ANALYSIS OF TYPES OF INNOVATION IN ORGANIZATIONS

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Rezumat. *În contextul economic actual, singura modalitate ca o organizație industrială să reziste pe piață este ca aceasta să inoveze. Din acest motiv este foarte importantă înțelegerea caracteristicilor care fac ca o organizație să fie mai mult sau mai puțin inovantă, precum și modul în care inovația este creată în cadrul acesteia. Indiferent că este vorba despre o inovație de produs, de proces, de marketing sau organizațională, pentru a putea adopta o strategie corespunzătoare, organizațiile trebuie să știe care este capacitatea lor de inovare.*

Abstract. *In the current economic context, the only way that an organization can survive on the market is to innovate. It is therefore very important to understand the characteristics that make an organization more or less innovative and how innovation is created there. Whatever their type, product innovation, process, marketing or organizational, to adopt an appropriate strategy, organizations need to know who is their innovation.*

Keywords: Innovation, types of innovation, organization, product, process

1. Introduction

Innovation is generally considered as the main engine of economic growth in the global economy today. There are many reasons for companies and organizations to innovate, including: increasing market share, capture new markets, improve product quality, choice of products, replacing outdated products, reducing environmental impact. Innovation is linked with creativity (which is part of this category of article). Innovation and creativity processes are interrelated, since finding the solution to the problems in a process of innovation requires creativity. Innovation covers a practical application of a marketable invention; however, innovation is possible without a prior-invention [1].

In the organizational context, innovation may be linked to performance and growth through improvements in efficiency, productivity, quality, competitive positioning, market share, etc. All organizations can innovate, including for example hospitals, universities, and local governments.

While innovation typically adds value, innovation may also have a negative or destructive effect as new developments clear away or change old organizational forms and practices. Organizations that do not innovate effectively may be destroyed by those that do. Hence innovation typically involves risk. A key challenge in innovation is maintaining a balance between process and product

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innovations where process innovations tend to involve a business model which may develop shareholder satisfaction through improved efficiencies while product innovations develop customer support however at the risk of costly R&D that can erode shareholder return. Innovation can be described as the result of some amount of time and effort into researching an idea, plus some larger amount of time and effort into developing this idea, plus some very large amount of time and effort into commercializing this idea into a market place with customers

2. Define innovation

Innovation has been defined in many different ways by specialists without a generally accepted definition. A definition of innovation from an organizational perspective is given by Luecke and Katz, who wrote: "Innovation is generally understood as the successful introduction of a new thing or method. Innovation is the embodiment, combination, or synthesis of knowledge in original, relevant, valued new products, processes, or services. A content analysis on the term "innovation" carried out by Baregheh within the organizational context, defines innovation as: "Innovation is the multi-stage process where organizations transform ideas into new/improved products, service or processes, in order to advance, compete and differentiate themselves successfully in their market."[2]

Schumpeter's focus on innovation is reflected in Neo-Schumpeterian economics, developed by such scholars as Christopher Freeman and Giovanni Dosi. Innovation is also studied by economists in a variety of other contexts, for example in theories of entrepreneurship or in Paul Romer's New Growth Theory. In network theory, innovation can be seen as "a new element introduced in the network which changes, even if momentarily, the costs of transactions between at least two actors, elements or nodes, in the network". The work of Joseph Schumpeter has greatly influenced theories of innovation. He argued that economic development is driven by innovation through a dynamic process in which new technologies replace the old, a process he labeled “creative destruction”. In Schumpeter’s view, “radical” innovations create major disruptive changes, whereas “incremental” innovations continuously advance the process of change. Schumpeter (1934) proposed a list of five types of innovations: [3, 4, 5, 6].

1. The introduction of a new good — that is one with which consumers are not yet familiar — or of a new quality of a good.
2. The introduction of a new method of production, which need by no means be founded upon a discovery scientifically new, and can also exist in a new way of handling a commodity commercially.
3. The opening of a new market, that is a market into which the particular branch of manufacture of the country in question has not previously entered, whether or not this market has existed before.

4. The conquest of a new source of supply of raw materials or half-manufactured goods, again irrespective of whether this source already exists or whether it has first to be created.
5. The carrying out of the new organization of any industry, like the creation of a monopoly position (for example through trustification) or the breaking up of a monopoly position.

Innovation typically involves creativity, but is not identical to it: innovation involves acting on the creative ideas to make some specific and tangible difference in the domain in which the innovation occurs. For example, Amiable propose: "All innovation begins with creative ideas. We define innovation as the successful implementation of creative ideas within an organization. In this view, creativity by individuals and teams is a starting point for innovation; the first is necessary but not sufficient condition for the second".

For innovation to occur, something more than the generation of a creative idea or insight is required: the insight must be put into action to make a genuine difference, resulting for example in new or altered business processes within the organization, or changes in the products and services provided. "Innovation, like many business functions, is a management process that requires specific tools, rules, and discipline." From this point of view emphasis is moved from the introduction of specific novel and useful ideas to the general organizational processes and procedures for generating, considering, and acting on such insights leading to significant organizational improvements in terms of improved or new business products, services, or internal processes.

Through these varieties of viewpoints, creativity is typically seen as the basis for innovation, and innovation as the successful implementation of creative ideas within an organization. It should be noted, however, that the 'innovation' term is used by many authors with rather interchangeably with the term 'creativity' when discussing individual and organizational creative activity.

The definition most often used is that recommended by the OSLO manual: An innovation is the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations.[7]

3. Ways in with firms could innovate

Many ways in with the organization can innovate are divided by several criteria, namely: by the nature of innovation in product, process, organizational and marketing innovation. By the degree of change: radical and incremental innovation, and by the degree of novelty: new to the organization, new to the market and new to world.

Fig. 1. Types of innovation in an organization.

A ***product innovation*** is the introduction of a good or service that is new or significantly improved with respect to its characteristics or intended uses. This includes significant improvements in technical specifications, components and materials, incorporated software, user friendliness or other functional characteristics.

Product innovations can utilize new knowledge or technologies, or can be based on new uses or combinations of existing knowledge or technologies. The term "product" is used to cover both goods and services. Product innovations include both the introduction of new goods and services and significant improvements in the functional or user characteristics of existing goods and services. New products are goods and services that differ significantly in their characteristics or intended uses from products previously produced by the firm.

A ***process innovation*** is the implementation of a new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software.

Process innovations can be intended to decrease unit costs of production or delivery, to increase quality, or to produce or deliver new or significantly improved products. Production methods involve the techniques, equipment and software used to produce goods or services. Examples of new production methods are the implementation of new automation equipment on a production line or the implementation of computer-assisted design for product development. Delivery methods concern the logisti**cs** of the firm and encompass equipment, software and techniques to source inputs, allocate supplies within the firm, or deliver final products.

Process innovations also cover new or significantly improved techniques, equipment and software in ancillary support activities, such as purchasing, accounting, computing and maintenance. The implementation of new or significantly improved information and communication technology is a process innovation if it is intended to improve the efficiency and/or quality of an ancillary support activity**.**

A ***marketing innovation*** is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing.

Marketing innovations are aimed at better addressing customer needs, opening up new markets, or newly positioning a firm's product on the market, with the objective of increasing the firm's sales. The distinguishing feature of a marketing innovation compared to other changes in a firm's marketing instruments is the implementation of a marketing method not previously used by the firm. It must be part of a new marketing concept or strategy that represents a significant departure from the firm's existing marketing methods. The new marketing method can either be developed by the innovating firm or adopted from other firms or organizations. New marketing methods can be implemented for both new and existing products.

Marketing innovations include significant changes in product design that are part of a new marketing concept. Product design changes here refer to changes in product form and appearance that do not alter the product's functional or user characteristics. They also include changes in the packaging of products such as foods, beverages and detergents, where packaging is the main determinant of the product's appearance. An example of a marketing innovation in product design is the implementation of a significant change in the design of a furniture line to give it a new look and broaden its appeal. Innovations in product design can also include the introduction of significant changes in the form, appearance or taste of food or beverage products, such as the introduction of new flavors for a food product in order to target a new customer segment. An example of a marketing innovation in packaging is the use of a fundamentally new bottle design for a body lotion, which is intended to give the product a distinctive look and appeal to a new market segment.

Organizational innovation is implementing a new way of organizing the company's business practices in employment organization or external relations firm. Such an innovation aimed at enhancing business performance by reducing administrative and transaction costs, improving satisfaction at work (and thus labor productivity) or reduces supply costs. In a general sense, the term "organizational innovation" refers to the creation or adoption of new ideas or behaviors organization through internal changes and adaptations of the organization that innovates. May be brought changes in strategy, structure, processes, skills, incentive schemes and innovation culture in the organization, reorganization of the whole organization [8].

The terms of incremental innovations and radical innovations are often differentiated according to the degree of change required to implement the innovation, the level of technological intensity.

Radical innovations produce new solutions for systems, processes, products or services, which is developing a new business, can cause changes in an entire industry and creates a new industry, with the creation of new markets. Radical innovations ensure a substantially higher value for clients, the latter being a dimension of novelty. Examples of radical innovations are: laser, fiber optics, computer industry, radar, etc.

Radical product innovations describe a product whose intended use, performance characteristics, attributes, properties of construction or use of materials and components differ significantly in comparison to products previously manufactured. Thus, innovations can involve radically new technologies or rely on combining existing technologies in new uses. Radical innovation is characterized by:

a) improve product performance by 5 ... 10 times over similar products available;

b) to create premises for 30 ... 50% reduction over the cost;

c) product characteristics [9,10]

Incremental innovation involves "adapting, refining, simplifying and improving existing products and/or systems of existing production and distribution. Incremental innovations were defined by Banbury and Mitchell as" refinements and extensions established projects leading to substantial price benefits or functional users. "incremental innovations are typically minor improvements of existing products and processes

Incremental innovation of a product or service refers to a product/service existing whose performances have been enhanced or improved in the life cycle, from one version to another. A simple product can be improved through the use of components or materials with higher performance, while a complex consisting of several subsystems integrated technical, can be improved by partial changes to one of its subsystems. Incremental innovations may consist of extending existing product lines, product families create or extend the functions of existing products by adding additional functions. Incremental innovations are still ongoing (for radical contrast to those which are staple) and a relatively high frequency to meet perceived market needs, but provide lower returns than firms with radical innovations. Incremental innovation category includes innovations "imitated", similar to those of competitors, new to firm, but not new to the market. Imitated innovations usually have a low technological innovative and less innovative market [11, 12, 13].

By the degree of novelty for the firm, it excludes changes that are minor or lack a sufficient degree of novelty. However, an innovation does not need to be developed by the firm itself but can be acquired from other firms or institutions through the process of diffusion. Diffusion is the way in which innovations spread, through market or non-market channels, from their very first implementation to different consumers, countries, regions, sectors, markets and firms. Without diffusion an innovation has no economic impact. The minimum requirement for a change in a firm’s products or functions to be considered an innovation is that it is new (or significantly improved) to the firm. .

There are two main reasons for using “new to the firm” as the minimum requirement of an innovation. First, adoption of innovations is important for the innovation system as a whole. It involves a flow of knowledge to adopting firms. Furthermore, the learning process in adopting an innovation can lead to subsequent improvements in the innovation and to the development of new products, processes and other innovations. Second, the main impact of innovation on economic activity stems from the diffusion of initial innovations to other firms. Diffusion is captured by covering innovations that are new to the firm.

Of note, it does not cover the diffusion of a new technology to other divisions or parts of a firm after its initial adoption or commercialization. For example, the first implementation of new production technology in one of five factories owned by the same firm is counted as innovation, but implementation of the same technology in the remaining four factories is not.

4. Conclusions

It is crucial to know why firms innovate. The ultimate reason is to improve firm performance, for example by increasing demand or reducing costs. A new product or process can be a source of market advantage for the innovator. In the case of productivity-enhancing process innovations, the firm gains a cost advantage over its competitors, allowing a higher mark-up at the prevailing market price or, depending on the elasticity of demand, the use of a combination of lower price and higher mark-up than its competitors to gain market share and increase profits. In the case of product innovation, the firm can gain a competitive advantage by introducing a new product, which allows it to increase demand and mark-ups.

Firms can also increase demand through product differentiation, by targeting new markets and by influencing demand for existing products. Changes in organizational methods can improve the efficiency and quality of their operations, thereby increasing demand or reducing costs. Innovation can also improve performance by increasing the firm's ability to innovate. For example, improving the capabilities of production processes can make it possible to develop a new range of products, and new organizational practices can improve the firm's ability to gain and create new knowledge that can be used to develop other innovations.

R E F E R E N C E S

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