APPLICATION AND SETTLEMENT OPPORTUNITIES OF THE INNOVATION CONTRIBUTION IN TERMS OF HUMAN RESEARCH

KATALIN SZENDRŐ
Ph.D. Student, Research Scientist

Kaposvár University, Human Exchange Foundation

Abstract

There is no development without innovation, and there is no innovation without human resources. Today, Research & Development activities, also Innovation became fundamental premise of economic development and sustainable competetiveness, the importance of RDI is greater than ever for adapting to new challenges. "Innovation performance has become a key element of economic growth in developed countries in the last two decades. This general trend, however, was not or hardly reflected in the economic policy."[1]

The field of human resources management became the central question of increasing organizational efficiency which is the basis of a country's competitiveness. Therefore we need to highlight the importance of the knowledge-driven economy and resource innovation.

The study presents the Research&Development&Innovation (RDI) position and mid-term aims of Hungary, besides demonstrates fundamental, innovation contribution-related regulations and information offering a starting point for the innovation contribution's application and settlement. Knowing this information is especially important since Hungarian firms do not seem to take advantage of the opportunities according to the experts' opinion. The main reason of this may be that even those who are affected hardly know what is considered as an R&D activity. This study helps the companies to gather deeper knowledge in order to take advantage of the opportunities.

Keywords: innovation contrubition, HR research, RDI position, Hungary

RDI position and mid-term aims of Hungary

The European Commission mandates UNU-MERIT (Maastricht Economic and social Research and training centre on Innovation and Technology) each year to publish a comparative study (European Innovation ScoreBord - EIS) by investigating countries of the European Union from an innovational viewpoint. The unified innovational indicator (Summary Innovation Index – SII) is calculated from 29 indices which can be grouped into three categories. The final index settles down on a scale between 0-1 in case of each country.

1 Klaus Kornwachs,Imre Hronszky: Shaping better technologies.

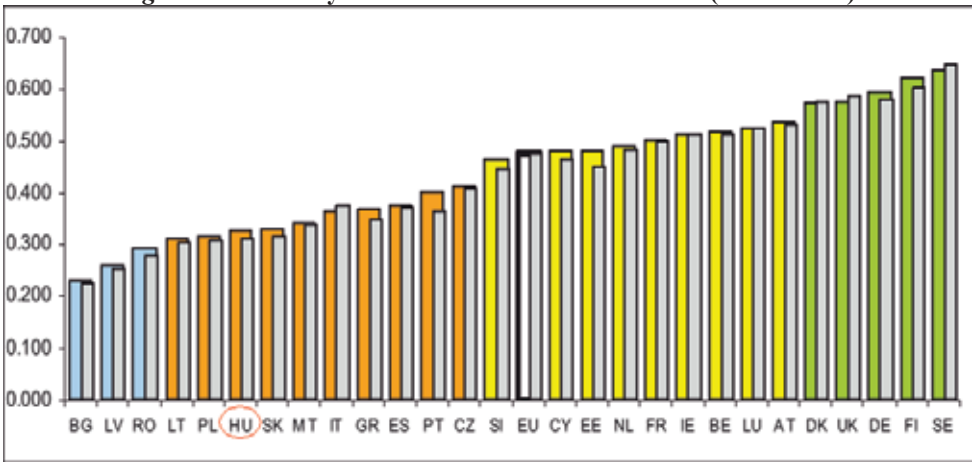
The three main categories playing role in determining the final, SII index are:
- enablers; human resources, finance and support;
- firm activities; firm investments, linkages and entrepreneurship, throughputs;
- outputs; innovators, economic effects.

Human resources play an important role, since the availability of skilled and educated people is one of the main innovation drivers, companies can hardly advance without human contribution and passion.

Figure 1. presents the Research-Development- and Innovational position of the EU countries according to SII. The effect of the monetary crisis and recession is not reflected in spite of the fact that the statement also concerns 2009.

Recent statistics indicate that the Union is having a hard time to get closer to the USA's innovational performance, however we are in a more advanced compared to BRIC countries (Brazil, Russia, India, China) despite their dynamic expansion in the recent years.

Figure 1. **Summary Innovation Index – SII – EU 27 (2008*-2009)**



Source: UNU-MERIT

* 2008: indicated in gray

Hungary is placed 22th in the European rank (among moderate innovators), preceding Poland, Lithuania, Romania, Latvia and Bulgaria, however still far behind the European average. The role of big, multinational enterprises and companies in foreign hand belong to Hungarian peculiarities to be emphasized, since these distribute 50% and 75-80% of the research-developmental and innovational expenditures, respectively.

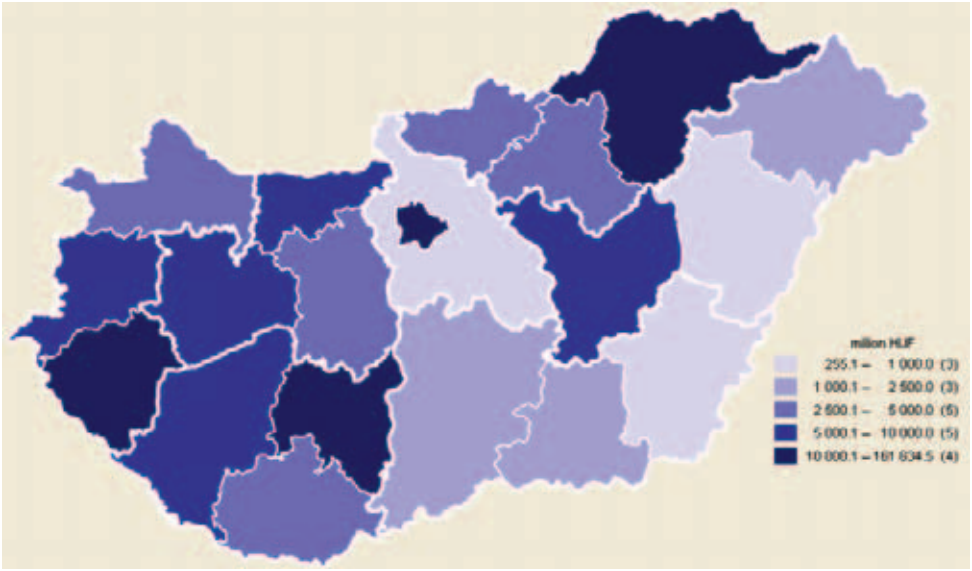
The improvement of SII indicators is among the mid-aims of the Science, Technology and Innovation Policy (STI) by 2013:
- Expansion of companies' research and development activities, dynamic increase in their yearly R&D expenditure. Corporate R&D spending within total R&D expenditure should be improved to 50% from 30%;
- Total R&D expenditure should possibly reach 1.8% of GDP (EU-27 rate is between 1.82-1.87 since 2001, while Hungary could not ever exceed 1%);

- Hungary's summary innovation index (SII) should reach the EU average (0.5) meaning 14th place in the EU rank.

During 2008, Hungary has not experienced change in the R&D activities influenced by the global recession; furthermore R&D expenditure reached 1% of GDP for the third time in the last 15 years. The spending was significantly higher than that of the last year, exceeded by almost 8.5% (266 billion Ft in total) due to the supportive and stimulating policy.

Despite of the increasing rate in all the three sectors (enterprise sector raised the most by 13%) compared to the previous year, and enterprices being responsible for financing nearly half of the R&D activities outpacing the governmental sector, Hungary still has plenty of room to improve.

Figure 2. **Expenditure of R&D units (2008)**



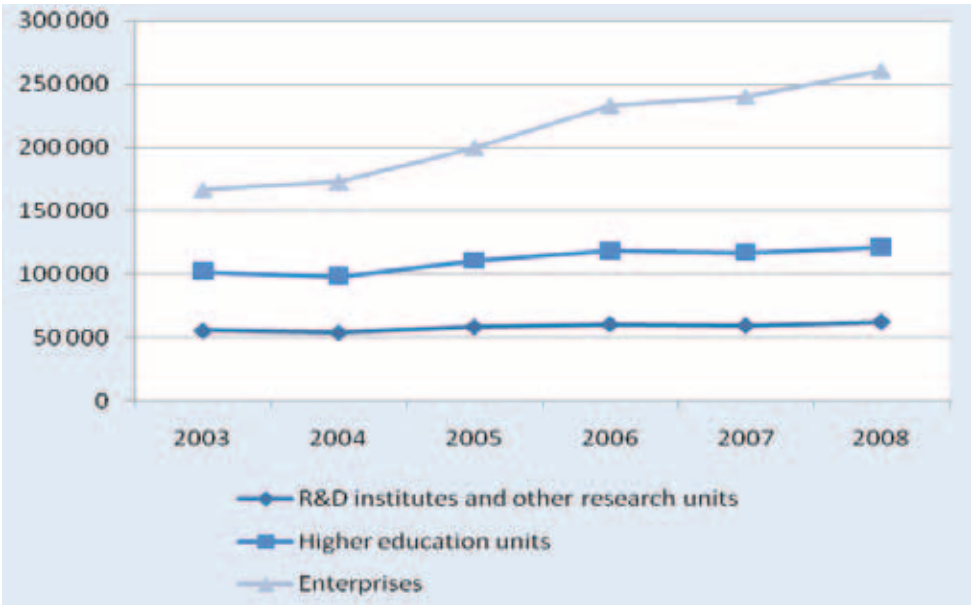
Source: KSH – Hungarian Central Statistical Office

The weak innovational willingness is reflected not only in the mentioned SII indicators, proportions, but in the strain of the benefits. "Although Hungarian firms spent more on research and development than the state budget in 2008, numerous firms still do not take advantage of the benefits!" The main reason of this may be that people (even those who are affected) are hardly aware of these opportunities. This is where the importance of the following acts and handbooks lies. Act XC of 2003. about Research and Technology Innovational Fund and the OECD publication, Frascati manual provide information to be familiar with the opportunities. Latter mostly helps to identify the definition of R&D activities, based on which particular industrial regulations, the general concept of research and experimental development, and the "borders", activities to be excluded can be specified.

The prerequisite of an R&D activity is the novelty and justification of a scientific and/or technological uncertainty. The significance of R&D activities can be manifested not only on macroeconomic level, but it is essential for the country's competitiveness as well.

Forming specialized advisory groups, multi-professional teams, which include experts with high level knowledge within a given discipline, is essential for the efficiency of R&D activities.

Figure 3. **R&D expenditures (2003–2008)**

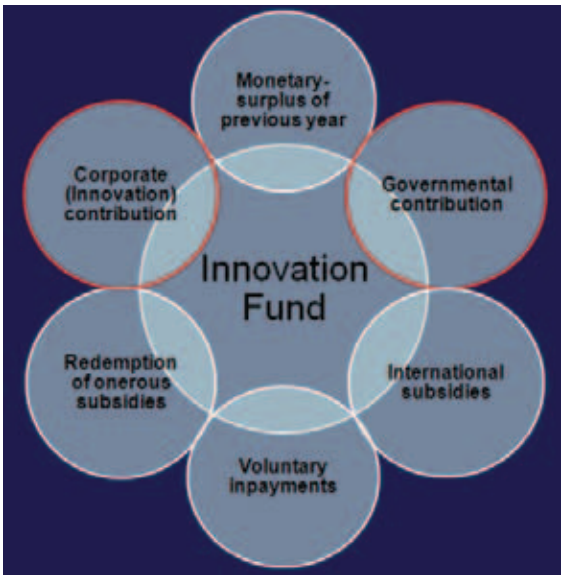


Source: KSH – Hungarian Central Statistical Office

The Research and Technological Innovation Fund

In Hungary, the Innovation Fund is reserved as an incentive for supporting research, development and technological innovation. Organizations may obtain grant through an open competition system, which is 180 billion Forints (≈ €634 million) in total in 2010.

Figure 4. **The content of the Innovation Fund**



Source: NKTH– National Office for Research and Technology

From among this amount, governmental contribution is highlighted, which is 20 billion Forints (≈ €70 million) in 2010. (Unfortunately, state contribution is intended to be canceled year by year.) Besides, corporate contribution give the other big portion of the Innovation Fund, made up of innovation contribution payments. In 2010 its prognosticated amount is over 23 billion Forints.

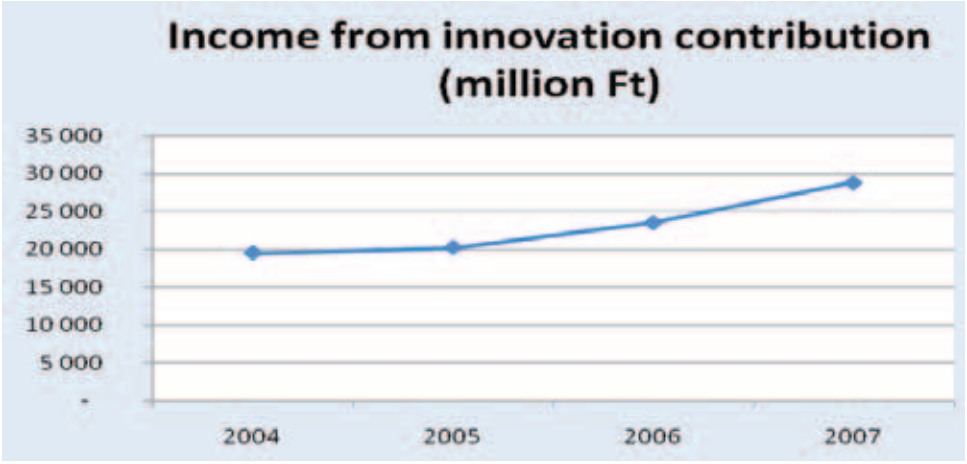
Innovation contribution

Act CXLIV of 1997. and Act C. of 2000. contain information about the contribution-obligated companies. For instance, microenterprises, small companies, also firms in the year of their registration are not included, however larger companies above a given turnover and labor force are obliged to make a payment.

Corporate contribution, or in other words innovation contribution is based on the (adjusted) net turnover of a company. The gross amount equals to 0.3% of the calculated sum (net turnover minus the procurement cost of sold items and/or the value of transmitted services and/or the material cost). In order to obtain the net amount, direct R&D expenditures can be deducted, such as basic research, applied research and experimental development. These R&D activities may be executed intramural or by public R&D units.

Figure 4. presents the innovation contribution of enterprises since 2004. Unfortunately, Hungarian Central Statistical Office does not provide more up-to-dated figures.

Figure 5. **Innovation contribution of enterprises**



Source: KSH – Hungarian Central Statistical Office

HR-related research topics

The following list provides a so-called "idea-source" for identifying applied research topics related to human research:

- Organizational communication;
- Change management;
- Organization development;
- Examination of a stress and a conflict management;
- Competence and organizational network research;
- Sociotechnical human resource examination;
- The examination of scopes of activities and labor activities;
- Crisis management opportunities;
- Organizational and human factors of quality development in increasing efficiency yielding organizational innovation;
- Examination of factors influencing sales efficiency.

The above listed topics - without the claim of the completeness – show the variegation of HR research projects. The following chapter provides an extract of a research final report as a specific example.

Summary

In order to speed up economic growth especially when strenghtened economic performance is essential, Hungarian organizations need to focus more on novelty and improve the level of innovation activity and performance. The Government fosters this activity by the open competition system for obtaining grant from the Innovation Fund.

Although, enterprises cannot influence directly the decisions of the Government and the political commitment towards innovation, but they – as the main contributors of R&D&I – can take advantage of the innovation contribution by turning it to R&D&I.
Any organization's success and innovational ability is based on the knowledge which is possessed by human resources. For this, multi-professional team's expertise must be adjusted to the companies' claims and their ideas.

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AZ INNOVÁCIÓS JÁRULÉK FELHASZNÁLÁSI LEHETŐSÉGEI HUMÁN KUTATÁSOK SZEMPONTJÁBÓL

SZENDRŐ KATALIN
Ph.D. hallgató, tudományos munkatárs

Kaposvári Egyetem, Human Exchnage Alapítvány

Összefoglaló

A tanulmány összegyűjti azokat az alapvető innovációs járulékkal kapcsolatos alapvető törvényeket, feltételeket és információkat, amelyek kiindulópontot jelentenek a járulék felhasználásához és elszámolhatóságához humán kutatások megvalósítása esetén. Különösen fontos ezen feltételek megismerése, mivel a magyarországi cégek nem használják ki kellőképpen a kedvezményeket. E mögött az állhat, hogy sok esetben az érintettek számára is meglepő, mi minden tekinthető K+F tevékenységnek (NKTH).

A K+F tevékenység meghatározásában segítséget nyújthat és támpontot jelenthet az OECD Frascati Kézikönyve, amely alapján iparáganként meghatározott rendelkezések, kutatás és kísérleti fejlesztés általános fogalma, valamint kizárandó tevékenységek, határok is pontosíthatók. A K+F alapfeltétele az újszerűség és valamely tudományos és/vagy műszaki bizonytalanság feloldásának számottevő eleme (Frascati Kézikönyv).

Az APEH rendelkezései alapján bármely vállalkozás megrendelhet bármely témában kutatás-fejlesztést annak végzésére jogosult költségvetési intézettől vagy közhasznú szervezettől (például a Human Exchange Alapítvány) úgy, hogy annak költségeivel csökkentheti járulékfizetési kötelezettségeit. A Kutatási és Technológiai Innovációs Alapról szóló 2003. évi XC. Törvény 4.§-ának (3) bekezdése nem tartalmaz tematikus korlátozást a vállalatok által végzett vagy megrendelt kutatás-fejlesztési tevékenységgel kapcsolatban, a fizetendő innovációs járulék éves bruttó összegét csökkentő tételek (költségek) érvényesítését nem befolyásolja az, hogy az adott kutatás-fejlesztési tevékenység a társaság tevékenységéhez nem vagy csak közvetetten kapcsolódik (APEH).

Kulcsszavak: innovációs járulék, humán kutatás, RDI pozíció, Magyarország