

Some methodological foundation of an innovation theory

L.N. Safiullin, A.M. Shigabieva, V.M. Mazitov, U.A. Saipullaev

Kazan (Volga region) Federal University, Kremlyovskaya Street 18, Kazan, 420008, Republic of Tatarstan, Russian Federation

Abstract. Market economy in the era of post-industrial areas of development the main focus in order to achieve the planned economic growth, it is advisable puts on the concept of "innovation", taking as a basis for the introduction of new human activities constituent elements that contribute to improving the resulting total of all of society as a whole.

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Introduction

The market economy during the era of post-industrial direction of its development, for achievement of the planned indicators of economic growth, expediently puts main accent on the concept "innovation", assuming as a basis the introduction of new components of elements which promote improvement of a resultant amount of all activity of society as a whole.

Economists K.R. MacConnell and S. L. Bryu identify "innovation" and "introduction" and accept within these concepts, first of all, a new product, its production, new production method or a new form of the organization of business [1]. These scientists considered that only the large companies are capable to generate and realize breakthrough innovations, in view of existence sufficient resource base, unlike small companies. F. Kotler, unlike the previous understanding, associates innovation as idea, goods or technology, that already passed through production in mass volume, and released in the market. The buyer, getting an innovation, accepts it as absolutely new, unlike the previous samples, with properties not used earlier, and unique characteristics [2, 3].

History

In 1911 Y. Shumpeter introduced the concepts "introduction" and "innovation" for the first time. For it the introduction is a knowledge in the technological process, new forms of the industrial organizations, application in practice of new products within a production cycle [4]. In turn, innovations it is defined as the new scientific and organizational combination of production factors motivated with enterprise spirit [5, 6]. The businessman became key object of innovative activity.

Y. Shumpeter defined some types of changes, characteristic for the category "innovation".

Table 1. Types of changes, characteristic for the category "innovation"

Type of change	Result of change
1-st	New equipment, technology or way of production
2-nd	Production with unique qualities
3-rd	Improvement of organizational cycle, ways of production
4-th	Inclusion the new types of raw materials in production cycle
5-th	Exit of an innovation on vacant sales markets

Originality of this understanding of the term "innovation" is that there were considered not only the subject parties of an innovation (equipment, technology, product), but also the subjective party of production – behavior, activity of innovator - the person who connects conditions and production factors in uniform innovative process.

F. Nixon assumed that the innovation is a connection of technical, production and commercial actions which are directed to emergence of advanced processes and the equipment in the market.

B.A. Rayzberg and L.Sh. Lozovsky added categories "management", "advanced experience" to already existing idea of innovation and expanded term introduction in others, not only especially economic activities of society [7, 8].

The list of scientists – the economists studying a phenomenon of innovations is rather extensive: A.I. Anchishkin, L.S. Baryutin, E.G. Geyger, A. Klaynknekht, N. D. Kondratyev, G. Mensh, N. Monchev, E. Mansfield, F. Nixon, I. Perlaki, E. Rogers, B. of Santo, T. Tviss, A.N. Folomyev, V.D. Hartman, Y. Shumpeter, Yu.V. Yakovets. Rather laborious survey work for

formation of uniform understanding of the theory of innovative management was carried out by such scientists, as A.A. Bogdanov, M. Weber, A.K. Gastev, G. Taun, A. Fayol, G. Ford, G. Emerson.

Stages in development of the theory of an innovation, from the point of view of Yu.V. Yakovtza, are subdivided as follows [9, 10].

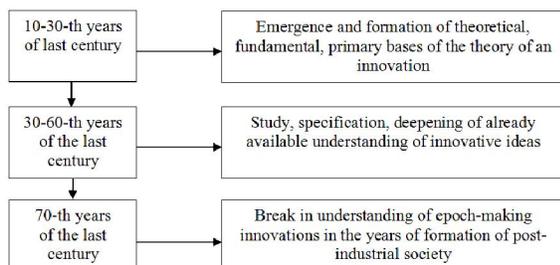


Fig.1. Stages in development of the theory of an innovation

J. Bernal assumed that the peak of economic activity of society is directly connected with scientific breaks, technical progress, innovations caused by introduction of innovation [11].

B. Tviss emphasized an important creative component of innovative activity. Also as an innovation it began to be understood uniform process of interconnected actions with economic contents and result [12]. B. Tviss assumed that productivity of innovations is influenced by several factors: market orientation, correspondence to final plans of organization, assessment methodology, optimum organization and management of process, constructive creativity, the external sphere surrounding innovative process and existence of "the adherent of the project", tools of analysis and an assessment of productivity of innovative projects [13, 14].

The role of national scientists in research and formation of existing concept of the theory of innovations is rather great. A.A. Dynkin, N. I. Ivanova, P. N. Zavlin, G. D. Kovalyov, K.A. Kirsanov, R. A. Fatkhutdinov and others made a big contribution to development of this theory.

Domestic economists by innovation mean not only interaction within the industrial cycle, directed on production of new product, but also social component of this process, an administrative section of the theory of an innovation.

Development of ideas of Shumpeter and Bernal was embodied in research of C.Kuznets who placed the main emphasis on influence of innovative activity on rates and volume of economic growth that subsequently reflected in his Nobel lecture.

Cyclic nature of knowledge development of

human society, according to S.Kuznets, is directly predetermined by waves of epoch-making innovations and vice versa.

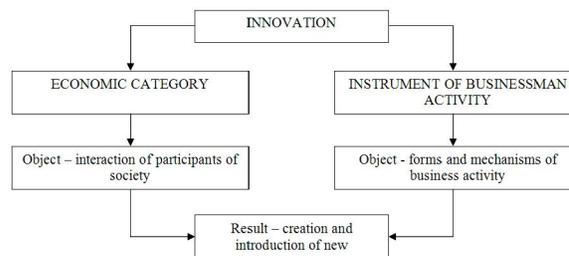


Fig. 2. Structure of innovations

Other domestic scientist – the economist A. I. Anchishkin, for the first time allocated IT – a component in innovative process and considered that optimization of production cycle is possible only on the basis of reorganization of ways of production based on automation, informatization, prevalence of scientific technical bases of industry, and materialization of scientific knowledge [15, 16].

Socially – economic innovations, according to the theory of "big cycles" of N.D.Kondratyev are predetermined, first of all, by basic, primary innovations. According to the scientist, innovations are distributed and arise on time unevenly. The result of any innovation is "know-how", i.e. the certain unique product appearing in the world market.

The present stage of development of the theory of innovations, formed by researches of such economists, as Adam B. Jaffe, Bryu S. L., David G. Victor, Josh Lerner, Elhanen Helpman, Chris Friman, William G. Baumol, Luke Soyete, MacConnell K.R. Richard R. Nelson, Scot Stern, is characterized by a binding of an education level, as one of basic factors of innovative development of economy and economic growth.

Result

As a whole innovations aren't just organically inherent in modern economy, they become way of its existence, its specific result. It is possible to draw a conclusion that development and deployment of new technologies is the complex challenge demanding attraction not only scientists, but also businessmen and the state. Only at the level of use, the new idea becomes an innovation. In addition, in modern conditions results of basic researches, the major applied researches and development define level of competitiveness of the states in the world community, extent of ensuring their national security and equal integration into world economy and sustainable development. Thus,

the concept of innovations in the broadest sense includes precise object or the action introduced in production by results of conducted scientific research or discovery, qualitatively distinct from previous analog.

When studying theoretical bases of innovation it is necessary to raise question of phenomenon of resistance to innovations.

Productivity of an innovation depends on several components:

- 1) existence of material and analytics – information infrastructure;
- 2) favorable political situation, both internal, and external;
- 3) comprehensive assessment of a state of environment
- 4) innovation value from the point of view of social productivity
- 5) innovation filling proceeding from consumer value
- 6) percent of return of investments, innovation productivities

All these indicators need to be corrected on coefficient of imperfection of innovative process.

Imperfection of this process is caused:

- 1) incorrect expectations of the agent of decision-making;
- 2) emergence of other criteria of satisfaction;
- 3) technological innovations;
- 4) innovations in power distribution between individuals and groups;
- 5) innovations of market conditions;
- 6) technology innovations in “macro environment”;
- 7) innovations of the status of organization in hierarchy of power in an environment context.

Imperfection of process can be caused by action of exclusively social factors, for example, key expert leaving the organization. Imperfection of process of activity promotes creation of new innovative opportunities. This fact forms the basis for integration of private theories of the industrial theory of management, explaining management of organization, with modern concepts of marketing and organization of project works. By search of means of elimination of imperfection of process, considerable load is on the agent of innovation at decision-making stage. The last is accepted as the rational human process including both individual, and social phenomena, based on factual and valuable principles which includes choice of example of behavior from a number of alternative samples for the purpose of achievement of desirable condition of connections of the subject.

The innovative solution based on discrepancies, has to give in to accurate definition

and fit into already existing technology and resources. The subject connected with this type of activity is able to realize discrepancy. Discrepancies of form and content of process don't arise together with any event in environment though after all external event most often helps to realize requirement of process.

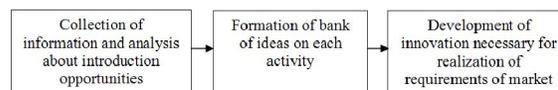


Fig. 3. Development stages of innovations

For effective implementation of innovative processes existence of several indicators is necessary: public understanding of need of developed innovation; clear understanding of purposes and problems of an innovation; existence of weak zones for their further improvement; isolation of innovative process; decision specifications.

Thus, the policy in the field of development of innovative activity has to adhere to the following main forward steps:

Conclusions

The main information barriers on a way of introduction of innovations are connected with resistance of the main links making administrative decisions. Rejection of innovations are connected, first of all, with uncertainty of individuals in expediency of changes. Also the participants involved in innovative process, sometimes overestimate the importance and need of their direct involvement in this process and exclude the derivation from it in case of their not productive and parasitizing activity.

Resistance to receipt of new information can be caused by status distinctions of the potential donor and the recipient. The higher is status of potential donor organization, the less possible that there will be an information transfer. Besides, economic ability of introduction of innovation has to be felt. Researches often trace the dependence of formation of defects of information transfer on weakness of communication channels.

Corresponding Author:

Dr. Safiullin L.N.

Kazan (Volga region) Federal University
Kremlyovskaya Street 18, Kazan, 420008, Republic of Tatarstan, Russian Federation

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