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## Innovative activity and methods for innovative ideas evaluation Tomsk Polytechnic University

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### Abstract

It is vitally important for a country to ensure stability and provide constant growth of economy in contemporary world. The key factor of economic growth is innovative activity which leads to scientific and technological progress. This article describes the main role of innovative activity and idea selecting process in enhancing competitiveness of a company. It is difficult to choose among the big range of ideas the right one under the conditions of resource limits. In this way the article gives several methods for evaluating ideas. Such methods are extremely useful for governance, technoparks, commercialization offices and companies with innovative activity.

*Keywords:* Innovative process, innovative activity, methods for innovative ideas evaluation, scientific and technological progress;

### 1. Introduction

It is known that the oil price was rising constantly in 2000 – 2008 intervals. Thereby, not only the state debt of the Russian Federation was covered but also the adequate fiscal reserves were formed. Those reserves were targeted at financial sector and export oriented companies' needs. The analysis of export, which is represented in the figure 1, shows that the massive part of currency allocations in Russia in 1995-2007 is held by mineral resources, metals, precious stones, chemical industry [5]. Large firms operating in such areas were not interested in innovative activity because natural resources in pointed spheres had guaranteed sales market therefore profit was assured. Specifically guaranteed profit led entities to invest into these areas.

Percentage of All Exports	1995	2000	2002	2003	2004	2005	2006	2007
Food and agricultural (excludes textiles)	1.8	1.6	2.6	2.5	1.8	1.9	1.8	2.6
Mineral resources (including oil, gas, and coal)	42.5	53.8	55.2	57.3	57.8	64.8	65.9	64.7
Chemical industry	10.0	7.2	6.9	6.9	6.6	6.0	5.6	5.9
Leather goods and furs	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.1
Wood, lumber, and timber	5.6	4.3	4.6	4.2	3.9	3.4	3.2	3.5
Textiles and footwear	1.5	0.8	0.8	0.7	0.6	0.4	0.3	0.3
Metals, precious stones, and jewelry.	26.7	21.7	18.7	17.8	20.2	16.8	16.3	16.1
Machines, equipment, and transportation vehicles	10.2	8.8	9.5	9.0	7.8	5.6	5.8	5.6
Other	1.3	1.5	1.4	1.4	1.1	1.0	1.0	1.2

Figure 1: Composition of the Russian export

However, the crisis of 2008-2009 and also current issue of 2014 have demonstrated the opposite side of the coin. Undoubtedly energy resources provide revenue which is indispensable for the government, but it highly depends on the price range on the market and finally energy resources are exhaustible. That is why it is vitally important to ensure stability of the economy and its permanent growth.

### 2. Innovative activity

Economic growth, the acceleration of scientific and technical progress, complexity of economic ties, enhancement of market competition and the role of buyers in product attributes formation stimulate permanent growth of the economic system, i.e. its development.

All the above mentioned is the components of the innovative activity which provides sustainable development not only for economy but also for the standard of living of the society. Innovative activity is a set of scientific, technological, organizational, financial and commercial activities which are aimed at creating and implementing of a completely new product or a developed one on the market. [1]

Global leadership is determined by the level of technology development. Discoveries and inventions effect on the level of technology development and technology development leads to implementing new instruments, devices and technologies at scientific research at the same time. This interconnection of the ongoing development of science and technology is called scientific and technological progress. It lies at the heart of innovative process.

There is no progress without new ideas. But usually the range of ideas is too extensive and managers face with the real challenge of ideas selecting. Figure 2 shows the selection process which is going through four stages [3]. The first one is called idea generation and it usually contains a big range of ideas where the brightest ones are selected and elaborated at the second stage. The phase number three requires much more responsibility. This stage has to give answers whether a project meets limits or not. Such limits are the following – financial, scientific and technical, manufacturing, economical, ecological and others. After some evaluation managers select ideas most appropriate for implementation. Unfortunately, many organizations make mistakes in their idea review processes which results in rejecting the most potentially innovative ideas in favor of less innovative ones.

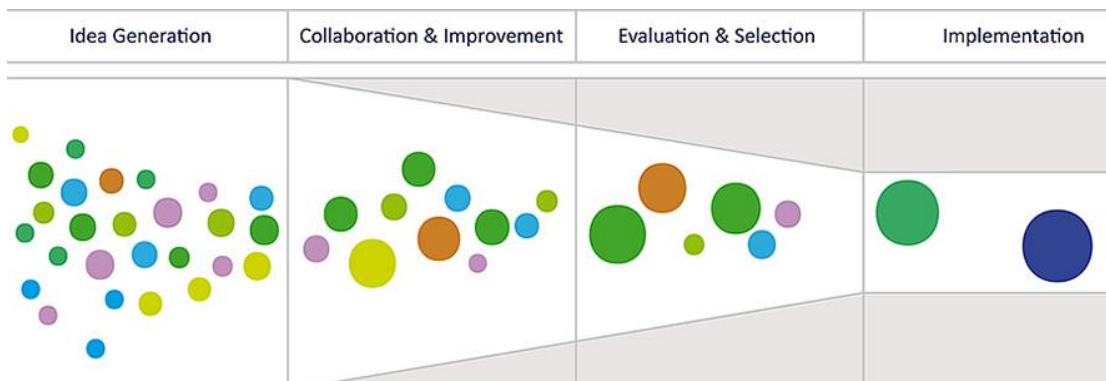


Figure 2: Ideas' path from generation phase to implementation

### 3. Methods for innovative ideas evaluation

Therefore there are some different methods to help managers to evaluate ideas:

- Pass-fail evaluation
- Evaluation matrix
- SWOT analysis
- Idea advocate

#### *Pass-fail evaluation*

If there is a large number of ideas that need to be reviewed a simple pass-fail evaluation is often essential to bring the idea pool down to manageable levels. It is better to start with a simple criterion for determining whether an idea will go on to a more in-depth evaluation. This criterion might be related to budget, time-frames, fit company culture or just practical viability. Whatever the criterion is, it should be clear. It is also important to be not too quick in rejecting ideas that might meet the pass-fail criterion with some modification. For example: a very creative idea that does not meet the budget criterion must nevertheless pass. It may be determined by means of implementing the idea at lower cost.

#### *Evaluation matrix*

The evaluation matrix is a simple array in which experts assess an idea against a set of criteria. The expert ranks how well the idea meets each criterion. Experts are also encouraged to provide comments while elaborating their ratings and, in particular, suggest how the idea might be improved to overcome weaknesses. The evaluation matrix score for each creation as well as an overall score for each idea. Assuming several ideas, focusing on a particular problem or business issue, are being evaluated at the same time, these scores can be compared and the highest scoring ideas can be selected for further review. However, it is important to look at the evaluators' comments. An idea with a low score might be vastly improved following minor changes.

#### *SWOT analysis*

An analysis of Strengths, Weaknesses, Opportunities and Threats (SWOT) is an old marketing stand-by and as such is a useful follow up to an evaluation matrix. Its aim is to identify key problems and potential development routes. Because the SWOT analysis looks at the idea from different perspectives, it provides a more rounded review of an idea than some methods. This analysis is also a vital element in business plans. It helps to identify the key forces acting on the market and the influence that they could have on strategic development. SWOT is easy to use, easy to implement and easy to understand. It could be implemented in a group or individually on very broad areas of application. As it is mainly used in business area is not very applicable for general idea selection.

#### *Idea advocate*

This is a group method, applicable after a certain idea has already been selected. As such it is not applicable for use when there are still many ideas to select from. The idea of this method is that the idea advocate represents different ideas to the group; therefore the advocate has to know ideas very well. Because the advocate is assigned to every attribute, the positive aspects of the entire attribute will be brought out of group examination. The idea advocate presents a case for each idea. The advocate should be someone familiar with the idea, or who initiated it, or who would have to implement it. Each idea is then discussed and decisions are made. If a particular case was illuminating then a straightforward selection can be made, however, if there are several strong cases several rounds of elimination will need to take place. It is important to ensure that there are no differences in power and status amongst the idea advocates. Providing that, the selection of an idea will depend on the power of arguments and rhetoric of an idea advocate, and not of power distribution within group.

## **4. Conclusion**

Thereby, the ideas selecting methods described above will help to systematize evaluating process and to pick right ideas to bring into life. There is a large number of such methods which also includes some mathematical approach to ideas evaluation but aforementioned ones are more suitable and easy to use.

## **References**

1. Akelev, E. (2014). Firm's innovation activity organising.[translit]. Tomsk: TPU.
2. Badrutdinova D. (2014). Problems of formation of economy in Russia. *Journal of Economics and Social Sciences*, No. 5, [Available at: <http://elibrary.ru/item.asp?id=224420602014>.] [Accessed 10/05/2015]
3. Federal State Statistics Service. (2008). *Rossiya v tsifrakh-2008*. [Available at [http://www.gks.ru/bgd/regl/b08\\_11/isswww.exe/Stg/d03/26-08.htm](http://www.gks.ru/bgd/regl/b08_11/isswww.exe/Stg/d03/26-08.htm)] [Accessed 10/05/2015].
4. Popadyuk, T. (2013). Innovative entrepreneurship. Moscow: Uright.
5. Rebernik, M. (2009). Idea evaluation methods and techniques. [Available at: [http://www.creativetrainer.eu/fileadmin/template/download/module\\_ideaevaluationfinal.pdf](http://www.creativetrainer.eu/fileadmin/template/download/module_ideaevaluationfinal.pdf)]. [Accessed 10/05/2015]
6. Tebekin, A. (2014). Innovation management. Moscow: Uright.