Iulian Boldea, Cornel Sigmirean (Editors)
MULTICULTURAL REPRESENTATIONS. Literature and Discourse as Forms of Dialogue
Arhipelag XXI Press, Tîrgu Mureș, 2016
ISBN: 978-606-8624-16-7
Section: Social Sciences, Psychology, Sociology and Education Sciences

THE IMPACT OF FINANCING THE RESEARCH AND DEVELOPMENT ACTIVITIES WORLDWIDE. COMPARATIVE STUDY

Mircea Iosif Rus

PhD, "Babeș-Bolyai" University of Cluj-Napoca

Abstract: After the economic crisis of 2006-2009, with its consequences still not completely gone, a number of companies began assigning increasingly larger amounts for financing research/development activities. Therefore, if in 2010 €455.97 billion were assigned by 1,400 companies, in 2014 €607.2 billion were assigned by 2,500 companies. These companies realized that they cannot survive without releasing at least one new product on the market. This is precisely the reason why they began investing increasingly larger amounts in the research and development activities, implicitly leading to the development of the states in which these companies develop their business, such as Switzerland, South Korea, China, Taiwan etc.

Keywords: research and development activities, financing, companies, states, billion EUR

I. Introduction

After the economic crisis of 2006-2009, as an attempt to overcome this period, many companies realized that they have to invest in themselves in order to cope with the competition on a market already collapsed, but full of competitors.

The investments available were mostly oriented towards people, as well as upgrading and purchasing equipment supporting their business.

For the purpose of improving their employees' professional skills, these particular companies had to, among other things, invest in the research and development activities both by creating new centers, as well as by including new people in the research and development departments to help in the process of finding and manufacturing certain products to be traded on the market and to develop a profit. For example, the French company Lafarge aimed at assigning an annual rate of 1% of its sales amount for the financing of these activities. Even if it failed to assign these amounts every year, it tried to come closer to this rate.

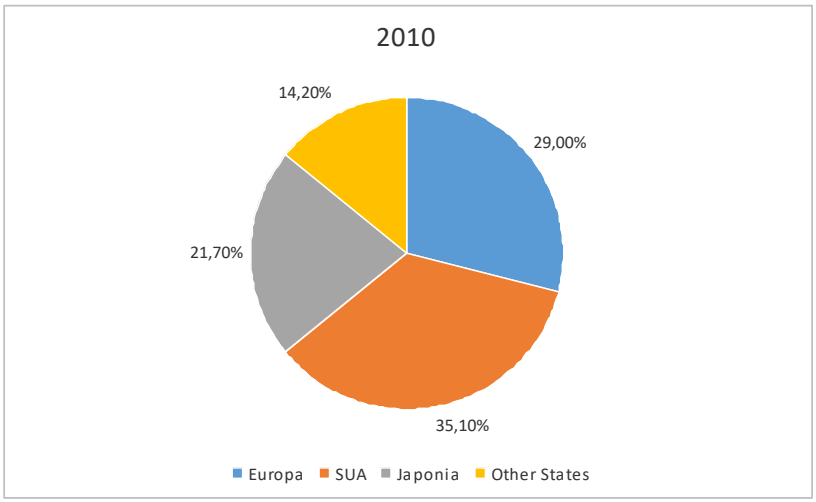
2. Financing the research and development activities

My scientific undertaking intended to show this process of financing research and development through a comparative study, over a period of 5 years, more exactly between 2010-2014.

For 2010, the study of the European Union was performed on a cross section of 1,400 companies worldwide that made investments in their research and development activities. The 1,400 selected companies included 400 in Europe, 487 in USA, 267 in Japan, as well as 246 companies from other 23 states such as China, Taiwan, South Korea, Switzerland, Canada, India, Norway and Australia.

The financing amount for the research and development activities was €455.97 billion, divided as shown in Picture 1:

Picture 1. Financing amount of the research and development activities in 2010 (billions of euros)

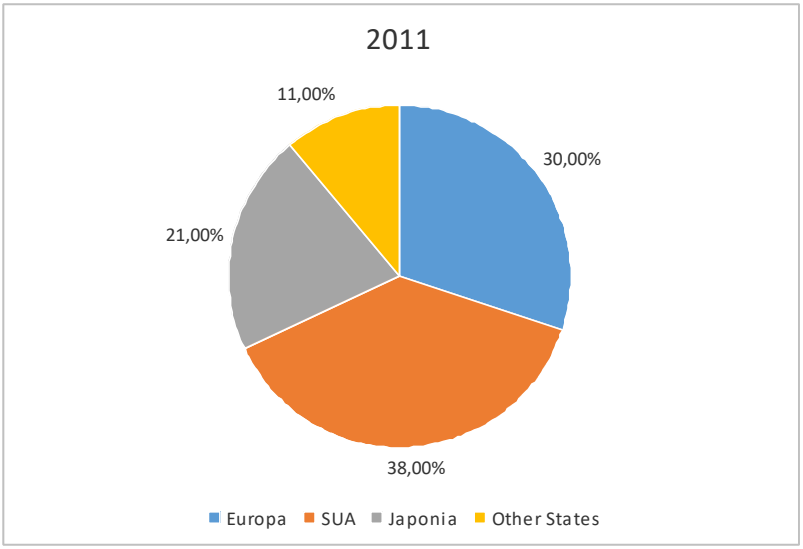


(*Source*: Author's adaptation of *The 2011 EU Industrial R&D Investment Scoreboard. European Commission, JRC/DG RTD*)

For 2011, a cross section was used including 1,500 companies worldwide that invested in their research and development activities. The 1,500 selected companies included 405 in Europe, 503 in USA, 296 in Japan, as well as 296 companies from other 19 states such as China, Taiwan, South Korea, Switzerland, Canada, India, Norway, Cayman Islands, Brazil and Australia.

The financing amount of the research and development activities was €510.7 billion, divided as shown in Picture 2:

Picture 2. The financing amount of the research and development activities in 2011 (billions of euros)

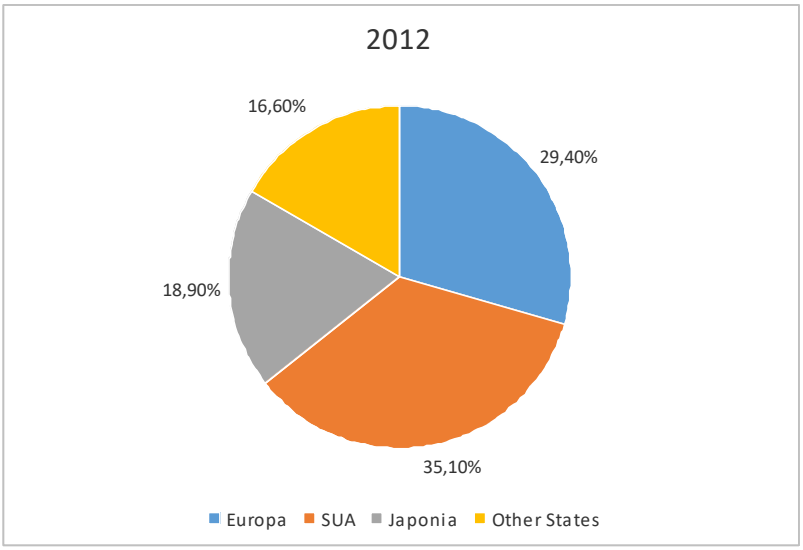


(*Source*: Author's adaptation of *The 2012 EU Industrial R&D Investment Scoreboard. European Commission, JRC/DG RTD*)

For 2012, a cross section was used including 2,000 companies worldwide that invested in their research and development activities. The 2,000 selected companies included 527 in Europe, 658 in USA, 353 in Japan, as well as 462 companies in 25 states such as China, Taiwan, South Korea, Switzerland, Canada, India, Norway, Cayman Islands, Brazil and Australia.

The financing amount of the research and development activities was €538.8 billion, divided as shown in Picture 3:

Picture 3. Financing amount of the research and development activities in 2012 (billions of euros)



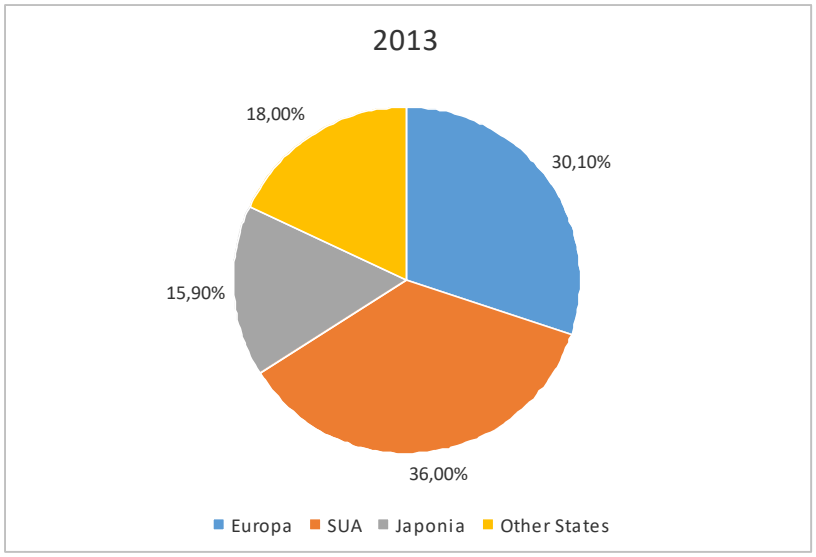
(*Source*: Author's adaptation of *The 2013 EU Industrial R&D Investment Scoreboard. European Commission, JRC/DG RTD*)

For 2013, a cross section was used including 2,500 companies worldwide that invested in their research and development activities. The 2,500 selected companies included 633 in Europe, 804 in USA, 387 in Japan, as well as 676 companies in other 26 states such as China,

Taiwan, South Korea, Switzerland, Canada, India, Norway, Cayman Island, Brazil and Australia.

The financing amount of the research and development activities was €538.3 billion, divided as shown in Picture 4:

Picture 4. Financing amount of the research and development activities in 2013 (billions of euros)

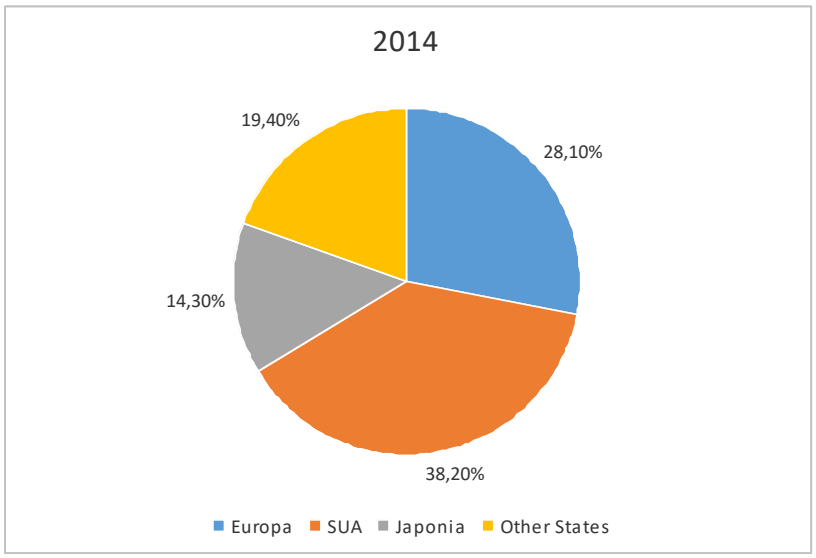


(*Source*: Author's adaptation of *The 2014 EU Industrial R&D Investment Scoreboard. European Commission, JRC/DG RTD*)

For 2014, a cross section was used including 2,500 companies worldwide that invested in their research and development activities. The selected 2,500 companies included 608 in Europe, 859 in USA, 350 in Japan, as well as 673 companies in other 29 states such as China, Taiwan, South Korea, Switzerland, Canada, India, Norway, Cayman Islands, Brazil and Australia.

The financing amount of the research and development activities was €607.2 billion, divided as shown in Picture 5:

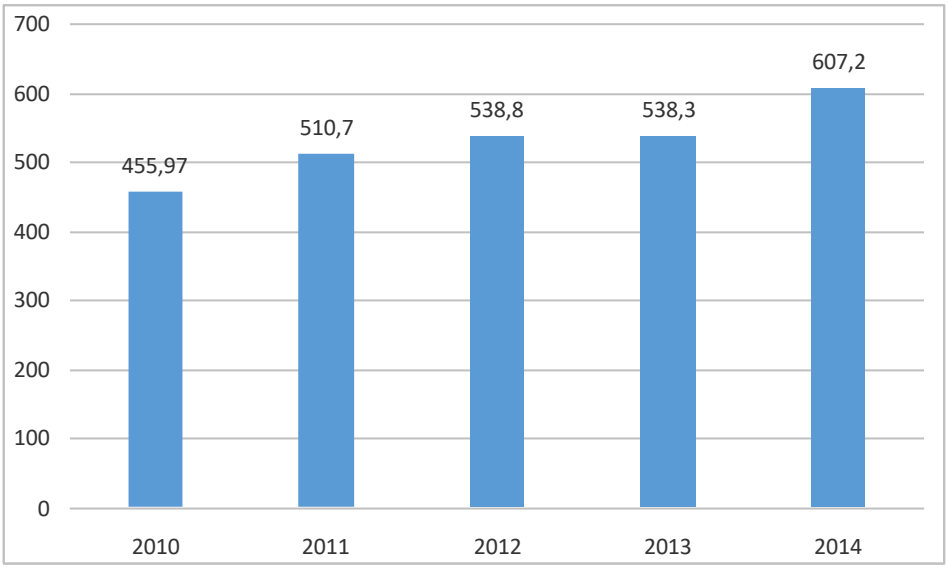
Picture 5. The financing amount of the research and development activities in 2014 (billions of euros)



(*Source*: Author's adaptation of *The 2015 EU Industrial R&D Investment Scoreboard. European Commission, JRC/DG RTD*)

As noticed, the financing value also grew year by year, directly connected to the rising number of the cross section companies. The financing amount is outlined in the Graphic 1:

Graphic 1.Financing amount of the research and development activities during 2010-2014 (billions of euros)



(*Source*: Author's adaptation of *The 2011,2012,2013,2014 and 2015 EU Industrial R&D Investment Scoreboard. European Commission, JRC/DG RTD*)

At the same time, it is worth noticing that the financing amount of 2014 grew by 12.8% as compared to 2013, which is not a small percentage, but it gives us hope that the research area tends to become one of the most important areas.

3. Conclusions

The presented study points out that the examined period of time included a growth of the financing amount for research and development activities, proving that new products

appeared on the market, part of the old products upgraded, everything aiming at client satisfaction.

It is also worth noticing that financing this area also led to new jobs, as well as to improved professional skills of the employees in this area, even though, sometimes, these employees were hired by rival companies. Again, this is a proof that the winner is the one who meets the client's, that is the employee's, needs, but the first winner is the employee.

BIBLIOGRAPHY

[1] The 2011 EU Industrial R&D Investment Scoreboard. European Commission, JRC/DG RTD [Accessed 15 November 2016]
[2] The 2012 EU Industrial R&D Investment Scoreboard. European Commission, JRC/DG RTD [Accessed 15 November 2016]
[3] The 2013 EU Industrial R&D Investment Scoreboard. European Commission, JRC/DG RTD [Accessed 15 November 2016]
[4] The 2014 EU Industrial R&D Investment Scoreboard. European Commission, JRC/DG RTD [Accessed 15 November 2016]
[5] The 2015 EU Industrial R&D Investment Scoreboard. European Commission, JRC/DG RTD [Accessed 15 November 2016]