning) integration in the educational process are also given. Different approaches to the technology of mobile education and Internet-based education are presented and some of them are briefly described. The article also explores the reasons for game-based mobile applications as a part of mobile learning and gives the description of such an application for professional language learning. The study is based on the open learner model and the game worked out by Taiwanese IT specialists and implies other strategies worked out by different lecturers, instructors and scientists. Brief characteristics of a mobile application for medical students are theoretically described. And thus, the conclusion is made that the usage of a smartphone can incorporate references to Internet resources beside using its built-in options in the process of language learning

Keywords: MALL, CALL, game-based mobile application, language learning, mobile learning

1. Introduction

Technology has always been present in the educational process. However recently with the fastest development of computer science and in the context of the society conversion into the informational one educative technologies have undergone changes. Nowadays we are facing the knowledge and information era of almost all the processes in our every-day life. Thus the two concepts are becoming highly valuable for a contemporary employee. The moving of the occupational sites from “the factory to the office” implicates a prospective labor unit to possess high level of digital literacy skill [1: 6]. New concepts and approaches are mostly based on the computer-, Internet- and mobile-assisted learning. All these leads to informatization of education, which means

the new demands to a competent graduate such as highly appreciated on the labor market skills of getting, processing and usage of information [2].

2. **Materials and methods**

The aforementioned factors entailed the new educational paradigm which is called “new” literacy [3], or called by some scientist “digital literacy” [4] or “electronic literacy” [5].

Mark Warschauer [5] in his research writes that “the technological, economic, and social transformations of the digital era pose three important literacy and learning challenges that can be summarized as past/future, home/school, and rich/poor”. Thus, the first correlation deals with the differences between the former accent on texts reading and translating and contemporary needs in digital literacy and interaction with participants from all over the world. The second correlation refers to the gap between the media-rich and autonomous literacy experiences that many children enjoy at home and the often more restrictive literacy practices they engage in at school [6]. And the third one refers to the differences in the possibilities of the children from high and low socioeconomic status families, moreover that this implies the higher value of and higher salary for the well-digital educated, giving them the possibilities of getting better positions, and simultaneously reducing payment for unskilled jobs.

In this context, the educational technologies must adapt to the students’ demands and stay ahead their experience, but not behind. Firstly, computer-assisted learning is a real support not only for a subject competence formation but for IT integration into the learning process thus simultaneously developing them.

As for English language learning (ELL), all the four skills (reading, listening, writing and speaking) may be formed in computer-assisted language learning [1, 7, 8, 9,

10]. The same is with Internet tools. Educators have studied benefits and challenges of introducing social nets like Facebook [11, 12] and Twitter [13], social networking sites [14], Google tools [15]. For example, García states that blogging has the potential for collaborative and autonomous work outside the classroom [FB plataforma]. Moreover, other Internet-based technologies have become widespread in teaching English. Aydin [16] in his research argues that the use of blogs in ELL “plays an important role in developing learners’ interaction, competencies and communications in the target language [16: 252]. Other scientists emphasize the function of blogging as improvement of reading and writing skills, grammar and vocabulary [17, 18, 19, 20]. Sysoev [21] explores the nature and benefits of podcasts in the learning process. He also describes the stages of students work with podcasts and their own podcasts creation. The more profitable podcasts are for listening and speaking skills development, as well as IT skills. [22] combine podcasts and videos into videocasts. Their research focuses on the alternative ways to make lessons more dynamic. The questionnaire given to students after working with videocasts showed that they felt more active and more motivated.

Still the technology of mobile education is being studied more now: that is the use of any portable device in education, such as tablets and PDA. With the smartphones entering our lives the focus of mobile learning has shifted to investigating mobile phones abilities and overall mobile applications designing that are widely used in tourism, banking as well as education. Bachore [23] describes merits and demerits of Mobile-assisted Language Learning (MALL). Biel [24] explores the ways to use smartphones built-in functions that can be useful in learning, mostly camera and dictaphone. Liu, M., Navarrete, C. C., Maradiegue, E. & Wivagg, J. [25] interviewed teachers in their research which finally showed that the following options were mostly used in the classroom: calculator, calendar, accessing Internet, maps, music and podcasts, and checking weather.

As for media creation voice recorder, notes, still camera and video camera were also involved in the learning process. The usage of other applications is rather rare, still scientist speaking about MALL describe already designed existing mobile applications for educational purposes [25, 26]. Often they are just resources such as dictionaries, translation tools, flash cards application, etc. Kapranchicova [27] combines MALL with Internet technologies and explores their benefits in developing the four skills of ELL.

3. Results and discussion.

At this stage the application itself should be described. The graphic imaging of a learner model depends on the learners' age and in case with students it varies from major to major. For schoolchildren pet, could be taken. The benefits of a companion pet as an open learner model were described by Chen, Chou, Deng and Chan [28]. They thoroughly explored all the components of a model and gave the objectives of this model functioning. They described a dog as a which is to be nurtured thus getting the awareness of individual progress. Moreover, a group pet ("Our-Pet") was introduced which added an element of competition and made students motivated and responsible for their individual learning strategies.

Another game-based example was provided by J.Ch. Yang, K.H. Chien, T.Ch. Liu [29]. In this game students taking care of a cyber-dog learn to use electric appliances consequently trying to preserve the dog's life. Their success or faults are reflected by the dog's emotions and health. Here we have a good example of combining the two functions of a specially designed mobile application: learning and assessment. In case with students and ELL an application combining a learner open model and dame-based learning may be introduced. It can be show on an example for medical students learning English.

An open learner model is a human, who is just starting a career of a doctor. This character can be drawn using CorelDraw or Maya (for 3D figures) software. The students

during mini-games incorporated into the application can earn coins and then buy uniform and equipment. Or they may choose learning option and having passed a number of lessons get a professional certificate. The aim is to get a professional model well and up-to-date equipped and qualified. Mini-games can be programmed for iOS and Android or may contain only the instructions involving side resources or additional activities aside from application: find information, collect bibliography, record and audio/video. These additional activities are assessed by the teacher who after that gives an individual code for completing the game.

4. Conclusion

Mobile learning is not restricted to the built-in options of a smartphone or other portable device; it may include Internet tools or other applications for educational purposes. A well-programmed and designed mobile application can combine learning and assessment functions, making students more self-aware about their success. Game-based applications also contribute greatly into students' motivation and responsibility for their educative actions.

References

- 1) Warschauer M, 2006. Laptops and literacy: Learning in the wireless classroom, New York, N.Y./London: Teachers College Press
- 2) Sysojev P, 2013. The foci and perspectives of language education informatization. Vissheje obrazovaniye v Rossii (Higher Education in Russia), №10, pp. 90-9.
- 3) Warlick D.F, 2008. Redefining literacy 2.0, 2nd edn. Columbus: Linworth Publishing.
- 4) Tour E, 2012. TESOL in times of change. Monash University Linguistics Papers, vol. 8, №1, pp.11–19

- 5) Warschauer M, 2008. Laptops and Literacy: A Multi-Site Case Study. *Pedagogies: An International Journal*, No 3, pp. 52–67
- 6) Gee J. P, 2004. *Situated language and learning: A critique of traditional schooling*, New York: Routledge
- 7) Melatti M, Khademi M, 2014. Peer evaluation in CMC learning environment and writing skills // *International Journal of Applied Linguistics and English Literature*, vol. 3 (5), pp. 220-228.
- 8) Heilman M, Collins-Thompson J, Callan J, Eskenazi M, 2006. Classroom Success of an Intelligent Tutoring System for Lexical Practice and Reading Comprehension. *Proceedings of the Ninth International Conference on Spoken Language Processing*. 17-21 September 2006, Pittsburgh., Baixas: International Speech Communication Association (ISCA), pp. 829-832
- 9) Blake R, 2016. Technology and four skills. *Language Learning & Technology*, vol. 20 (2), pp. 129-142
- 10) Fust S.Sch, Muñoz P.J.M, Chatzi P, Papakosta P, 2012. Creación de espacios de trabajo virtuales. *IV Jornadas de Formación para Profesores de Español en Chipre*. 2-9 Junio, 2012, Nicosia, Chipre, pp. 5 - 15. <http://www.mecd.gob.es/dctm/redele/Material-RedEle/Revista/201527/2015-redele-27-5-du-lu-hsiao-mila-vieco.pdf?documentId=0901e72b81ce2593> Accessed 20 November 2016
- 11) AbuSa'aleek A.O, 2015. Students' Perception of English Language learning in the Facebook context. *Teaching English with Technology*, 2015, vol. 15(4), pp. 60-75
- 12) García P.G, 2012. El uso de Facebook en la enseñanza de segundas lenguas. *IV Jornadas de Formación para Profesores de Español en Chipre*. 2-9 Junio, 2012, Nicosia, Chipre, pp. 16-22

https://www.ucy.ac.cy/langce/documents/Projects/ACTAS_JORNADAS_ELE_C

[HIPRE_2012.pdf](#) Accessed 20 November 2016

- 13) Mompean J. A, Fouz-Gonsales J, 2016. Twitter-based EFL pronunciation instruction. *Language Learning & Technology*, №20(1), pp. 166–190
- 14) Lin C.-H, Warschauer M, Blake R, 2016. Language learning through social networks: Perceptions and reality. *Language Learning & Technology*, №20(1), pp. 124–147
- 15) Conroy M.A, 2010. Internet tools for language learning: University students taking control for their writing. *Australasian Journal of Educational Technology*, vol 26(6), pp. 861-882
- 16) Aydin S, 2014. The Use of Blogs in Learning English as a Foreign Language *Mevlana International Journal of Education (MIJE)*, vol. 4(1), pp. 244-259
- 17) Quadir, B., Daniel, N.-Sh. Ch., Teng Ch.-E, 2011. The Effects of Reading Habit on Blog Adoption. *Proceedings of the 19th International Conference on Computers in Education*. 28 November – 2 December 2011, Chiang Mai, Thailand. Thailand: National Electronics and Computer Technology Center, pp. 733-737
- 18) Sysojev P.V, 2012. Blog-technologies in foreign language teaching. *Yazik I Kul'tura (Language and Culture)*, №4(20), pp. 115-128
- 19) Gendre J.P, 2012. Una experiencia virtual: el blog como herramienta de aprendizaje y evaluación para los cursos de ele. *IV Jornadas de Formación para Profesores de Español en Chipre*. 2-9 Junio, 2012, Nicosia, Chipre, pp. 173-187 <http://www.mecd.gob.es/dctm/redele/Material-RedEle/Revista/201527/2015-redele-27-5-du-lu-hsiao-mila-vieco.pdf?documentId=0901e72b81ce2593> (Accessed: 20.11.2016)
- 20) Navarro I.R, 2012. Blogging en la clase de español como lengua extranjera. *IV Jornadas de Formación para Profesores de Español en Chipre*. 2-9 Junio, 2012, Nicosia, Chipre, pp. 23-28. <http://www.mecd.gob.es/dctm/redele/Material->

RedEle/Revista/201527/2015-redele-27-5-du-lu-hsiao-mila-

vieco.pdf?documentId=0901e72b81ce2593 Accessed 20 November 2016

21) Sysojev P.V, 2014. Podcasts in foreign language teaching. Yazik I Kul'tura (Language and Culture), №2(26), pp. 189-202.

22) Hsiao D.-L., Vieco M, 2015. "Mi vida loca": ejemplo de explotación didáctica y reflexiones en torno a su integración en ELE. redELE revista electrónica didáctica del Español como lengua extranjera, vol. 12(27), pp. 100-117
<http://www.mecd.gob.es/dctm/redele/Material-RedEle/Revista/201527/2015-redele-27-5-du-lu-hsiao-mila-vieco.pdf?documentId=0901e72b81ce2593> Accessed 20 November 2016

23) Bachore M.M, 2015. Language Learning through Mobile Technologies: An Opportunity for Language Learners and Teachers. Journal of Education and Practice, vol.6(31), pp. 50-53

24) Biel L.A, 2012. El teléfono móvil en la clase de ele. IV Jornadas de Formación para Profesores de Español en Chipre. 2-9 Junio, 2012, Nicosia, Chipre, pp. 157-166
<http://www.mecd.gob.es/dctm/redele/Material-RedEle/Revista/201527/2015-redele-27-5-du-lu-hsiao-mila-vieco.pdf?documentId=0901e72b81ce2593> Accessed 20 November 2016

25) Liu M, Navarrete C.C, Maradiegue E, Wivagg J, 2014. Mobile learning and English language learners: A case study of using iPod touch as a teaching and learning tool. Journal of Interactive Learning Research, vol. 25(3), pp. 373-403

26) Vasbiyeva D.G, 2016. The opportunities of mobile technologies integration into foreign language learning in a non-specialist university. Philologicheskiye Nauki. Voprosy teorii i praktiki (Philological Sciences. Questions of Theory and Practice), № 5, vol. 3, pp. 193-195

- 27) Kapranchikova K.V, 2014. Mobile technologies in language learning by the students with non-linguistic majors. *Yasik I Kultura (Language and Culture)*, № 1(25), pp. 84-94
- 28) Chen Zh.-H, Chou Ch.-Y, Deng Y.-Ch, Chan T.-W, 2007. Active Open Learner Models as Animal Companions: Motivating Children to Learn through Interaction with My-Pet and Our-Pet. *International Journal of Artificial Intelligence in Education*, vol. 17(2), pp. 145-167
- 29) Yang, J.Ch., Chien, K.H., Liu, T.Ch, 2012. A digital game-based learning system for energy education: energy conservation pet. *Turkish Online Journal of Educational Technology*, vol. 11(2), pp. 27-37 <http://www.tojet.net/articles/v11i2/1123.pdf> (Accessed: 21.11.2016)

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Dudkina O. A differentiated approach to the formation of customer loyalty in the enterprises of sphere of service

Dudkina Olga Vladimirovna
candidate of sociological Sciences
associate Professor of "Service, tourism and hospitality industry"
Of the "Donskoy State Technical University" (DSTU)

Abstract: The notion of loyalty is the basis of long-term relationships with actual and potential consumers of goods or services. True customer loyalty is revealed when the two components of loyalty - emotional and rational - are in balance and meet his preferences.

Keywords: customer loyalty, staff loyalty, loyalty program, marketing communications

1. Introduction

True loyalty is the commitment of customer to a particular company, approval of methods, goals, resources and policy activities, both in relation to the client and to the whole environment of business – internal and external. Therefore, all these components should be as open as possible to any client. And every service personnel must be sincere carrier of ideas of the company in which he works [1].

Loyalty is the preference of a man of a certain brand, product, place, the seller that makes buying, sometimes even sacrificing something. If the customer buys just because it is convenient, profitable, need, is there loyalty or not — is still not clear.

2. Results and Discussion

If the client buys again — it is also not proof of loyalty: it can be, simply had no other choice. Repeated and deliberate purchase under the influence of a sense of preference, where the client makes sacrifices, is a demonstration of true loyalty.

For example, the client goes through the city in the same gym, although near the house there is another, similar like a twin brother. How did this preference, this true

loyalty? It is not known. It may well be that it was the result of deliberate actions of management and employees of the fitness center.

These purposeful actions, which are very likely cause a feeling of attachment among the target audience, are the loyalty program.

A common way of attracting customers is the use of low prices and discounts [2]. But in a psychological sense, such programs do not adequately call loyal. If the seller of goods or services makes a discount, then, most likely, the price was originally too high. Therefore, to build a loyalty program only on discounts is a wrong strategy.

A loyal customer is a client who wants to buy a product or order a service only from a particular seller. But this should not mean that he does so because the firm's product or service is cheaper. Always on the market, there may be a competitor who will offer more favorable price. In this case, the customer will go to another dealer. Our only option is to help the client in solving his problems. When a person has some need, he turns to a specific company for help. This company efficiently, quickly and at an affordable price provides this product or service. A satisfied customer will always return here again and will recommend this company not only because it has low price, but because it is advantageous and convenient in all respects.

All existing loyalty programs, which are currently implemented by companies, based on an appeal to the prudence of customers. But we should not forget that companies do not always beneficial to support this loyalty. Once launched the customer loyalty program may not be removed from the practice because it will greatly affect the reputation of the organization. So before you launch into action any of the programs, you must predict the consequences of its development in practice and to calculate whether will be advantageous from the point of view of profitability it is these methods of attracting customers.

In other words, loyalty is the positive attitude of the customer to the company, its brand, to all activities, to the promoted product, company personnel and many other aspects. Generally, customer loyalty is determined by the duration of use of the client services company, not leaving to competitors [4].

Speaking about what is customer loyalty, it is worth noting the key importance of a positive user experience. If the person with the product or service had a positive experience with the company, the likelihood that he will return here again, is quite high.

A number of studies have shown that people, who are satisfied with the purchase of a product or service, with a considerable degree of probability will have a positive attitude to other suggestions of the same brand, the same organization [5]. Moreover, the inclusion of the audience in a special exclusive loyalty program, the presence of which allows to work with the company on privileged terms, significantly strengthens the commitment to the already valuable users.

It is not necessary to perceive commodity-money aspect as the only way to leave a favorable impression on the client. You should know that in the market there are many companies providing services similar to your and often at a better price. However, it is important for clients not only this. If the company's image, mission, its public activity or relationship to their work coincides with the perception of the user, if you can create an emotional attachment toward the brand, consumers will agree to pay a little more just to support you, or to feel connected to your business.

An example is the huge interest in the first day of sales of the new line of i-phone with updated and not in the direction of reducing prices. Consumers seeking to buy the latest gadget release, do not expect benefits.

Proof of the necessity of stimulating and logical building of loyalty is:

— 20% of the client base of the organization brings 80% of earnings (the well-

known principle of Pareto);

— a satisfied customer talks about his experience on the average three friends, and unsatisfied — says negative ten;

— the money spent on strengthening the loyalty of one customer will be repaid within a year;

— if the company considers that it is expensive, then they should know that the cost of attracting a new customer, as a rule, five times higher than on its retention;

— the growing number of satisfied customers by 5% can increase the company's revenues by 50% [6].

From the foregoing it follows that the loyalty of existing and potential customers is one of the most important factors in the development of the company.

The question is — do they always need to stimulate consumers? The answer is quite unexpected — no. And even, in some cases, this may lead to the opposite effect — the loss of the client.

Client is better to leave alone in some cases.

First. A situation which can be called “buttery butter”. The client constantly uses the services of specific service organizations; the level of consumption close to the maximum, there is no signs of decreasing of his loyalty to the company. In this situation, you should not fill customer different stimulating promotions. The optimal strategy in this case will be a moderate promotion of the current models of customer behavior. The company needs to thank this customer in the case (key word — «in the case»). As an incentive or appreciation it is better I use pleasant surprises, not exposing any of the conditions to obtain them.

Second. The situation — «retaliation». The client may get angry if he offered to use the bonuses (to join the loyalty program) after he had an unpleasant incident with the

service of this organization. In this case, before stimulating the client should repay the dissatisfaction with the company (product, service), otherwise, the best deals can only exacerbate a negative reaction. In such a situation the company better to apologize and to charge the offended customer additional bonuses as compensation.

Third. The situation under the conditional name «bad foods customer». There are two types of motivation. The first is based on the internal needs of a person, let's call it «emotional». The second, which is stimulated through rewards, or «rational». The use of rational motivation can neutralize emotional motivation. An example of this approach can be seen in companies that use financial prizes for the “likes” in social networks or subscribe to the company's website. This stimulation leads to the fact that customers no longer «like» posts free of charge, and their expectations of rewards, each time only growing.

There is no and cannot be a single recipe for successful management of customer loyalty. How many companies, so many recipes. Moreover, indeed – how many clients – so many should be recipes loyalty. The only thing that can save the raging imagination of the managers – a common algorithms of actions.

High level of emotional involvement of the client into a particular company does not guarantee regular purchases (visits), but this is the ultimate goal of service organizations. For example, a woman dreams of visiting an expensive salon, however, she uses the services of the budget salon due to financial constraints.

At the same time, the presence of regular visits (purchases) does not guarantee loyalty. Sometimes the customer uses the services (brand) because of the presents of some limits at the moment, life circumstances or, for example, the lack of alternatives. As soon as competitors will offer him the best conditions, the client will reconsider their preferences and move on to another seller (service provider).

This may mean that the emotional and rational components of loyalty as the unity and struggle of opposites are the basis of long-term relationships with customers. The customer is truly loyal, when both components of loyalty are in balance and meet his preferences. A service organization must not only meet customer needs but to give him positive emotions, engaging in the process of creating additional value – trust.

There is another important aspect which cannot be avoided, which is noted in a number of studies suggests that in the basis of fast and stable development of the organization of sphere of service is the loyalty of the staff. Because the team, component of a company is the basis of everything. However, many managers mistakenly believe that the loyalty is the ordinary trustworthiness — that is, formal adherence to internal rules and regulations. Some people include here also common courtesy of the staff. One must not confuse these concepts. Moreover, the loyalty of the employees of the organization in sphere of service should be the goal of any Manager, because this factor can significantly increase productivity, improve the atmosphere in the team and bring many other benefits [6].

How to achieve employee loyalty of the organization? Loyalty of the company — not a formal quality of a person. It means a deep trust and respect, pride in their company. In the ideal case, if the company's mission and its main objectives coincide with the plans of a particular employee on their own future, and resonate with his views on the world as a whole, such loyalty is true and unbreakable. It is worth remembering that the basis of any relationship is trust. As it turned out, not important — a good social package and new furniture in the office, but simple human trust to his neighbor.

That's why, for example, if you don't believe that your employees are able to work efficiently, having access to social networks, and therefore blocking them, then you need to change something. And not necessarily change the employees or staff selection, or

maybe just their attitude towards them. In other matters, all cases are unique and much depends on the business and the leader himself.

Employees should be aware of the purpose of the company split, and informal welcome. Therefore, the important place takes the brand strategy of the organization. You should remind about it employees quite often. Should allow employees to Express their opinions, influence what is happening within the company and really grow your career. An organization where its members have no voting rights and prospects, is turning into a quagmire, where the natural solution is either to escape or to adapt to the musty swamp environment — sit quietly in your seat, sipping coffee and creating only the visibility of the work [8].

What is loyalty in the organization in sphere of service really can only be understood after a long activity in the study of this process. Opportunities should be provided for employees to feel respected by their leaders. It is necessary to encourage initiatives of colleagues, to strengthen corporate culture for a long time. And only after that will form a real team of loyal professionals.

3. Results and Discussion

Thus, loyalty is, first and foremost, a marketing communications tool that allows you to create a company image, attract new clients and partners, worthy to fight with rivals, achieve higher levels of sales, to generate new markets. The range of use of methods of loyalty are diverse and extensive. Design and development of loyalty programs – a promising direction, which allows to increase the competitiveness of service organizations in the market, ultimately to increase the company's profit and lead to new horizons of development.

References

1. Boroday V. A.; Kazmina L. N., The process of commercialization of individual competences in the tourism-based brand // Economy and society. No. 6-1 (19).Saratov, 2015. — P. 378-381.
2. Dudkina O. V.; Minasyan L. A.; A. S. Saga, experience in the use of information and communication technologies in conducting marketing research on the question of rendering of tourist potential of the city of Rostov-na-Donu // Culture and tourism as tools for the enhancement of human potential of the nation. — National Academy of tourism Saint-Petersburg, 2016 — P. 121-128.
3. Grekova G. A., Borovkova A. A., Innovative technologies in education Current issues of psychology and pedagogy in modern conditions // Collection of scientific papers based on the results of international scientific-practical conference. — No. 3. Saint-Petersburg, 2016. — P. 149-152.
4. Dudkina O. V., On the choice of perception of the external environment for the enterprises of sphere of service // Tourism and hospitality industry: modern state and development trends: Materials of the II international scientific-practical conference. 2016. — P. 175-177.
5. Dudkina O. V., Competence approach in human resources management in modern conditions // the Socio - economic and technological problems of development of sphere of services. — Vol. 12. Volume 2. Rostov-on-Don, 2013. — P. 57-60.
6. Dudkina O. V., Landmarks of HR services in modern conditions // Socio - economic and technological problems of development of sphere of services. — Vol. 12. Volume 2. Rostov-on-Don, 2013. — S. 60-63.
7. Dudkina O. V., Personalization of the company's image as a factor of competitive advantages of the company // Economy and society. No. 2-5 (11). Saratov. 2014. P. 1148-1151.
8. Boroday V. A.; Dudkina O. V., Problem field of coaching in Russian business // Economy and society. — № 1-3 (10). Saratov. 2014. — P. 422-425.

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