

## A New Approach to the Definition of Intangible Results of Innovation Performance

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Doi:10.5901/mjss.2015.v6n5s4p430

### Abstract

The paper discusses the definition of the results of innovation performance through the analysis of this concept, singles out its main features and basic notions that characterize and define their internal relationships. This analysis allowed the authors to give the definition of the concept of the results of innovation performance and introduce a new approach to the definition of intangible results of innovation performance, which is considered as a total of intangible forms of the idea implemented as a result of innovation performance or in the process of this kind of performance. The intangible results are regarded as additional unaccounted resources and opportunities that reduce risks when the value of the enterprise future cash flows is calculated by the Gordon Growth method, i.e., it leads to the increase of the enterprise's value. In this article authors suggest the classification of intangible results of innovation performance, which are achieved not only within the organization, but also in the surrounding business environment in order to get unique competitive advantages and sustain the company's value. Finally, this research focuses on the intangible results of innovation performance, particularly, their more detailed classification, explanation of their nature and development of evaluation methods.

**Keywords:** innovation performance, the results of innovation performance, innovations, technologies, intangible assets, intellectual capital, the intangible results of innovation performance, intellectual property

### 1. Introduction

Nowadays leading companies have chosen a brand new approach to issues of economic growth which is based on reinforcement of getting, using and passing over knowledge. To our mind, it is innovation performance that generates new knowledge, experience, and technologies that are intellectual potential of any company and one of the main resources of its development.

Innovation performance plays a specific role in the sustainable development of the company. It is a source of changes, so it allows to consider it as a source of self-development and self-organization of business systems. Innovation performance introduces alterations to the social and economic system, affects the structure and defines the tempo and scale of economic processes and accompanying structural changes.

Having analyzed contemporary world economic studies, we figured out that there is no common terminology in the field of innovation performance.

We are specifically interested in such phenomenon as results of innovation performance. It draws our attention because these results give company the opportunity to find solutions to a great number of scientific, technological, social and political issues.

Today more and more companies focus on intangible results of innovation performance as a source of company's value creation and support.

### 2. Literature Review

Many scientists and experts pay attention to the innovation performance in their studies considering it as a social and economic phenomenon. Some authors (Suleimanov & Kurnysheva, 1994) emphasize the procedural component of innovation performance. Others study innovation performance more widely, including to this concept besides innovation, serial and mass production, marketing distribution and use of the new product (service). Innovation performance acts as a part and base of the innovation process (Tatarkin & Sukhovey, 2002). Another group of economists does not identify

innovation performance with the process, considering innovation as “performance aimed at creating new or improved products (services), including the improvement of processes, methods, production organization and management, as well as related additional research and development” (Zavlin, 1998; Todoseychuk, 1999; Sheremet, 2005).

Taking into account a big variety of terms and definitions used in legislation, scientific studies and practice to characterize “innovation performance” we came to the conclusion that different authors apply their own approaches.

Therefore, in the context of our research subject “the results of innovation”, we can find out the following and most common approaches to interpretation of innovation process.

*The traditional approach.* Within the framework of this approach only the very essence of “innovation” (novelty, novation) for example a new product, service, technology, process or method, etc. is treated as result of innovation performance, i.e. something which is improved up to an acceptable and desired state by a technological process (Hamidov, 2000; Krilov et al., 2003; Santo, 1990; Ukolov et al., 2009; Jankowski & Mukharev, 2001).

*The focused approach.* According to this approach authors also consider embedded, introduced, implemented, etc. innovation as a result of innovation performance but at the same time they point out the key condition of its existence which is practical usefulness, consumption, demand. Thus, they consider that the purpose of innovation performance is to meet a variety of social needs. Within the framework of this approach we mark out a group of authors that do not focus only on meeting needs but also consider expected social and economic effect (competitiveness, quality improvement, return on investment, improvement of working environment and solution to social and ecological problems, etc. (Teslinov, 2009; Zavlin, 1998; A. Krutik, 2000; Ilyenkov et al., 1997; Yakovets, 1997; Trifilova, 2005).

*Non-goal-oriented approach.* Within the framework of this approach authors focus on other grounds (essence of the idea (novelty), process itself, applied technologies, existing cycles, stages and characteristics, etc.) when they give the definition of innovation performance. Authors do not take into account target results of innovation performance (Tatarkin, 2002; Baldin, 2005; Gunin & Barancheev, 2000; Medynskiy, 2008).

As for us, we share the “focused approach” due to several reasons. It fully reflects the essence of innovation performance and emphasizes its target point and expected social and economic impact. Applying conceptual modeling and considering this approach it is possible to give the definition of “the result of innovation performance”. This definition is an integral part of the methodology of our research that is subject to development.

### 3. The Concept of “The Result of Innovation Performance”

Taking into account classical basic elements of activity, we can define basic characteristics of innovation performance. Thus, any activity has some “essence”, activity is done by a “subject” and aimed at an “object”, carried out by an “action” and for the sake of some “result”.

We correlated characteristics of innovation performance claimed by various authors in their definitions with the list of classical elements of activity and allocated the basic characteristics of innovation performance to the following groups.

*The essence* of innovation performance is a kind of process, a number of measures, actions that are included in the basic concept of “process”.

*The subject* of innovation performance is employees, staff, team, entrepreneurs, and the managers at different levels.

We consider *actions* of the subject as “technologies”, which include the entire range of functions and tasks necessary for production, deployment and distribution of innovations.

Analysis of attributes that define the “object” and the “result”, with respect to innovation performance, has revealed a number of features associated with different approaches to the concept of “innovation”. Some authors consider innovation as an “object” of innovation performance; others regard innovation as a “result” of innovation performance. In terms of meaning both of these approaches to the concept of innovation are justified. During the process of innovation performance we work with innovations and get an innovation. To our mind the difference of these approaches is that, the innovation (I), which is an object of innovation performance is considered as “idea” (the new idea, project, program, proposals, etc.), and during an innovation process (IP) acquires a different form (I') (goods, product, patent, technology):

$$I \rightarrow IP \rightarrow I'$$

Having defined the basic concepts of our conceptual scheme “the result of innovation performance”, let us give them the definition:

“PROCESS” (appears as a generic term)—a range of irreversible, interconnected, long-term changes, both spontaneous and managed, self-organized and arranged, the result of which is a kind of novelty or innovation.

“Idea”—a form of reflection of the environment that includes goal awareness and perspectives of its further learning and practical transformation.

"Technology"—a way of transformation of substance, energy and information in the process of production, processing and recycling of materials, assembly of finished products, quality and management control. Technology embodies methods, techniques, mode of operation, sequence of operations and procedures. It is closely related to the resources employed, equipment, tools and materials used.

"FORM"—internal organization of content, covering the system of long-lasting relations of the subject. The mismatch of content and form ends up "dropping" off the old form and acquiring a new one. It can appear in the form of material things and be shaped matter, and obtain a non-material form and be shapeless matter and exist regardless of matter.

Basic concepts are interconnected with the following meaningful interrelations (see Figure 1).

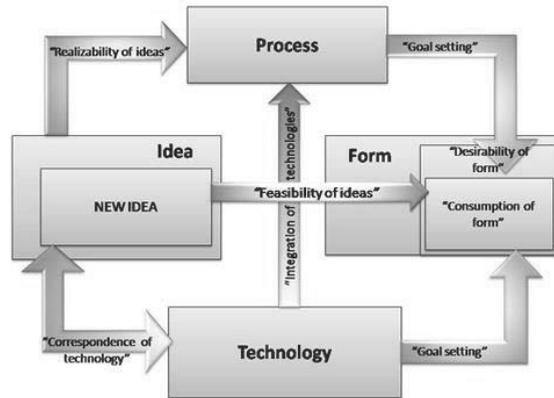


Figure 1. Conceptual scheme "the result of innovation performance"

- 1) The relation of "Feasibility of ideas" is the specific project component which reflects the ability of scientific ideas to be implemented in practice; the concept of feasibility sets the general target for transformation of an idea into an innovation (result), occurring in the process and technological units.
- 2) The relation of "Realizability of ideas" is the technological component of interrelations, reflecting the ability of the process itself, as the sequence of irreversible interconnected, long-term changes, to ensure the creation of an innovation as a result.
- 3) The relation of "Correspondence of technology" is technical, organizational, methodological or other capacity and resource (financial, industrial, human, etc.) provision of a technology (a way or a method) to transform an idea and bring it to its logical desired result.
- 4) The relation of "Integration of technologies" is a procedure of systematic, reasonably necessary and adequate implementation, integration, inclusion of certain technologies in the process of innovation, ensuring its existence.
- 5) The relation of "Goal setting" is interrelations, coming from the process and the technological unit and determining the target for a form of innovation as a result. The process aims at the result, both the result connected with the implementation of the consumed innovation and the intermediate results that appear in the course of implementation of a technology at various stages and cycles of the innovation process. These results can be planned, occasional, unexpected, intermediate, final, but they are consequences of goal-setting (basic or intermediate), they can be reflected in the form of specific targets as well as additional effects.
- 6) The relation of the "Desirability of form"—of all possible outcomes of innovation performance we choose the new forms of innovation that are desired by the initiator. Negative results are not considered as the results of innovation performance. Innovation is recognized not only after its introduction, but after it produces an effect i.e. the desired positive result.
- 7) The relation of the "Consumption of form"—consumed forms which are in high demand and produce a commercial effect are mostly valued of all the desirable forms of innovation. Introduced innovations that have not found their consumer are not regarded as the desirable outcome of innovation performance.

Thus, having identified basic concepts and using the above-described interrelations we sum up and formulate the

concept:

The result of innovation performance is a desirable form of a new idea, which is carried out within the implementation of a purposeful process of its consumption and appropriate technologies installed in it; the form can be material and non-material.

#### 4. Findings and Discussion

Results of innovation performance can be divided into two parts. The first part includes "material results of innovation performance" which can be expressed in different forms of property, new or improved products, with a particular physical form, created, cultivated, modified or upgraded machinery, equipment, tools, devices, etc. All material components of innovation performance are reflected in financial statements. There are standard methods for evaluation and management that do not give rise to disputes and questions. Undoubtedly, tangible results of the enterprise's innovation performance make up the main and meaningful part of innovation performance.

The second but not less important part of the innovation performance results, in our opinion, are "intangible results". The question of the content for the "intangible results of innovation performance" is quite problematic due to the ambiguity and complexity of the terminology used in Russian science and foreign literature, and, in our opinion, requires further study. Intangible results of innovation performance also require a thorough evaluation and accounting.

Some Russian researchers consider only intangible assets of the company as intangible results of innovation performance.

We agree that some of the intangible assets are part of intangible results of innovation performance, but it is not right to claim that these economic categories are identical.

Today there are many interpretations of the concept of "intangible assets" related to legal, accounting and tax areas of activity. However, generally, these definitions are specific, depending on their purpose.

The content of intangible assets discussed in terms of accounting and intellectual property is defined in the regulations.

Thus, according to Russian accounting standards intangible assets also include identifiable non-monetary assets without physical substance that are essential for use in the production or provision of goods or services, for rental to others, or for administrative purposes, to the adoption of the accounting records of assets as intangible.

Authors name the following clear criteria to identify "intangible assets":

- Documentary evidence of the existence of an asset, and the exclusive rights to intellectual property (patents, certificates, trademark, contract purchase, etc.);
- Ability to generate economic benefits;
- Lack of material and the real (physical) structure;
- Ability to be identified;
- The use of objects of intangible assets in production, works, services or management of the company;

In order to determine the complex of elements of innovation performance results it is necessary to consider a number of other related economic categories reflecting the essence of intangible assets.

Thus, in modern terminology of economics such category as "intellectual capital" is more and more often understood as "intangible assets". In terms of market, intellectual capital is a collective term for intangible values, which increase the market value of the company and its competitiveness (Molodchik, 2014).

According to many researchers, the main components of the intellectual capital are:

- 1) "Structural or organizational capital", which includes intellectual property and a body of professional knowledge;
- 2) "Consumer (client) capital"—a body of knowledge that allows you to find and create a new customer;
- 3) "Human capital", which consists of professional knowledge, moral values, commitment to the company's corporate culture and is gradually becoming a critical component of intellectual capital.

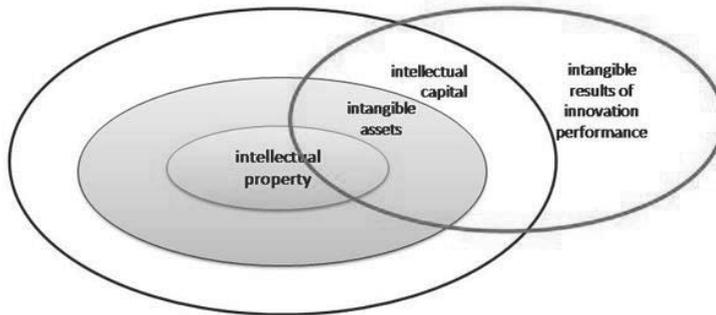
There is an opposite point of view, when the intellectual capital is regarded as a part, but not synonymous with intangible assets. It is recognized that there are things of immaterial nature that are not a part of the intellectual capital of the company. For instance, R. Petty and D. Guthrie believe that such a thing is the reputation of the company, which may be a co-product (the result), obtained thanks to reasonable use of the intellectual capital of the company, but is not a part of its intellectual capital.

We agree with the view of I. Prosvirina, that the extension of the concept to the level of the entire set of intangible assets is unjustified. Firstly, the notion of intellectual capital becomes unnecessary; secondly, an important characteristic

of intellectual capital (its ability to be controlled with the help of management techniques) is blurred. Intangible assets that are the results of external factors are weakly or not manageable at all.

Agreeing with the idea that the intellectual capital incorporates a wider range of assets than intangible assets in terms of accounting, we should specify that not all intellectual capital is included in intangible results of innovation performance (Molodchik et al., 2012).

From our point of view, the relations of such economic categories as "intangible results of innovation performance", "intellectual capital", "intangible assets" and "intellectual property" (Stern Stewart & Co, 2012) can be represented in the following way (Figure 2):



**Figure 2.** The relations between terms "intangible results of innovation performance", "intellectual capital", "intangible assets" and "intellectual property"

Intangible results of innovation performance bring revenue and increase the company's market value not only thanks to accounted intangible assets and intellectual capital, but also due to a range of other intangible, unaccounted and unconceived components.

Studying the intangible results of innovation performance, it is worth noting that in the world neither a common term for intangible factors has been found yet nor their final classification has been formed. Taking into account the lack of a precise definition of "intangible result of innovation performance", we note, first, the general characteristics of intangible results of innovation performance, some of them can be applied to all related economic categories we discussed above, and some have a unique character:

- Work to create intangible results of innovation performance as all regarded categories is scientific, creative, and intellectual. Intangible results of innovation performance are unaccounted factors that reflect not only new knowledge, but also a transformation of the existed knowledge, as well as various kinds of scientific services;
- Intangible results of innovation performance also have specific authors or team of creators
- Intangible results of innovation performance as well as an intellectual capital are associated with the growth of knowledge;
- Intangible results of innovation performance can stimulate innovation performance by their existence;
- Intangible results of innovation performance contribute to the creation of social and economic relations, which can be the subject of a special interdisciplinary legal regulation;
- Some of the intangible results of innovation performance can be defined in terms of value, also can be a subject of labor contract, commercial contracts, therefore, can generate income today or in future, increasing the market value of the company, help develop and effectively manage innovation performance of the company;
- A large part of intangible results of innovation performance are a public good;
- Intangible results of innovation performance are interconnected in the system of communication, interdependence, which carries a synergistic effect in terms of overall impact of innovation performance.

Under the intangible results of innovation performance in the context of our definition of "results of innovation performance", we consider a total of intangible forms of the idea implemented as a result of innovation performance or in the process of this kind of performance. These kinds of results are regarded as additional unaccounted resources and opportunities. Intangible results of innovation performance are achieved not only within the organization, but also in the surrounding business environment in order to get unique competitive advantages and sustain the enterprise value.

Classification of intangible results of innovation performance can be carried out according to various criteria, covering the basic aspects of the enterprise. In addition, it allows us to give the key components of the intangible results of innovation performance structure.

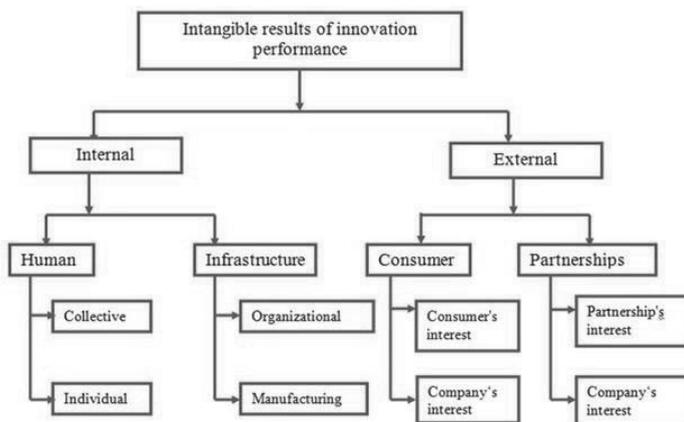
Based on the identified characteristics of intangible results of innovation performance and their meaning, the source of formation and accumulation, authors propose the following classification of intangible results of innovation performance of the company (see Figure 3).

There are three levels of classification (Elokhova & Nazarova, 2012). At the first level intangible results of innovation performance are divided into:

- 1) External are formed, accumulated and provide a competitive advantage in the external environment of the enterprise: the image, the reputation of the brand, cooperation with partners, impact on distribution channels and mechanisms, etc.;
- 2) Internal are formed and accumulated in the internal environment of the enterprise: technologies, manufacturing know-how, organizational culture of the enterprise, etc.

**Table 1.** Classification grounds of intangible results of innovation performance

Grounds of classification	Type of intangible results of innovation performance
1) Environment of formation and accumulation	Internal (in the internal environment of the enterprise)
	External (in the external environment of the enterprise)
2) Source of formation	Converted from the flow of information from the external environment
	Converted from the internal corporate flow
3) Scope of use	For internal use
	For the accumulation at the enterprise
	For external use
	For sale
4) Frequency of use	Disposable
	Reusable
5) Base of goal-setting	Objective
	Accompanying
6) Factor of appearance	Random
	Expected
7) Degree of identification	Specially recorded in the activity
	Accidentally recorded
	Not taken into account
8) Form	Explicit (can be formalized)
	Implicit (can not be formalized)



**Figure 3.** Classification of “intangible results of innovation performance”

At the second level there are two distinct components for internal intangible results of innovation performance: infrastructure and human results. Infrastructure results are supposed to be divided into manufacturing and organizational results of the enterprise. Human results are supposed to be divided into individual and collective results.

External intangible results of innovation performance are referred to as market assets of the enterprise, and are divided into consumer's and partnership's results. Consumer's results are supposed to be divided into consumer's and company's interest. Partnerships results are proposed to be divided into partnership's and company's interest.

## 5. Conclusion

Today, more and more companies focus on intangible results of innovation performance as a source of creation and maintenance of the company's value. Intangible results of innovation performance require a thorough evaluation, as future income from them is often very significant. The result of application of intangible results of innovation performance is not only wealth creation, but also a broad exchange of intangible results of innovation performance that is one of the most important prerequisites for economic, social and cultural development of the national economy.

Thus, having analyzed and reinterpreted the existing theoretical foundations of innovation performance we have given the conceptual definition of "the result of innovation performance".

The research gives an opportunity to focus on intangible results of innovation performance, namely on more detailed study of their nature and development of methods for their evaluation.

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