Managing a Structural Modernization of the Regional Industrial Complex

Mikhail Shchepakin, Eva Khandamova, Viktor Gubin, and Tigran Oganesyan
Kuban State Technological University, Krasnodar, Russia
shchepakin@mail.ru, d_vag@mail.ru, oganesyant@mail.ru, ewa-h@yandex.ru

Abstract. Purpose: The purpose of the study is to develop to manage the structural modernization of the regional industrial complex by activating the deflator of marketing behavior optimism.

Design/Methodology/Approach: During the study, we have employed the methods of theoretical knowledge such as formalization and the hypothetical-deductive method, general-logic methods (analysis and synthesis, induction and deduction, comparison, generalization, integrated approach, simulation). As for the specific-scientific methods, we have used categorial analysis, factor analysis, semantic analysis and the method of expert assessment.

Uniqueness/Value: It is proposed to use a “deflator of marketing behavior optimism” of a manufacturing enterprise in its marketing communication space (MCS) as a tool to manage modernization in the regional industrial complex. Using the value of the marketing behavior optimism index, we will be able to assess the state (quality, nature, scale, importance, etc.) of enterprise’s communications aimed at smart marketing behavior to increase the competitiveness of business enterprises and provide for the efficient restructuring of the regional industrial complex.

Keywords: Regional industrial complex, Structural modernization, Innovative value chains, Marketing behavior phenomenon, Deflator of marketing behavior optimism, Competitiveness

JEL Classification Codes: R32, L60, L5

1 Introduction

The orientation of industrial enterprises in the region towards restructuring and rational structural modernization involves the creation of innovative value chains and balanced distribution of benefits by the initiator of marketing effects on market agents of different levels and different functions. However, in the context of the escalation of contradictions, disagreements, and conflicts between the interacting parties these effects hamper positive changes in the core components of the regional economy and restrain the execution of business development priority tasks. This situation doesn’t allow increasing the gross regional product (GRP) and achieving the desired competitiveness of the regional economy.
Stronger impact of the external market environment and escalation of internal business problems make the authorities and management of various levels to revise their attitude to the development of a mechanism for managing changes when making modernization, which involves various social actors. Decision-making on forging the communication space between interested market actors concerning modernization is associated with building a rational marketing and behavioral spirit and a favorable moral and psychological climate between various market actors. The economic and behavioral motives of parties are intertwined in the marketing and communication space focused on the efficient involvement and use of various resources that make up for the shortage that restrained the transformations and the accumulation of potential for economic growth.

However, market challenges and changing balance of powers in the international community trigger, on the one hand, crises and occurrences in regional economies (and foremost in their industrial segments). On the other hand, they have a significant impact on escalating and unresolved contradictions, disagreements and conflicts in and out of business. On the third hand, ubiquitous digitalization as innovative transformations in the marketing and communication platform insufficiently cover the technical and technological transformations and modernization in the business and various management bodies to ensure economic growth. The one-sided orientation towards digitalization as a cure-all in the situation of backward economic development of the regions slows down economic growth and does not give prerequisites to narrow the production, technological and technical gap between the state of the industry in the national economy and its state in the advanced Western countries and China. The suggested scenario of digitalization, on the one hand, greatly facilitates the communication between people and various bodies (for example, the establishment of multifaceted centers for the provision of state and municipal services), and on the other hand, it paralyzes a man and takes away his ability to think and analyze the things around.

2 Materials and Method

The authors use the findings of theoretical-methodological and scientific-applied research conducted by Richard Thaler (Thaler 2008). He integrates ideas that link together the economic and psychological approaches to decision making, which can be embodied in the behavioral models of individual actors and affect the nature of their actions associated with transformations and changes at the enterprise level and in particular areas of society.

The interweaving of economic, behavioral and psychological components in decision-making broadens the ideas about interdisciplinary behavioral models of parties. Each of them as an individual can be guided by three psychological features when justifying his choice in an economic decision: a) limited rationality; b) the idea of justice; c) the lack of self-control. Comprehending the behavioral responses of a man working in various business agencies (or government bodies, or social institutions), help to understand how market relations will be built between different actors of the economic space. i.e. relations associated with transformations within enterprises, industries, and the business community. We are talking about the engineering of
production and technological cycles and platforms on which the modernization and restructuring of core areas of activity in local and national business bodies depend on. Engineering in industrial complexes has become a key link in the forward movement towards a prosperous society. Behavioral economics should clearly show within the frames of the marketing communication space the action of the mechanism for building relations between manufacturers and consumers, between market partners. It should reflect as a mirror the managerial decisions on the structural modernization of the industrial production, arranging business processes with the initiators of marketing communications in the cycles of their transitional effects on target (interested) audience. At the same time, it should not be confined to the behavior of individuals and their personal features, as stated in Richard Thaler’s works (Thaler 2008). The main object in the behavioral economics is the boundaries of the rationality of marketing and other decisions made by economic agents (bodies of different scales and management levels, households, individuals) regarding the production of products (goods) in need of the population, promotion and purchase, their use and establishment of partnership on mutually beneficial terms. Behavioral economics should broaden their understanding of the actors’ motives manifested in the coordination of their actions when solving development problems and the selection of methods to be followed to achieve socio-economic growth.

Based on the analysis of various materials and research methods, the authors came to the conclusion that effective management of the structural modernization or changes in the relations between the actors of specific economic spaces within some territories and within specific periods is feasible if the marketing and other behavior of actors and their employees are arranged in their interests, benefits and moral-ethical embodiment of their principles and ideals declared by those who take the relevant decisions and dictates the game rules in market exchanges.

3 Theoretical and Methodological Findings

3.1 Analysis of the State of the Problem

The research findings cover the theoretical and methodological content of the analysis, as well as the applied one that describes the response of parties to the regulatory effects of the state and the authorities regarding transformations in the key links of the national economy encouraging employees and business to introduce innovative changes of a different nature.

Bearing in mind the state of the market, the variability of external sanctions and pressure from the West and national government, business enterprises have to adapt to the regulatory effects of the authorities and make decisions on the rearrangement of business processes and their improvement through the transformation of actors’ marketing behavior and staff’s behavioral responses into various directions. On the one hand, towards satisfaction of the demands for higher customization (Zunde 2009), and on the other hand, towards the improvement of business processes, organizational and functional changes, as well as restructuring and modernization, and on the third hand, towards the drastic cut of production costs due to stiffer and higher unfair competition,
as well as the orientation of the business on marketing simulation and aggressiveness in promotion of goods and services to a competitive market.

The renovation of the industrial production is in the hands of large business leaders which restrains the initiatives of small and medium-sized enterprises since they seek easy money and quick expansion of their capital under minimal investment costs. Small and medium-sized business leaders, in turn, are found themselves in the situation of dynamic response to market challenges and retention of competitive positions in regained market niches. Digitalization as a tool to manage growing diverse target audiences put new demands on both the technical and technological components of innovative production chains of consumer values and business management tools. In contrast, the instability of the economy is accompanied by rising motivation-resource contradictions and discords within in business area, as well as between the state and business, society and business, employees and business owners. A communication space aimed at involving actors with life cycles of diverse and multidirectional communications should be adjusted by the business under the assumption that the generated transitional effects of modernization initiator will increase the motivational capacity of the parties involved in the execution of the indicated and planned changes (production-technology, logistic, organization-management, marketing, etc.).

Analysis of motivations among parties to private relations showed the scale of the problem concerning ensuring the economic growth of the national economy. It revealed the flaws in the management of structural modernization of core industries, since the mechanism is poorly supported by the real regulatory measures of the state, business, and employees to change their marketing and other behavior for the benefit of society and residents.

3.2 Analyzing the Perception of the Restructuring by Actors

The Russian economy is passing through structural transformation and modernization in key sectors of the national economy. The driver of these changes is incessant pressure of the West together with sanctions of different scale and nature. Crisis events in core sectors of the economy lead to a decrease in its growth rates and economic performances by 4% on average. And this situation affects the population’s income and consumption of vital goods and services by 8–10% on average. The final consumption by market actors as the most important index of their well-being has been declining in recent years, and this figure made up 10.2% in 2016 (Aganbegyan 2019).

Russia is exposed to economic pressure from the West and the United States due to imposed sanctions, as well as the aggravation of the economic crisis in key sectors of the economy. Economic performances of the Russian economy dropped by 4% on average, at the same time income and consumption of the population – by 8–10%. The final consumption of households as the main index of the population’s well-being decreased by 10.2% (Aganbegyan 2019).

Negative trends in the forward movement of Russia towards a social state are connected with the restrain and inhibition of structural modernization which the competitive positions of small and medium-sized enterprises hinge on (Bodrunov and Porokhovsky 2015; Sigida and Lepina 2019). Despite efforts of businessmen to alleviate crisis events, the economic situation in Russia has changed little, and the
problems of import substitution have not been resolved to the great extent (without taking into account some progress in the agricultural sector).

The real state of transformations in the Russian economy and the inadequate requirements for the pace of structural modernization in the country’s interests leads to the following negative displays:

a) lower competence of employees expressed in their misunderstanding of the processes that occur in the minds of customers (partners, various market agents, consumers, etc.) in the marketing communication spaces formed by the initiators of the transformations. In particular, this takes place due to the transition to ubiquitous digitalization covering the whole range of various types of changes and transformations (production-technical, technological, organizational, marketing, etc.);

b) neglected impact of current and future domestic technical and technological developments on overcoming the gap in the qualitative economic growth of the country. This situation is explained by the commitment of business and government to the introduction and support of borrowed developments under the preservation of their property rights;

c) underestimated influence of motivation-communication and behavioral factors on prerequisites for enhancement of business enterprises’ competitiveness. The internal state of the business environment and staff of business bodies that depend on the staff’s motivation to establish appropriate communication and fruitful exercise of their innovative capacity in the results of the above transformations is not regarded when developing modernization and restructuring programs for business.

Manufacturing enterprises, as well as small and medium-sized businesses that develop their strategies under the tasks of industrial structural modernization, ignore the action of those factors that change the internal state of the actors and affect their performance in a changing market. Such factors can include digitalization in various sectors and market segments, business responsiveness to simmering contradictions of a different nature and not always as appropriate to the requirements and demands. Disregarding the need to act and display own marketing behavior, correlating it with own identity in the business medium and according to the resources and opportunities for the establishment of sound communication with different actors of the market space leads to negative consequences. Marketing strategies of industrial entities are characterized by unbalanced management that alters the pattern of structural interactions. Instable internal communications and inconsistent objectives of economic growth shaken the competitive position of the business and they do not lay the groundwork for structural changes in industry segments.

On a global scale, enterprises rely on innovative philosophies and theories that can help them achieve growth, competitiveness, and desired labor productivity (Day 2008; Kruger 2017). The economic toolkit in the development of models for the management of structural and other changes should be adjusted and filled with specific substantive content in relation to the conditions of an unstable economy and undermanaged internal contradictions in business. The engagement of the marketing imitation in the creation of innovative value chains should be accompanied by changing a marketing behavior and setting distinct borderlines of the marketing identity for each part of the regional industrial complex.
The perception of occurring changes in society, a system of economic and social relations, and the moral spirit of people evoke enthusiasm or disappointment in the minds of a working person. For example, an assessment of economic optimism by Russians showed the following results. Only 17% of the population see positive changes in the economy related to the progress of the restructuring and modernization in various fields of society. Thirty-nine percent believe that things are getting worse. A survey of the Public Opinion Foundation states the negative attitude of highly-educated people and wealthy residents. Less than half of the surveyed (45%) recognize the current situation in the economy satisfactory, 37% answered “it is bad”, and only 8% were undecided. Such an assessment of the state of the economy and modernization speaks about that the state, business, and society must revise the attitude to the tools that should be used and adapted to the goals and objectives of transformation and restructuring of the industrial-production field in particular territories (regions) to accumulate the required potential that would ensure the desired rate of economic growth and cement the socio-economic path of development.

3.3 Discussing Possible Approaches to the Resolution of the Problem on Structural Modernization of Regional Industrial Segment

Business evolution requires new thinking and managerial techniques (methods, skills) (Gibson et al. 2000) when making up business development programs, delivering structural modernizations and restructuring the production and technological platform of the industrial sector. It becomes important to reconsider ideas about the content of restructuring and modernization, organizational and cultural components in the management system. As far as new features in the economic nature of the above categories are distinguished, ideas about processes and phenomena that disrupt the connections between the system parts and shake its competitive position in a changing market are reassessed.

Not bolstering business credibility in the eyes of the market and potential partners and neglecting the opinion and inner state of human resources, the owners of capital and resources lose the image, thereby weakening the competitive position of the national economy in general.

The owners of business enterprises (and especially in the core sectors of the country’s economy) should appeal the consciousness and ability of their human resources to kick-start exchange in an unstable economic system. It is the human resources that initiate positive structural and other transformations (getting such capacity under the pressure of regulatory marketing effects). Changing the internal state of the business makes possible to identify and cement the positive marketing identity of each actor for the effective management of business processes in a changing market. The desired vector in the management of the various planned transformations and business processes can be fixed by changing the state of the internal environments at the enterprises. These changes should cover the whole relationships between staff of business entities and owners of enterprises (represented by top managers).

Communications built between various agents of the market and within the business reflect their contradiction and multivariance when it comes to forms, procedures, motivations, and reaching agreements on the distribution of financial gains and benefits.
between them. The structural links of different management levels participate to a different extent in creating consumer values and developing innovative technical-technological and other chains for the production of goods and the provision of services. Particular attention should be paid to the heterogeneity of the functional and executive apparatus when executing measures on the innovation of business marketing and communication platforms and forging internal links of business enterprises. The relations arising between sales and production units, production and innovation departments, management bodies and other intermediaries, servicing and supporting organizations are heterogeneous and multidirectional, which affect the nature of decision-making and effectiveness of offers within developed marketing and other behavior. Endeavors to integrate managerial effects by different market actors with respect to each participant in market and intra-company communications are aimed at enhancing the business competitiveness and gaining a stable market position in a changing marketing space under higher resource constraints.

The direction of marketing behavior of the communication participants is contingent, first of all, on two key factors: a) the competitive position of the enterprise in marketing communication space transformed by him (for restructuring purposes); b) available resource pool for the accomplishment of innovative projects and qualitative characteristics of resources involved in the transformations (foremost, the range of developments in the enterprise’s innovative portfolio; the present image, supported by the developed marketing communication network; the creative component of corporate attributes; the innovation of human resources motivated to strengthen the position of the business in an unstable market, etc.).

The roles, powers, and functions of different bodies at the level of entities, large corporate structures, and subordinate authorities are interconnected in such a way that their profile and character are adjusted to the goals of structural and other transformations of clear social orientation and civic-humanitarian importance. The restrained development of the socio-economic system and its industrial and production segments is primarily explained by the lack of sound business management and social development models relying on an anthropocentric approach to communications and taking a man creating and materializing different innovative transformations as a key figure.

Changing the marketing behavior of business enterprises and correlating it with the stages of both life cycles (from entry into the market to the recession) of the market actors (Shumpeter 1939; Weber 1954) and the stages of the communication life cycles built in their marketing and communication spaces, one can lay conditions for efficient use of resources. The latter integrates resource components of different quality and origin.

A manufacturer of goods and services transforming production value chains and intensifying marketing effects on other market actors (consumers, investors, intermediaries, and other market agents) rearrange his marketing behavior to hold the market niche. But industrial business hardly will manage to ensure its competitiveness without state support in delivering programs on the modernization of structural proportions between industry segments of the system.

The innovation of a manufacturer is already visible at the stage of developing a balanced marketing communication space that engages different market actors into relations based on the trust and productive cooperation of the business (Shchepak in and Krivosheyeva 2015; Shchepak in et al. 2018). The behavioral responses of the regional
industrial complex (RIC) should be tested for the communication penetration of decisions made. Moreover, it concerns the decisions that are at the upper tiers of the authority and far from business entities and human resources that are put into action from the top for the successful completion of the modernization and restructuring programs.

It should be borne in mind that in the course of structural and other modernization, the motivational penetration of elements for update and transformations in key links of value chains should be activated, as well as the communication penetration of actors for useful cooperation to mitigate negative factors in an unstable market should be broadened. An example of the unjustified (or mistaken) efforts of federal officials is a plan to introduce a four-day working week in Russia, which will consolidate the negative responses of employees to measures violating their interests and result in stiffer contradictions in the business medium. According to a survey by a research agency of the HeadHunter portal, entrepreneurs believe that labor productivity will be falling, labor discipline will be worsening, the number of overhours will increasing and the salary will be declining while the intensity of labor will be rising. Only 12% of employers are ready to pass to this schedule, but 76% do not recognize such a proposition as appropriate.

A business cannot succeed in modernization without a) initiatives of employees focusing their inner potential (primarily innovative, professional, creative, motivational, behavioral and other) to innovative changes; b) the combination of available resources; c) consistent establishment of communications within a business and between business bodies of various industries and fields, which is an indispensable condition of a synergistic approach for the integration of actors in the shaped communication spaces; d) scientific groundwork in the theoretical-methodological and instrument-procedural provision of modernization management in unstable economies, when the economic nature of processes (and especially communications) is interpreted from a technocratic standpoint when communication is built with disregard to the internal state of the elements in the chain of relations of local economic bodies.

The science-based vision of the enterprise as an object with mixed tangible resources (Kleiner 2008) should be certainly complemented by an understanding of the hierarchy of intangible knowledge, processes and accompanying phenomena formalized by human resources in the forms of new knowledge (Conner and Prahalad 1996). And this knowledge should be aimed at creating new value chains that integrate the experience, competencies, various knowledge, and understanding of the socio-political vector of business and social development. The integration of different standpoints allows regarding the system structure of the enterprise from the perspective of the nature of communications being developed and the theory of marketing communication space worked out earlier (Khandamova 2013). We move beyond the understanding of enterprise’s economic nature as an activator of consumer behavior and broader interpret the enterprise as a communication process that exhibits the relations between the parties and periods of their life cycles (we mean ones of the consumer, manufacturer, goods offered and communications developed) (Shchepakin and Gubin 2019, p. 358). The state of the socio-economic system is clearly expressed during recession and crises that destroy and slow down the establishment of communication ties, as well as reduce their effectiveness under resource constraints and motivational disappointments of the
developers of innovative solutions and products. Crises shut down not only economic activity (Greenberg 2015) and behavioral reasonableness in developing a marketing space, but also undermine the system of interpersonal and inter-actor relations. The undermined relations destroy the moral and ethical foundation of communication and distort the principles, regulations, rules, and traditions developed by civilized society. As a result, the scientific segment of the market is sidelined, financing of innovative developments is outsourced to the initiative groups of businessmen and some individuals, investors lose the incentive to attract investments in the establishment of new industries with a long return-on-investment period. The activity of financial organizations aimed rather at mitigating the risk of loan default than achieving the efficient modernization of core economic sectors is sharply rising.

This situation is resulting in a slowdown of structural modernization of the industrial production and the restructuring of enterprises in the core sectors even before the start of transformations. Management of marketing behavior turns into leverage that weakens crisis events and makes sense of actors’ and staff’s influences. This sense can be embodied in development programs aimed at the social vector of transformations under way (Schepakin 2019, pp. 109–110).

The manufacturer gasps for air under tax burden and can’t invest money in the establishment of new industries and increase their share in the structure of the national economy. It would be reasonable to exempt business investments from profit taxes and provide state financial support for newly established industrial complexes. Promotion of the manufacturing enterprises would create new opportunities to meet the consumer demand of the population and bring it to the parameters of the real state of the market space.

The decline in the incomes of the working population leads to a weak “transformation of savings” into efficient business investments (Lvov and Porshnev 2002). Namely, “ramp-up of output, which involves investments by both the state and private investors in human resources, infrastructure, and technology” can lay a base for structural modernization of most sectors of the Russian economy (Rubini 2019). However, the unfavorable economic situation in Russia caused by political and geopolitical reasons and aggravated by disadvantageous measures of state regulation leads to a slowdown of economic growth and retardation of decisions on the execution of the structural modernization program for the industrial sector. Investment in fixed assets is spiraling downward due to serious leaks of funds into an offshore zone. Russian business should reconsider its marketing behavior in industrial and consumer markets, regardless of deteriorating market conditions and the weak response of authorities to the demands of a changing market. It is required to develop adaptive mechanisms for resource management that would meet the interests of different market actors (manufacturers, consumers, employees in various fields of activity, society and the state as a defender of the population’s interests). It’s impossible to increase the motivational penetration of the business and its employees for the socially important changes without the intensification of innovation and marketing-communication activities of all parties interested in the development of market exchanges, as well as without the regulatory and managerial adaptation of authorities at all tiers to the goals of structural transformation and industrial-technological transformations. The business should feel the direction of the wind of change and employees should switch their inner
state to make the changes reasonable. The changes that would transform the state, quality, and scale of communication ties within the business medium and between market agents aiming their efforts at creation of greater “consumer value of the product” (Day 2008). Incorporation forms of business should not weaken the positions of enterprises and their elements. Changes should touch all business components that do not meet the demands of modernization transformations. The marketing imitation mechanism should initiate organizational changes and optimization of management subsystems by filling them with the new content of means of influences on the consumer and other market agents). Marketing injections should be focused on the positive adaptation of the business both to the market demands and needs of employees and societies. The spirit of human resources and business should be targeted at incrementation of marketing behavior optimism and enhanced by the efforts of the state and its social institutions.

4 Applied Scientific Findings

4.1 The Index of Marketing Behavior Optimism

Behavioral economics acts in the marketing in such a way that it shows the quantitative influence of social, cognitive, emotional and other factors on the economic behavior of actors and their decisions on the establishment of relations with interested market agents. It displays the impact of various factors on market variables (prices, profits, resource allocation, sales, and other benefits), thereby adjusting the behavioral responses of different participants within their resource capabilities. In the context of economic instability and obscured crisis phenomena, it becomes important for the business to introduce an index of expediency of changes in the actors’ behavior under the influence of a particular marketing pressure by expanding the range of marketing tools that meet the challenges and demands of the market environment.

In view of an analytical approach to the essence of current marketing and managerial tools, the authors suggest the introduction of a term “marketing behavior optimism deflator” (MBOD) of a manufacturing enterprise in its marketing communication space (MCS). With the help of this tool, one can choose the path of modernization and other changes when executing business development programs. MBOD is written (formula) as the ratio between the cost of goods produced and sold at real price levels under use of innovative marketing tools (including ones developed on the digital economy platform) to the cost of goods sold that are promoted to the market through conventional marketing communications at prices of some reference year.

For taking into account the impact of innovative marketing tools on the marketing behavior of an actor, it is necessary to introduce an index of marketing behavior optimism, which can be represented as follows.

\[ I_{MBO} = \frac{V_{инн}}{V_p} \]
where
I_{MBO} is the Index of marketing behavior optimism of actor in his MCS;
V_{nmi} is the volume of goods sold (services provided) by the actor initiating the
development of a marketing communication space for the accounting period (year)
when using innovative marketing tools designed in the course of modernization and
other transformations;
V_{p} is the volume of goods sold (services provided) for the base period (year) before
changing the entirety of marketing tools to influence consumers and market partners
that have been used until structural and other transformations.

We mean by an index in behavioral marketing a specific performance indicating the
changes in a complex behavioral phenomenon in time and space, the elements of which
are not directly summed up, but presented for some period.

We have investigated the MBO index using the example of perfumery and cosmetic
products in the Krasnodar Territory. The competitive market for perfumes and cos-
metics products in the Krasnodar Territory is represented by the following enterprises:
Avanta OAO, Svoboda OAO KO, Nevskaya Kosmetika OAO, PKK Vesna OAO,
Contsern Kalina OAO, and Companiya Klever OOO. For calculating the MPO index,
we have used the data on the gross revenues of enterprises (Table 1).

Table 1. MBO index for perfumes and cosmetics enterprises (for example, the Krasnodar
Territory as of January 1st, 2020)

| Enterprise           | Gross revenue (base period – V_{p}), thousand rubles | Gross revenue (accounting period – V_{nmi}), thousand rubles | I_{MBO}, net of price rise | Price rise index in the accounting period against the base one | I_{MBO}, price rise included |
|----------------------|------------------------------------------------------|--------------------------------------------------------------|---------------------------|-----------------------------------------------------------------|----------------------------|
| Avanta OAO           | 535,253.0                                            | 729,734.0                                                   | 1.36                      | 1.20                                                            | 1.06                       |
| Nevskaya Kosmetika OAO | 10,410,215.0                                        | 12,737,595.0                                               | 1.22                      | 1.16                                                            | 1.02                       |
| PKK Vesna OAO        | 2,622,063.0                                          | 3,378,922.0                                               | 1.29                      | 1.13                                                            | 1.09                       |
| Contsern Kalina OAO  | 14,058,166.0                                         | 15,324,490.0                                             | 1.09                      | 1.15                                                            | 0.93                       |
| Svoboda OAO KO       | 15,51,607.0                                          | 1,955,025.0                                               | 1.26                      | 1.15                                                            | 1.06                       |
| Kompaniya Klever OOO | 2,769,324.0                                          | 3,263,220.0                                               | 1.18                      | 1.14                                                            | 1.02                       |

Source: compiled by the author.
It should be noted that $V_p$ is the base period (year), i.e. the volume of goods sold using conventional marketing communications for delivery of transformations, and $V_{innov}$ is the accounting period (year), i.e. the volume of goods sold using innovative marketing tools after delivery of transformations.

The application of innovative marketing tools changes the MBO index of actors (manufacturers). The growth of the MBO index lay the conditions for the enterprise to expand the market for the sale of products and change its marketing behavior in the competitive market.

4.2 The Model for Management of Structural Modernization in the Regional Industrial Complex

The MBO deflator renders the state of the market environment, within which (space and time frames) the marketing communication space of actor is developed. It is a measure of the decisions made by a business to formalize its marketing behavior in the specific conditions of the economic and social state of the system (whether local or the national economic system). The deflator affects the selection of the communications that reflect the stages of their life cycles, the quality, and composition of the resource components of the enterprise. The deflator acts as an indicator of business opportunities, on the one hand, to meet the consumers’ demands, and on the other hand, to answer the question about the sufficiency of the resource capabilities of market agents to enter into mutually beneficial market relations with the initiator of transformations in his marketing and communication space. The Communication Life Cycle (CLC) rejects the tools that do not meet the time imperatives, the resource potential of the business, the state tasks concerning the transformation of the manufacturing sector (Fig. 1).

Designations: MCS is a marketing communication field; a is a period of unstable motivation; b is growing motivation to the establishment of communication; 1 is an integrative potential of RIC; 2 is actors of a market environment, RP is a regional product; MBO is marketing behavior optimism.

Smart market relations most often serve as a product of the marketing and communication actions of the initiator at the right time and in the right economic space. At CLC stages (from I to VII), the actor oriented at the establishment of partnerships (most often it’s the initiator of communications) makes up the essential contents of information signals, arranges the most acceptable channels for their transmission with regard to the impact of backward signals and the action of noises.

Within the developed model, the “distributor of communications (DC) of the business enterprise” is of fundamental semantic and organizational-technical importance.

It is this distributor that integrates the incoming signals from the actors of the marketing network and management levels, bodies-innovation developers, investors, and other related market agents. It accumulates the influencing tools, differentiates them by the directions and nature of outward signals, and then sends these signals to waiting participants of the marketing communication space. The smarter the differentiation of signal impulses is, the more targeted will be the impact of the initiator of the transformations on the market agent interested in the partnership.
Accumulated content of the messages sent in DC affects the outward signals and changes the internal state of the business. This state is changing when the human resources are mobilized to carry out modernization and smooth current tensions and disagreements.

Fig. 1. The model for management of the structural modernization in the regional industrial complex amidst an intensification of the motivational-behavioral factor in respect to market actors.
Allocating the funds for marketing communications amidst market downturns, unstable economic growth (due to systemic and non-systemic crisis events), poorly predicted fluctuations in oil prices (for example, due to coronavirus in China and other countries, etc.) there is a need to involve a mechanism of marketing volatility. The latter means the variability of prices (costs) for marketing impact tools on target audiences (investors, consumers, resource providers, business owners, etc.) applied in certain periods and within specific marketing and communication spaces. Marketing volatility displays significant fluctuations in prices for various types of goods and services, as well as tariffs in various fields of economic and other activities. Such volatility leads to unreasonable and sometimes unpredictable behavior of market agents who suppress the weaker actors or drive them from the occupied space, or try to enhance their competitiveness (by simulating positive or negative actions in relation to partners, contractors, and other societies).

This is unfeasible without appropriate respective modernization transformations. Prerequisites for the economy to reach new frontiers of the competitiveness are laid exactly when developing programs of structural and other modernization. The development issues of business agents and particular areas of activity have started to be addressed. First of all, this is achieved by changing the marketing behavior of business agents within the frames of real time and the real marketing and communication space. Michael Becker proved this possibility in his theory and argued that “the recognition and assumption of the need to gain a better understanding of the way the (marketing) system works” stresses the need to “develop an efficient theory of exchange” (Baker 1975; 1983; 1995). But M. Becker disregarded the fact that an unstable market poses a myriad of problems related to marketing simulation and production of simulacra that do not meet the demands and requests of consumers and society, which may arise in connection to the modernization of the industrial and production area.

Assessing the marketing behavior of actors in the context of industrial modernization, we see important to introduce a term “reorganization of entity’s marketing behavior (MBE)” to designate a set of measures aimed at changing marketing behavior responses (and marketing behavior as such) of business agents, their links and elements on the spot of restructuring changes within space and time frames, which are defined by the authorities, the state or the business to be adapted to crises and instability. Negative processes should be overcome by cementing the competitive position of a business, the economic system as a whole and the state due to innovative changes of a different nature made on a modernization basis.

The complex of measures under development can be aimed at: a) restructuring of internal and external relations; b) tackling debt retirement and building new business processes with new parties; c) upgrading production links, marketing and communication platforms, broadening the stock and product line groups of goods of new quality and purpose; d) optimizing the resource potential of a business, human resources, and the government’s opportunity to assist the resolution of conflicts, raising the efficiency of managerial influences on target groups and functional tools for implementation of decisions, mitigating losses and preventing damage to society and the state, etc.

*Reorganization (rehabilitation)* of the marketing activity of actor presupposes the introduction of new marketing tools for management of business performance,
reflecting the demands of adaptive marketing behavior to changing market conditions to be met by various actors.

For example, a) referring marketing injections to the components of the marketing cycle; b) the utilization of various forms of positive marketing imitation (Shchepakin 2018; Shchepakin et al. 2019; Shchepakin and Handamova 2016; Shchepakin and Handamova 2015) in changing market states of system elements and links; c) the introduction of a new marketing toolkit, namely a marketing protector, a marketing damper and a marketing implant to solve the development issues of the regional industry and manage the competitive position of the business (in terms of individual enterprises of the industrial complex) amidst newly arising market challenges (Shchepakin et al. 2017a; Shchepakin et al. 2017b; Shchepakin and Khandamova 2015). The reorganization of marketing activity poses to the owners and top managers the tasks that should be solved by market actors in order to strike a balance of interests and gain mutual benefits. Therefore, they should restructure their marketing behavior (including the actions of staff). The changes predetermine a successful modernization and achievement of reasonable structural proportions in the RIC. Changing organizational and functional relations within the business and with foreign market partners allows initiating the development and delivery of innovations and new projects concerning technological and other cycles in the production and commercial activities of the business. Bettering state influences on market actors, including consumers, to their own benefit, raises the trust of market partners to modernization programs and the government. The random actions of government bodies, business, and population without state control cause discontent with transformations and aggression and instigates negative simulation behavior in a market environment. The communications and behavior of actors are getting chaotic, the motivational penetration of people for innovations in economic and social life is sharply declining. In this situation, the actor faces marketing and social bifurcation, which hinders structural and other transformations.

4.3 The Impact of Staff Penetration from Various Perspectives on the Behavioral Optimism of Actors

The nature of the marketing behavior in the communication space is multi-faceted. It directly and indirectly depends on the factors, such as the motivational and communication penetration of entities (and their staff) for the execution of modernization and restructuring in operating and developing business, as well as behavioral optimism for unlocking innovative potential and engaging unutilized reserves to cement competitive positions of the business in a changing market medium.

We attained the following results:

- motivational penetration of staff for delivery of various transformations (technical, technological, structural and others) made up 28%;
- communication penetration of entities (and their staff) for the establishment of productive relationships with various market agents for the accomplishment of modernization and restructuring programs is 36%;
behavioral optimism of entities (and their staff) to a higher volume of modernization and restructuring transformations in the industrial sector is 21%.

The findings indicate that contradictory relations have established in the national economic space (between the state and business, business and employees, bodies of the business environment, employees and state, state and society). They are caused by discords, disagreements, and conflicts, as well as risks and threats arising from outside and existing within the socio-economic system. The weaker influence of contradictions and risks on transformations in the industrial sector under positive interference of the government can enhance the motivational and communication penetration of entities (and their staff) for large-scale changes in the production, technological and economic areas of society. Besides, behavioral optimism will be translated into innovative projects under development and meaningful initiatives to unlock all kinds of system potentials for accelerated economic growth and the establishment of a humane society.

We have broadened the understanding of turbulent marketing. The term reveals its economic nature, which is characterized by the random and chaotic split of values, the inappropriate structure of marketing links and elements (in particular, restructuring and modernization of business is carried out with out-of-date tools, poorly-defined proportions between entities and elements industrial complex in various terms, the establishment of unbalanced relations between various parties in terms of resources and benefits, distortions within the marketing mix, the destruction of staff incentive systems and disregard to the promotion of goods in view of their real properties, wrong choice of communication tools of influence leaving without attention the life cycles of consumers, goods, communications, etc.).

Such chaotic marketing is characterized by growing entropy in the development of market behavior when disorder and chaos propel various parties in the generation of behavioral responses of entities to any external stimuli. The following findings should be recognized: a) the development of a deflator of marketing behavior optimism for an industrial enterprise; its correlation with the life cycles of communications (CLC) of various market agents and their resources for active participation in modernization in the marketing communications space of the initiator; b) the identified impact of motivational-communication and behavioral factors on structural modernization and restructuring of the production and technology platform within the development of innovative marketing leverage for interested market actors; c) channels for the attraction of market partners are accumulated in the distributor of communications and their involvement in the resolution of business development problems is contingent on CLC stages of various market actors; d) recommendations to choose acceptable (resource-efficient) forms and scopes of marketing imitation (positively directed) in turbulent marketing within the marketing communication space of the regional industrial complex to maintain competitive positions through structural modernization of the technical and technological platform of the regional industrial sector.
5 Conclusion

1. The need for delivery of business development program based on structural modernization and restructuring of the regional industrial complex (RIC) is associated with the advance of their management with a focus on:
   a) changing the marketing behavior of entities if the prerequisites for smoothing contradictions and disagreements of a different nature are laid;
   b) the state of the market environment exposed to stronger pressure from the West and unbalanced regulatory influence of the state from the point of parties’ interests that cause negative processes in the internal state of the business and its constituents;
   c) oscillations of staff motivations related to their interest in modernization and development of an effective business in terms of unresolved contradictions;
   d) ambiguous manifestation of the communication factor under resource constraints and ill-defined goals in the socio-economic development when creating conditions for truly supported humanization of socio-economic relations;
   e) accumulation of integrative potential of the RIC by means of innovative value chains, efficient use of available resources and ones involved in the economic turnover, wider application of marketing imitation in adaptation processes, as well as marketing injections in development of efficient management decisions on restructuring.

2. In the face of modern market challenges and threats, the business processes can be simulated on new production and technology platform that reasonably uses developing marketing tools (including, economic digitalization tools) to engage a wide range of market actors seeking stronger competitiveness and positive marketing identification when shaping balanced marketing-communications spaces under resource constraints and aggravation of contradictions.

3. The key factor in the growth of the national economy is structural modernization and restructuring of regional industrial complexes and tools for getting the desired result are management models based on incrementation of entities’ motivation for activation (and integration) of their potentials to cement competitive positions in an unstable market environment. Delayed response to influences from the state, business, and society regarding modernization restrains business process restructuring, raises market pressure, widens the gap in the interests of various market actors, scales up contradictions between different social classes.

4. CLC as a tool for the management of communication between actors in the marketing communication spaces outlines the range of opportunities provided by the content of applications, the volume of modulation signals, methods and forms of message delivery. The communication life cycle reflects the variability of the motivational capacity of modulating communication effects. It displays the communication development costs and estimates the potential of resource provision of the communication cycle. Employing certain methods and forms of impact, business is built in the marketing imitation model, relying on the marketing identity of each market party, the stability of their motivational penetration for modernization in particular and innovations in different components of the business’ and society’s
Performance and development in general. The lack of initiative in business is no prospects for positive changes in the economy and the movement of society along the given social development path. The interaction between enterprises of the regional industrial complex when working out business development programs through structural modernization and business process restructuring means getting a unanimous opinion on the use of resources involved in economic turnover by the entities, fair distribution of the benefits to mitigate inner business contradictions causing the gap in interests of the state, business, and society.

5. The suggested MBO deflator of the industrial enterprise integrates the relationships between many participants in market impacts. It allows shaping the marketing behavior of actors on the new theoretical and methodological basis. It integrates new ideas about the economic nature of restructuring and influencing factors. We have identified the relationship between the stages of the communication life cycles form the perspective of interacting parties, have proposed the methods for resolution of motivational-resource contradictions in an unstable economy, which gives reason to expect the growth of communication penetration of entities and individuals for innovative-based modernization. The key factor is the marketing identity of entities and marketing volatility that can point at the choice to be made by the state, business and population to lay conditions for higher competitiveness of the economic entities making up the regional industrial complex.

6 Further Lines of Research

The identification of socio-economic relations reflecting the essence of the MBO deflator allows developing an efficient model to manage the marketing behavior of business entities. The management is focused on the expansion of marketing tools range, the establishment of conditions for structural modernization and qualitative transformation of the production platform in the industrial sector of some territories. Mobilization of business resources for the development of marketing communications spaces with the balance of benefits and interests in the context of different challenges (requirements of the state and society, consumer demands and interests of business entities), as well as due attention to contradictions, disagreements, and conflicts in business and society, can indeed weaken crisis events and contribute to the potential for accelerated economic growth.

Acknowledgments. The article has been written under support of the Russian Foundation for Basic Research and Administration of the Krasnodar Territory in framework of the research project 19-410-230016 p_a.
References

Thaler, R.: Improving Decisions about Health, Wealth, and Happiness. Yale University Press, Yale (2008)
Zunde, V.: Concept and Algorithmized Model for the Development of Integrated Marketing Communication System in Russian Companies: Author’s Abstract by Doctor of Science, Economics (Habilitation Doctorate). Science, Rostov-on-Don (2009)
Aganbegyan, A.: Who suffered the most in the crisis – population or business? (2019). https://aif.ru/money/opinion/gustoy_navar_kto_bolshe_postradal_v_krizis_naselenie_ili_biznes. Accessed 20 Dec 2019
Bordunov, A., Porokhovskiy, A.: The Economic System of Modern Russia: Anatomy of the Present Time and Alternatives of the Future. Lenand, Moscow (2015)
Sigida A., Lepina M.: Is the real crisis yet to come? (2019). https://mirnov.ru/ekonomika/nastojaschii-krizis-esche-vperedi.html. Accessed 20 Dec 2019
Day, J.S.: Market Oriented Organization: How to Understand, Attract and Retain Customers. Eksmo, Moscow (2008)
Kruger, D.: Application of business reengineering as a process improvement tool: a case study. In: Proceedings of the Portland International Conference on Management of Engineering and Technology: Technology Management for the Interconnected World. Eksmo, Moscow (2017)
Gibson, J.L.: Organizations: Behavior, Structure, Processes. INFRA-M, Moscow (2000)
Schumpeter, J.: Business Cycles: A Theoretical, Historical & Statistical Analysis of the Capital Process. McGraw Hill, New York (1939)
Weber, M.: Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest and the Business Cycle. The University of Illinois at Urbana-Champaign’s Academy for Entrepreneurial Leadership, Historical Research Reference in Entrepreneurship. McGraw Hill, New York (1954)
Shchepakin, M.B., Krivosheyeva, E.V.: Managing the growth of business enterprise’s competitiveness in the changing market environment. Ekaterinburg Int. Res. J. 9(40), 81–84 (2015)
Shchepakin, M.B., Khandamova, E.F., Krivosheeva, E.V., Kuznetsova, O.A., Kurenova, D.G.: Managing the marketing behavior of manufacturing enterprise by “competitiveness” factor. Espacios 39(31), 18–20 (2018)
Kleiner, G.B.: Enterprise Strategy. Publishing House “Delo” of National Economy Academy, Moscow (2008)
Conner, K.R., Prahalad, C.K.: A resource-based theory of the firm: knowledge versus opportunism. Organ. Sci. 7(5), 39–48 (1996)
Khandamova, E.F.: Marketing Communication Field of an Enterprise: Establishment and Development: Monograph. Publishing House South, Krasnodar, Russia (2013)
Shchepakin, M.B., Gubin, V.A.: Resolution of conflicts is a source of ensuring an equilibrium at an unstable enterprise in the socio-economic system. Econ. Relat. 9(1), 353–372 (2019)
Greenberg, R.: Our society is completely at a loss. Eighty percent of people hardly survive. Sobesednik 49(1), 8 (2015)
Shchepakin, M.B.: Managing the anti-crisis marketing behavior of an actor in the scenario of a social development path chosen. Bull. Astrakhan State Tech. Univ. Astrakhan Ser. Econ. 2(1), 101–120 (2019)
L’vov, D.S., Porshnev, A.G.: Management of socio-economic development in Russia: concepts, goals, mechanisms. The State University of Management, Department of Economics of the Russian Academy of Sciences. Publishing House “Economics” ZAO, Moscow (2002)
Roubini, N.V.: Russia should promote the private sector (2019). https://mirnov.ru/ekonomika/avtoritetsnoe-mnenie-v-rossii-nuzhno-stimulirovat-chastnyi-sektor.html. Accessed 20 Dec 2019

Baker, M.: Marketing Theory and Practice. Macmillan Press, London (1995)

Shchepakin, M.B., Khandamova, E.F.: Marketing imitation as a tool for a business agent to influence consumer behavior. Econ. Bus. 1–1(66–1), 1090–1097 (2016)

Shchepakin, M.B., Khandamova, E.F.: Transition of the marketing impact of a business agent on the actors of the marketing communication space. Econ. Bus. 4(57–2), 912–915 (2015)

Shchepakin, M.B., Krivosheeva, E.V., Eremeev, A.V.: Marketing protector is a tool for business to keep a competitive position in the market. Bull. Astrakhan State Tech. Univ. Astrakhan Ser. Econ. 3(1), 16–35 (2017a)

Shchepakin, M.B., Erok, A.D., Oblogin, M.V.: Marketing damper is a tool for managing the business competitive position. Sci. Eur. 11–3(11), 98–110 (2017b)

Shchepakin, M.B., Khandamova, E.F., Krivosheeva, E.V., Ivanov, D.N.: Marketing implant as a tool for managing business development amidst aggravation of different conflicts. Issues Econ. Manage. 8(4), 80–98 (2017)