



# **FUNDING OPPORTUNITIES FOR HUNGARIAN SMALL AND MEDIUM SIZED ENTERPRISES**

With a focus on Research and Innovation

Zsuzsanna Kerémi

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Tampereen Ammattikorkeakoulu  
Tampere University of Applied Sciences

## **ABSTRACT**

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**KEREMI, ZSUZSANNA:**

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The thesis was written for a Hungarian proposal writer office in order to help them to expand their palette to international research and innovation projects, just like the new framework programme of the European Union, called Horizon 2020. The company works with Small and Medium Sized Enterprises (SMEs), therefore the focus of the thesis was on that sector.

The aim of the thesis was to explore the SME sector of Hungary, to give an overall picture of the EU budget and the recent financial framework period for 2014-2020. The paper focuses on opportunities available for SMEs in the EU level, and draw attention on the importance of research and innovation.

The thesis concludes where does Hungary stand in the EU level, and what should be done to improve this, by indicating the situation of the SME sector and access to finance compared to the other European Union member states. The paper includes a survey that was collected among Hungarian and foreigner SMEs to show the problems and difficulties SMEs face when applying to framework programs.

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Key words: framework program, European Union, grant, Small and Medium Sized Enterprises, EU budget, Horizon 2020, research and innovation

## CONTENTS

1	INTRODUCTION .....	7
2	Small and Medium Size Enterprises .....	9
2.1	SME definition.....	9
2.2	SMEs in the EU .....	10
2.2.1	Current position of SMEs in the EU .....	10
2.2.2	Small Business Act .....	11
2.2.3	Future of SMEs in the EU .....	12
2.3	SMEs in Hungary.....	12
2.3.1	SMEs in Hungary by number.....	13
2.3.2	Industrial distribution of the Hungarian SMEs .....	14
2.3.3	SWOT Hungary .....	15
3	Budget .....	18
3.1	MFF Multiannual Financial Framework.....	18
3.2	EU Budget.....	18
3.2.1	2007-2013 Financial Framework - Expectations contra results....	20
3.2.2	2014-2020 - Changes, new expectations.....	22
3.3	Benefits for Hungary .....	23
3.3.1	Hungary 2014-2020 – Meeting the EU Objectives.....	25
4	SME Finance .....	27
4.1	Green Paper – Entrepreneurship in Europe 2003 .....	27
4.2	Action plan to improve access to finance for SMEs.....	27
4.3	SAFE Survey results .....	28
4.4	Access to Finance in Hungary .....	29
4.5	Funding options .....	32
4.5.1	COSME - Competitiveness of Enterprises and Small and Medium-sized Enterprises .....	33
4.5.2	LIFE (2014-2020) (the Financial Instrument for the Environment).....	34
4.5.3	HORIZON 2020 – the new framework program for the period 2014-2020. ....	34
4.5.4	EUREKA – A Network for market oriented R&D .....	34
4.5.5	Structural Funds – Hungary .....	35
4.5.6	Financial Instruments - JEREMIE .....	36
5	Research and Innovation .....	38
5.1	Innovation Union .....	38
5.2	Research and Innovation in Hungary.....	39

5.3	SWOT Analysis of the Hungarian Research and Development and Innovation system .....	44
5.4	Funding for research and innovation from the EU Community budget ..	46
5.5	Framework Programmes .....	47
5.5.1	FP7 Results .....	47
5.5.2	Horizon 2020.....	48
6	Questionnaire.....	52
6.1	The questions .....	52
6.2	Finding respondents .....	53
6.3	Results and conclusion of the Questionnaire .....	54
7	Conclusion.....	58
	REFERENCES.....	59
	APPENDICES Questionnaire Page 1 .....	61
	Questionnaire Page 2.....	63
	Questionnaire Page 3 A .....	65
	Questionnaire Page 3 B .....	66
	Questionnaire Page 3 C .....	67
	Questionnaire Page 3 D .....	67

## LIST OF ABBREVIATIONS AND TERMS

SBA	Small Business Act – collection of the main initiatives of the EU to help SMEs
SME	Small and medium-sized enterprises
FP7	7th Framework Programme
H2020	Horizon 2020
SPR	SME Performance Review is a document from the European Commission highlighting the development of this sector, using three key performance indicators: the number of SMEs, the value added generated by SMEs and the number of persons employed by the SMEs.
CAP	Common Agricultural Policy
GNI	Gross National Income
MFF	Multiannual Financial Framework
FP7	Seventh Framework Programme for research and technological development
LLP	Lifelong learning programme
CIP	Competitiveness and innovation programme
TENs	Trans-European networks
EEN	Enterprise Europe Network
ERDF	European Regional Development Fund
ESF	European Social Fund
CF	Cohesion Fund
EAFRD	European Agricultural Fund for Rural Development
DCI	Development Cooperation Instrument
JEREMIE	Joint European Resources for Micro to Medium Enterprises
GERD	Gross domestic expenditure on R&D
NIH	Nemzeti Innovációs Hivatal – (Hungarian) National Innovation Office
PCP	Pre-Commercial Procurement

## 1 INTRODUCTION

This paper is written for a Hungarian Proposal Writer office that has been working mainly with enterprises and research centres that apply to projects financed by the Hungarian Structural Fund. They are planning to expand their palette to international research and innovation projects just like the new framework programme of the European Union, called Horizon 2020. The company mostly works with Small and Medium Sized Enterprises (SMEs), therefore this thesis also focuses on that sector.

The aim of the thesis is to explore the SME sector of Hungary, to give an overall picture of the EU budget, the EU Strategy until 2020, and the recent financial framework period for this 7 years, (2014-2020). In the second half of the thesis I would like to describe the opportunities available for SMEs in the international level, and draw attention on the importance of research and innovation.

In the paper I would like to find out where does Hungary stand in the EU level, and what should be done to improve this, by indicating the situation of the SME sector and access to finance.

The paper has a focus on the new program, Horizon 2020 as requested by the company. I made a questionnaire among Hungarian and also Foreigner SMEs, to find out more about the problems SMEs face when applying to H2020. At the same time I would like to find out how well-known the H2020 is among the questionnaire participants, and in which areas would their business need financial support.

As background information, I did my practical training in a Hungarian SME, working in the ICT sector. They were planning to apply to a H2020 project in a consortia last year. Therefore my main tasks in the practical training included reading all material available on Horizon 2020. During that time, I had the opportunity to go to conferences related to Horizon 2020, and the ICT calls. The National Innovation Office (NIH) organises constantly presentations, lectures and info days to provide information about the new framework program. The Participant Portal, the Help Desk, the National Contact Points and the Enterprise European Network are all easy to access and helpful for anyone interested in the project.

Listening the presentations and reading more about H2020, even before writing this thesis, I started to ask the questions more frequently, that why the Hungarian SMEs are not receiving more grants from this programme? Why are the Nordic countries and Germany more efficient? Why is the rate of the successful projects in Hungary lower than the EU average? Is there some problem, or gap that is not realised here? How could we improve the competitiveness of this country? And how could we get more capital from the EU for Research and Innovation? Why did Hungarians have only 1468 successful participants in the 7th EU Framework Programme? In the following I would like to find answers to these questions as well.



## 2 Small and Medium Size Enterprises

In this first chapter I will write about the small and medium sized enterprises. First I will define SMEs according to the EU recommendation, than I will focus on the current situation of these businesses in the European Union and in Hungary. In the end of the chapter I will collect the strengths, weaknesses, opportunities and threats of the Hungarian SME sector.

### 2.1 SME definition

"SME" stands for small and medium-sized enterprises, sometimes also called as small and medium-sized businesses (SMBs). In EU law (EU recommendation 2003/361/EC) SME is defined using two main factors, as shown in Table 1:

1. number of employees and
2. either turnover or balance sheet total

*Table 1 SME definiton table*

<b>Company category</b>	<b>Employees</b>	<b>Turnover</b>	or	<b>Balance sheet total</b>
Medium-sized	< 250	≤ € 50 m		≤ € 43 m
Small	< 50	≤ € 10 m		≤ € 10 m
Micro	< 10	≤ € 2 m		≤ € 2 m

Note: this definition in Table 1 applies to the figures for individual firms only. A firm which is part of larger grouping may need to include employee/turnover/balance sheet data from that grouping too. (The new SME definition, 2005, 24)

As Table 1 shows, there are three types of SMEs:

- Micro-enterprises with less than 10 employees, and with a turnover or balance sheet less than 2 million Euro.
- Small enterprises with less than 50 employees, and with a turnover or balance sheet less than 10 million Euro.
- Medium-sized enterprises with less than 250 employees, and with a turnover less than 50 million Euro or balance sheet less than 43 million Euro.

## 2.2 SMEs in the EU

### 2.2.1 Current position of SMEs in the EU

In between the 28 Member States of the European Union (EU28), there were 21.6 million SMEs in the nonfinancial business sector in 2013. These enterprises employed 88.8 million people (66.9% of total employment) and generated 3,666 trillion Euro (58.1 % of total) in value added in 2013. Which means that more than 99,8% of the enterprises were accounted as SMEs. This illustrates the importance of the SMEs. (SME Performance Review, 2014, 14).

In 2013 the number of SMEs decreased by (-0.9%), and the number of employees in SMEs by (-0.5%). Due to the economic difficulties, the turnover generated by the SMEs showed worse result as it increased by only 1.1% in 2013, while in the previous years, the growth was 1.5% (2012) and 4.2% (2011). (SME Performance Review, 2014, 6). These numbers show a decline in the recent years. Due to the economic crisis the future forecast is not as positive as it should be, I will write about it later in this chapter.

Table 2 below shows the number of micro, small, medium and large sized enterprises by number of enterprises, employment, and value added at factor cost. The table clearly shows that the large enterprises has a great market share in value added and employment, while the number of them is around 0,2% of the total.

*Table 2 SMEs and large enterprises: number of enterprises, value added and employment in the EU28 in 2013*

	<b>Micro</b>	<b>Small</b>	<b>Medium</b>	<b>SMEs</b>	<b>Large</b>	<b>Total</b>
<b>Number of enterprises</b>						
Number	19,969,338	1,378,374	223,648	21,571,360	43,517	21,614,908
%	92.4%	6.4%	1.0%	99.8%	0.2%	100%
<b>Employment</b>						
Number	38,629,012	27,353,660	22,860,792	88,843,464	44,053,576	132,897,040
%	29.1%	20.6%	17.2%	66.9%	33.1%	100%
<b>Value added at factor costs</b>						
Mill. €	1,362,336	1,147,885	1,156,558	3,666,779	2,643,795	6,310,557
%	21.6%	18.2%	18.3%	58.1%	41.9%	100%

*Source: Eurostat, National Statistical Offices and DIW Econ*

### 2.2.2 Small Business Act

In June 2008, the European Commission released the Small Business Act (SBA) for Europe – a brochure introducing all the main initiatives of the EU to help SMEs.

The act is a set of principles to guide the EU and the Member States to bring added value and to improve the business environment for SMEs by modernisation and simplification of the existing EU legislations in order to bring better results. Applying the SBA, the Commission increased the SME focus in major EU support programs.

(Think Small First, A Small Business Act for Europe, 2008, )

The Small Business Act does not constitute as legal, but serves as a guideline in the planning and implementation in both National and European Union level ensuring equal conditions for SMEs. The ten principles are the following:

1. **Entrepreneurship:** Creating an environment in which entrepreneurs and family businesses can thrive and entrepreneurship is rewarded.
2. **Second Chance:** Ensuring that honest entrepreneurs who have experienced bankruptcy are promptly given a second opportunity to succeed.
3. **Think Small First:** Designing rules modelled on the “Think Small First” principle.
4. **Responsive Administration:** Making public administrations responsive to the needs of SMEs.
5. **State Aid and Public Procurement:** Adapting public policy tools to suit SME needs - facilitating SMEs’ participation in public procurement and ensuring better access to State Aid for SMEs.
6. **Access to Finance:** Facilitating SMEs’ access to finance and developing a legal and business environment conducive to the specific requirements of SMEs, including timely payments in commercial transactions.
7. **Single Market:** Helping SMEs to benefit more from the opportunities offered by the Single Market.
8. **Skills and Innovation:** Promoting the enhancement of skills in the SME workforce and all forms of innovation.
9. **Environment:** Enabling SMEs to transform environmental challenges into economic opportunities while acting sustainably.

**10. Internationalisation:** Encouraging SMEs to benefit from the growth of global markets and supporting them in this pursuit. (Think Small First, A Small Business Act for Europe, 2008, 4)

### 2.2.3 Future of SMEs in the EU

There is slight growth forecasted to the near future, according the SME Performance review (SPR) that also highlights the implementation of the SBA and set out recommendations for future improvement. The total value added generated by SMEs is expected to rise by 2.8% in 2014 and 3.4% in 2015. There is growth expected in employment also with another 740,000 jobs in SMEs. The total number of SMEs should grow by 0.38% by 2015. (SME Performance Review, 2014, p.9)

In the following chapters I will try to find the main problems that SMEs face. According to the Survey on Access to Finance of SMEs in the Euro Area (SAFE) survey data these problems include finding potential customers, costs of production and labour, access to finance, lack of educated and experienced staff, competition and regulations. (Survey on the access to finance of enterprises (SAFE) Analytical Report 2014)

## 2.3 SMEs in Hungary

There is a big difference in the value added and employment rate generated by SMEs among the EU countries due to the economic recession. In the so called front runner group, including Austria, Belgium, Germany, Estonia, Malta, Sweden and Slovakia the value added generated by SMEs in 2013 was 10% or higher than in 2008. While the same indicator showed decrease with 10% or more in the very weak performance countries just like Croatia, Cyprus, Czech Republic, Hungary, Greece, Ireland, Portugal, Romania, Slovenia and Spain. (SME Performance Review, 2014, 21)

Between 2009 and 2013, the situation of Hungarian SMEs got worse. 22000 SMEs were closed down (4%), which concerned 32500 jobs (2%), while the value added fell by 6%

over the same period. (SBA Factsheet Hungary 2014, 2) The crisis had a bigger impact on the small and medium sized businesses than on the large companies.

### 2.3.1 SMEs in Hungary by number

Hungary is the 13<sup>th</sup> biggest country among the EU member states by size with its 9,8 million population. Table 3 shows the number of micro, small, medium and large sized enterprises by number of enterprises, employment, and value added at factor cost in Hungary.

*Table 3 SMEs in Hungary*

	Micro	Small	Medium	SMEs	Large	Total
Number of enterprises						
Number	497 947	23 906	4 064	525 917	829	526 746
%	94.5%	4.5%	0.8%	99.8%	0.2%	100%
Number of employees						
Number	867 316	447 932	404 374	1 719 622	708 457	2 428 079
%	35.7%	18.4%	16.7%	70.8%	29.2%	100%
Value added at factor costs						
Mill €	8 570	7 528	8 874	24 972	21 365	46 336
%	18.5%	16.2%	19.2%	53.9%	46.1%	100%

Source: Eurostat, National Statistical Offices and DIW Econ, 2014 SBA Factsheet Hungary

Comparing Table 2 (EU) and 3 (Hungarian), we can see that the number of SMEs in Hungary is 2,4% of the total SMEs of the EU, while the number of employees is 1,9% and the value added is only 0,7% of the EU total numbers. Hungary must focus on increasing the value added by SMEs if it wants to improve its economic situation.

Looking into the tables more detailed, we can see, that the percentage of the Micro businesses in Hungary is bigger (94,5%) than the EU average (92,4%). Also important to note that the biggest sector where the people are employed is the same, micro businesses sector in Hungary with more than 867 thousand people (35,7%), not like in the EU average, where most people are employed by large companies (33,1%). The reason for the low number of the value added by Hungarian SMEs is significant by the

results. The large enterprises rule the market. The value added generated by the businesses employing more than 250 people takes the 46,1% of the overall value added in Hungary (while the number of large enterprises is only 0,2% of the total enterprises).

There is a significant regional concentration among the SMEs. In 2012, 45% of the total SMEs were located in Central Hungary, due to the capital city, Budapest, where 31% of the SMEs were located. (KSH – Statisztikai Tükör, 2013.)

The largest part of the businesses are private enterprises (66% in 2012), however there is a growing number of corporations parallel with the growth in SMEs. With the increase in the size of the organization the ratio of limited liability companies is growing as well. (KSH – Statisztikai Tükör, 2013.december)

### 2.3.2 Industrial distribution of the Hungarian SMEs

Most of the Hungarian small and medium sized enterprises exist in the field of Wholesale and retail trade; repair of motor vehicles and motorcycle and Professional, scientific and technical activities. Most of the people are employed in the previously mentioned Wholesale and retail trade; repair of motor vehicles and motorcycle and Manufacturing, while the most profit comes from the same industries, as can be seen in Table 4. This is important because in the following chapters I will write more about Research and Innovation, which is an important part of Professional, scientific and technical activities.

*Table 4 Industrial distribution of the Hungarian SMEs*

Industries	Number of SMEs	Number of employees	Value added in Million €
Mining and quarrying	429	3537	111
Manufacturing	49310	369204	5730
Electricity, gas, steam...	622	7410	674
Water, sewerage, waste, remediation	1861	22150	305
Construction	59911	182276	2043
Vehicles and motorcycle, wholesale and retail trade	134661	440872	5546

Transportation and storage	28049	99142	1999
Accommodation, food services	30824	113985	597
Information and communication	33020	77371	2018
Real estate activities	32122	64468	1575
Professional, scientific and technical activities	116380	209937	2771
Administrative and support services	38728	129270	1603
SUM	525917	1719622	24972

Source: Eurostat SBS database and National statistical office

### 2.3.3 SWOT Hungary

In the following there is a SWOT analysis of the Hungarian SME sector, including the strengths, weaknesses, opportunities and threats. As resource I used the document written by Professor of the Corvinus University Budapest, Dr. Szabó Antal.

*Table 5 SWOT analysis of the Hungarian SME sector*

Strengths	Weaknesses
<p>The Hungarian entrepreneurial legislation provides an appropriate basis for establishing a business. According to the Act. LXI of 2007, it is simplified and less costly to set up a company.</p> <p>Our entrepreneurs are flexible and adaptive to new challenges.</p> <p>A new entrepreneurial generation appeared in the market, creating a highly motivated start-up ecosystem.</p> <p>Easier taxation for SMEs.</p> <p>The appearance of venture capital funds set the private sector in motion.</p> <p>Start-ups began to compete in the domestic and EU level.</p> <p>Skilled and experienced staff and managers (educated and experienced).</p> <p>Improvement in the loans for SMEs.</p> <p>Positive effect of the Széchenyi Card.</p> <p>Factoring program helps with the liquidity problems.</p> <p>Broad scientific research background is available (already in the university departments, ERENET network)</p>	<p>Cost of production and labour.</p> <p>Regulations.</p> <p>Unfavourable macroeconomic developments, huge and growing national debt, reckless and slow convergence process.</p> <p>Dual economic organization, extremely strong and by the government highly subsidized multinational presence, while weak and vulnerable domestic SME sector;</p> <p>The multinational companies abusing their dominant position against the domestic SME suppliers.</p> <p>More than fifty different kind of taxes, unpredictable tax system.</p> <p>Large number of inefficiently managed and low-capital businesses.</p> <p>The domestic companies are not prepared to extend their markets intentionally.</p> <p>Large number of debts and unpaid bills.</p> <p>Less funding sources compared to the developed countries.</p>

	<p>The mandatory electronic tax declaration is a significant administrative and financial burden.</p> <p>Low risk-taking among the entrepreneurs and low business culture.</p> <p>Significant ratio of black labour and unemployment - the structure of the Hungarian labour market is unfavourable.</p> <p>Hard to comprehend with the governmental support system for the SMEs.</p> <p>No unified view among the parliamentary parties about the support for SMEs, therefore not enough emphasis and support for SMEs.</p>
Opportunities	Threats
<p>Incubators and accelerators were launched followed by professional blogs. Conferences and consultants provide assistance with education and the opportunity to establish contacts among investors and entrepreneurs.</p> <p>Available EU funds.</p> <p>The Széchenyi Card simplifies the access of capital for SMEs with an adequate history.</p> <p>Favourable conditions for foreign sales due the provisions of the EU's internal market.</p> <p>The competitiveness of the Hungarian research and development, and innovative solutions against the cheaper labour markets (Croatia, Romania, Serbia, Ukraine)</p> <p>The possibilities of integration of domestic SMEs, and networking facilities by the Governmental Public-private partnership programs (assisting in the supplier programs)</p> <p>Business consultant system helps to improve the competitiveness of the entrepreneurs.</p> <p>The European Commission's Framework program, the so called Horizon 2020 provides opportunity for the innovative business in competitiveness and Innovation.</p> <p>The JEREMIE program can help the micro, small and medium-sized enterprises access to finance, especially businesses that would not get financial help from the banks.</p>	<p>Slowdown in the development of the SME sector, and increased disadvantages against the bigger competitors.</p> <p>The increasing taxes reduces the accumulation of the own resources.</p> <p>Due to the aggressive policy of the multinationals the number of the domestic SMEs reduced.</p> <p>Because of the more favourable economic environment, the number of SMEs paying taxes to the neighbouring countries has increased.</p> <p>An increasing number of companies are loss-making, leading to liquidation.</p> <p>Bureaucratic and extremely complicated policies and regulations - the Hungarian controlling authorities punish more than they help to understand the instructions.</p> <p>There is wrong picture drawn of the entrepreneurial attitude - in the media, the entrepreneurs are not honest and socially responsible.</p> <p>Because of the quickly accessible profit orientation, the aspects of sustainable development is neglected.</p> <p>The SMEs do not get enough support, information and consulting - what leads to decline in competitiveness against the other EU member countries.</p>



Sources: SWOT analysis of the Hungarian SME sector, using Corvinus University of Budapest, Small Business Development Center, by Dr. Szabó Antal

The overall goal of the European Union - just like the goal of the Hungarian national strategy - is the expansion of employment and ensure economic growth while protecting the environment.

From the SWOT table it is clear that the Hungarian SMEs has good opportunities for development and expansion, but in the same time the threats and weaknesses are significant. The assistance of the European Union, and the Hungarian government has a remarkable role in this. Without realising the weaknesses and threats, the Hungarian SME sector cannot become competitive, and reach the goals set for 2015, and in the overall financial period by 2020. In the following I will try to highlight the possibilities for growth.

### **3 Budget**

In this chapter the focus is on the EU budget and the Multiannual Financial Framework. I will analyse the previous periods, and include the future expectations as well from both European and Hungarian aspects.

#### **3.1 MFF Multiannual Financial Framework**

The Multiannual Financial Framework (MFF) is a seven-year plan regulating the annual budget. In the MFF the maximum amount of expenditure is set for every year that can be spent in different fields. The European Union sets the multiannual financial frameworks since 1988. The previous and already ended 7 year periods were between 1988-1992, 1993-1999, 2000-2006 and 2007-2013. The current financial programming for 2014-2020 was agreed as a legal act on December 2013.

After looking into the Budget in detail, where does the money come from, and how is it spent, I will write about the recently ended financial framework of 2007-2013, and collect the changes and goals for the current 2014-2020 period from both EU and Hungarian perspective.

#### **3.2 EU Budget**

The EU Budget is prepared by the European Commission and is then discussed and agreed by the Council of the EU and by the European Parliament. The money comes from 4 different resources, as can be seen in Figure 1. (European Commission webpage, Financial Programming and Budget 2014)

- Traditional own resources – generated by the customs that were collected when goods imported from outside the EU (around 10,3%)
- VAT-based own resources – generated from a small percentage of the Value added tax of the member states (around 9,4%)

- GNI-based own resources – generated by a standard percentage of the Gross national income of the member states – this takes the  $\frac{3}{4}$  part of the whole revenue (around 73,8%)
- Surplus from previous year (around 0,7%)
- Other revenue – just like tax and deduction from EU staff, interest on deposit or late payment, payments from non-EU countries, surplus from previous budget (around 5,8%)

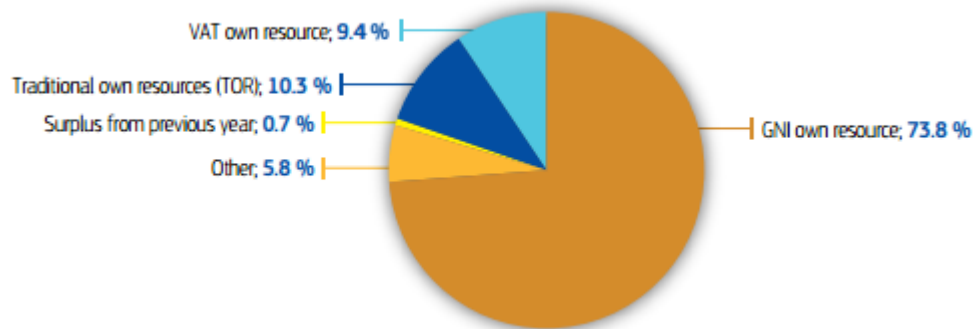


Figure 1 EU Revenue 2013

Source: <http://ec.europa.eu/> Financial Programming and Budget 2014

The EU budget is about 1% of the 28 EU countries' gross domestic product (GDP) – which means around 224 Euro per person. It was nearly 144 billion Euro in 2013 – while the budgets of the 28 EU member states' national budgets was over 6,400 billion Euro.

94% of the budget is spent on the following (as can be also seen in table 6).

- Sustainable growth (including Competitiveness for growth and employment and Cohesion for growth and employment),
- Preservation and management of natural resources (including Common Agricultural Policy (CAP))
- Citizenship, freedom, security and justice
- EU as a global player

While the remaining 6% is spent on Administration and Compensations.

(European Commission webpage, Financial Programming and Budget 2014)

Table 6 Executed payments in 2013 (million Euro)

Heading	Payments
1a Competitiveness for growth and employment	12 621
1b Cohesion for growth and employment	56 321
2 Preservation and management of natural resources	58 012
3a Freedom, security and justice	1 055
3b Citizenship	657
4 The EU as a global player	6 812
5 Administration	8 235
6 Compensations	75
Total	143 786

Source: EU Budget 2013 – Financial report, 24

### 3.2.1 2007-2013 Financial Framework - Expectations contra results

During the 7year financial framework program, the EU has set measurable objectives, and achieved a lot. In the following, I will collect these goals, and the results using the EU budget 2013 Financial Report

#### Competitiveness for growth and employment

The main objective was to create more economic growth, jobs and social cohesion. It helped students, small and medium enterprises, researchers and also everyday citizens, with the following major programmes:

- Seventh Framework Programme for research and technological development (FP7) – I will write about it later more detailed
- Lifelong learning programme (LLP)
- Competitiveness and innovation programme (CIP)
- Trans-European networks (TENs) (including investments in road, rail, multi-modal links, air, inland waterways and maritime routes)
- The 600 partners of the Enterprise Europe Network in 50 countries helped SMEs
- Erasmus program helped students to study creating advantages for them in the job market

(EU budget 2013, 2014, 49-61)

### **Cohesion for growth and employment**

The European Regional Development Fund (ERDF), the European Social Fund (ESF) and the Cohesion Fund (CF) helped to strengthen economic, social and territorial cohesion between regions and the EU Member States. They also supported competitiveness, employment and encouraged cross-border, transnational and interregional cooperation.

During the 2007-12 period, the Cohesion fund helped to co-finance the building or reconstruction of 1 200 km of road and 580 km of railways. It provided an improved water supply to 2.8 million citizens and served 5 million citizens with waste water treatment. (EU budget 2013, 2014, 62-69) During this period, thanks to the European regional development fund, 594 000 gross jobs were created; 5 million citizens have gained broadband access. 29 350 renewable energy projects, 19 000 education projects and 3 800 health projects were financed. (EU budget 2013, 2014, 14)

### **Preservation and management of natural resources**

The EU invested the most in Agriculture to encourage save production of high quality food using innovative farming.

EUR 13 billion were available through the European Agricultural Fund for Rural Development (EAFRD) in 2013. The EAFRD contributed to boost the economic potential of rural areas, to create new sources of income for the inhabitants by encouraging the diversification of their activities and to protect our rural heritage. It focused on increasingly important issues such as climate change, biodiversity, water management and renewable energy. Climate action was a key priority for the European Union. A relevant example was the programme LIFE + which contributed to the implementation, updating and development of EU environmental policy and legislation and received EUR 269 million in 2013. (EU budget 2013, 2014, 70-76)

### **Freedom, security and justice**

EUR 1.1 billion was allocated in 2013 for the protection of freedom, security and justice within the EU, including the

- Solidarity and management of migration flows programme preventing illegal immigration.

- Security and safeguarding liberties programme helped the Member States to cooperate in the fight against crime and preventing terrorism.
- Criminal justice programme helped the judicial cooperation

(EU budget 2013, 2014, 79-89)

### **Citizenship**

'Youth on the move', 'An agenda for new skills and jobs', 'European platform against poverty', 'Innovative Union' and 'Europe for citizens' programmes were some of the EU funded projects under citizenship to provide better life and create 'European identity' among the EU members. (EU budget 2013, 2014, 90)

### **The EU as a global player**

Offering help for potential future EU Members, and neighbouring countries. Including Development Cooperation Instrument (DCI) and other external actions. (EU budget 2013, 2014, 104)

### **3.2.2 2014-2020 - Changes, new expectations**

The main goal of the current financial funding period between 2014 and 2020 meets the target of the Europe 2020 Growth strategy. With simplification of the rules, the application for funding will be available for more people, bringing more measurable results. With less administrative obligations more understandable and simple funding rules. Using online systems, such as e-application and e-reporting and easier accounting system will help the submission process. The most important elements of the 2014–20 MFF include:

- ▶▶ a focus on growth, jobs and competitiveness with increased investment in education and research through the European Social Fund (ESF) and the European Regional Development Fund (ERDF).
- ▶▶ a higher quality of spending thanks to simpler rules for EU funds and a clear focus on investments producing tangible results;
- ▶▶ a reformed common agricultural policy for a more competitive and environmentally friendly European agriculture;
- ▶▶ the fight against climate change as a key component of all major EU policies and devoting 20 % of the 2014–20 MFF to actions against climate change;

- ▶▶ solidarity with the poorest EU countries and regions by concentrating the largest portion of regional funding in those parts of the EU and by introducing a new youth employment fund;
- ▶▶ reduced administrative expenditure growth thanks to cuts in staffing numbers at European institutions.
- ▶▶ with the Erasmus + grants, more than 4million young people will be able to study, train or volunteer abroad
- ▶▶ 1.5 billion Euro will be available over the next seven years to support culture in the new Creative Europe program (Source: The EU budget in my country, Hungary)

Table 7 shows the commitments in million Euro for the 2014-2020 Financial Framework program that aims to meet the Europe 2020 Strategy, to create innovative and sustainable growth.

*Table 7 Financial Framework 2014-2020, Commitments in EUR million current prices*

	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Total</b>
<b>Competitiveness for growth and jobs</b>	16560	17666	18467	19925	21239	23082	25191	<b>142130</b>
<b>Economic, social and territorial cohesion</b>	47413	49147	50837	52417	54032	55670	57275	<b>366791</b>
<b>Sustainable Growth: Natural Resources</b>	59303	59599	59909	60191	60267	60344	60421	<b>420034</b>
<b>Security and citizenship</b>	2179	2246	2378	2514	2656	2801	2951	<b>17725</b>
<b>Global Europe</b>	8335	8749	9143	9432	9825	10268	10510	<b>66262</b>
<b>Administration</b>	8721	9076	9483	9918	10346	10786	11254	<b>69584</b>
<b>Compensation</b>	29	0	0	0	0	0	0	<b>29</b>
<b>GRAND TOTAL</b>	<b>142540</b>	<b>146483</b>	<b>150217</b>	<b>154397</b>	<b>158365</b>	<b>162951</b>	<b>167602</b>	<b>1082555</b>

Source: ec.europa.eu, Financial Programming and Budget, MFF 2014-2020

### 3.3 Benefits for Hungary

5,33% of the gross national income came from EU investment (in 2013), therefore we can state that Hungary is one of the EU member states that benefits the most of the membership. During that year Hungary received 5909,8 million Euro from the EU Budget.

More than 95% of the public investments are coming from the EU, trying to expand the employment and ensure economic growth while protecting the environment.

Table 8 shows the amount paid to the EU Budget by Hungary in 2013. The GNI (Gross National Income) was 92,9 billion Euro, while the total national contribution was 920,2 million Euro.

*Table 8 -Operating budgetary balance and the Hungarian resources paid to the EU budget in 2013 in (million Euro)*

VAT-based own resource	<b>109,2</b>
GNI-based own resource	<b>751,2</b>
Other	<b>59,9</b>
<b>TOTAL national contribution</b>	<b>920,2</b>
Traditional own resources (TOR) (75%)	<b>90,9</b>
TOTAL own resources	<b>1 011,1</b>
<b>Gross National Income (GNI), EUR billion</b>	<b>92,9</b>
<b>Operating budgetary balance (EUR million)</b>	<b>+4 954,5</b>
<b>Operating budgetary balance (% GNI)</b>	<b>+5,33%</b>

Source Revenue and Expenditure table 2007-2013 from ec.europa.eu

Hungary received 5909,9 million Euro during 2013. From this 66% was spent on Cohesion for growth and employment, while aid for preservation and management of natural resources was 30% of the total amount. (Revenue and Expenditure table 2007-2013 from ec.europa.eu)

Figure 2 shows the allocation of the budget between the Member states. The purple line shows the amount received in relation with the Gross National Income. As I mentioned above, Hungary is among the countries that benefits the most from the EU Budget.



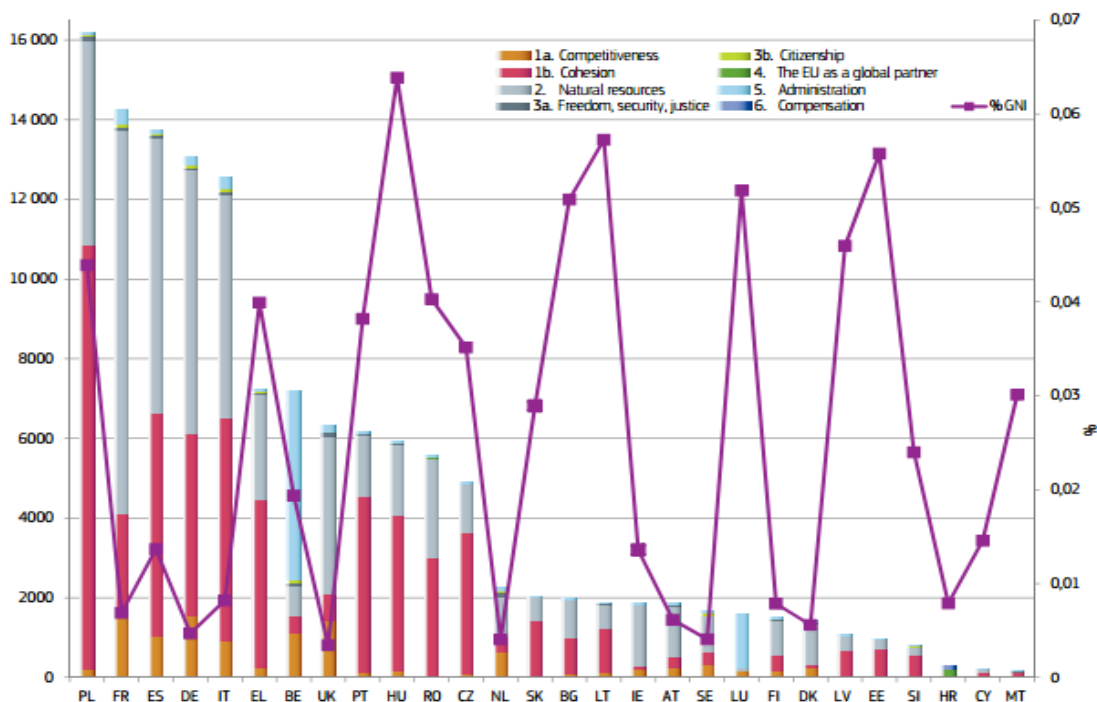


Figure 2 Expenditure by Member States in 2013 ( million Euro)

Source EU Budget 2013 - Financial Report

In the recent years, due to the EU help, Hungary had enough resources to modernize Railway lines, to extend the motorway. EU Funded projects help the scientist to have better working conditions and competitive salaries. New highly equipped medical centres were built. The equal education for everyone program and the Erasmus program gave better opportunities to diligent students to achieve more. New jobs were created, and unemployed people were integrated back to the job market thanks to the EU funds. These are just couple of examples of the advantages and benefits Hungary received by being part of the EU, not mentioning the Agricultural, Environmental and Energy programs. (The EU budget in my country, Hungary)

### 3.3.1 Hungary 2014-2020 – Meeting the EU Objectives

In the following I will compare the 5 main targets of the EU and of Hungary for 2020 – using the sources from (Overview of Europe 2020 Targets) The national targets was set out in the National Reform Programmes (NRP) in April 2014.

Table 9 EU vs Hungarian targets of Strategy 2020

EU	Hungary
<b>Employment</b>	
75% of the 20-64 year-olds to be employed	The employment rate rises to 75%
<b>R&amp;D / innovation</b>	
3% of the EU's GDP (public and private combined) to be invested in R&D/innovation	1,8% of the National GDP to be invested in R&D/innovation
<b>Climate change / energy</b>	
Greenhouse gas emissions 20% (or even 30%, if the conditions are right) lower than 1990	Emissions reduction targets is 10% (compared to 2005 levels)
20% of energy from renewables	Renewable energy 16,45% of gross final energy consumption
20% increase in energy efficiency	26,6% increase in energy efficiency
<b>Education</b>	
Minimum 40% of 30-34-year-olds completing third level education	Minimum 30,3% of 30-34-year-olds completing third level education
Reducing school drop-out rates below 10%	Early school leaving to be reduced to 10%
<b>Poverty / social exclusion</b>	
At least 20 million fewer people in or at risk of poverty and social exclusion	Reduction of population at risk of poverty or social exclusion to 450000

From the table above we can see that the goals are similar however Hungarians do not set as high goals as the European Union.

## **4 SME Finance**

In the SME Chapter I highlighted the economic importance of the SMEs, therefore it is clearly seen that the future economic growth highly depends on the SMEs' growth. This is why I would like to talk about the problems and facts about SME financing. After discovering the access to finance both in Hungarian and EU level, I will collect the finding opportunities available for SMEs from the EU resources.

### **4.1 Green Paper – Entrepreneurship in Europe 2003**

In 2003 the European Commission published the Green Paper – Entrepreneurship in Europe. The work is trying to enhance the efforts taken into entrepreneurship in order to increase the competitiveness of the EU. The Green Paper clearly states that the efforts can be taken from 3 different levels:

- Individual level – motivating individuals to become entrepreneurs with the right training and education for successful businesses, and making it available to everyone in the society
- Firm level – easier entry, better regulatory environment, modernized taxation, financing and innovation
- Society level – better social recognition, failure is a natural inherent in entrepreneurship

(Green Paper – European Commission, 2003)

### **4.2 Action plan to improve access to finance for SMEs**

Financing of Small and medium sized enterprises differ from that of larger corporation in many ways. Growth uncertainty, credit risks (the risk of loss due to a debtor's non-payment of a loan) and shorter lifetime of the SMEs are just couple of risks that an investor must consider.

In order to improve the access to finance for SMEs, the EU published an action plan to improve access to finance for SMEs in 2011. There are short and medium terms goals set in the action plan, including objectives on creating a stable financial markets and

strengthening the banks, while ensuring that credit continues to flow to SMEs. The Commission also wants to redound the venture capital market and reduce regulatory and financial barriers for SMEs. Creating new financial instruments and improving the communication between the EU and the SMEs the Commission plans to help the Small and Medium Sized Enterprises. (An action plan to improve access to finance for SMEs, 2011)

### **4.3 SAFE Survey results**

The Survey on the Access to Finance of Small and Medium Sized Enterprises or also called SAFE Survey was established in 2008. The latest version covers the results from September 2014, using data from the 28 EU member states, plus additionally Iceland and Montenegro. The most important problem the SMEs face currently is related to finding customers and access to finance. There are differences among the countries and also in the size of the businesses. For instance, access to finance is a bigger fear for micro enterprises, and also for the innovative businesses. (Survey on the access to finance of enterprises, 2014)

The most common ways of financing in the second half of 2014 was debt financing. The results showed, that the businesses used or considered using in the future the following sources of financing: bank loan (57%), bank overdraft or credit line (53%), leasing or hire-purchase (47%), trade credit (33%), grants or subsidized bank loan (32%), retained earnings or sale of assets (25%), other loan (19%), equity (16%), other sources (11%), factoring (11%) debt securities (4%). Debt financing was the less common in Hungary, by only 74% of the businesses using it, while the EU average is 86%. Most of the enterprises not using bank loans in Hungary explains this with insufficient collateral or guarantee and too high interest rates or prices, while only half of the respondents does not need this type of financing. Rejection rates were also higher in Hungary with 19% (for companies that applied for bank loans) than in the EU in average. (Survey on the access to finance of enterprises, 2014)

Even if there are differences between the member states, the overall outlook for the future growth is positive. The half of the respondents evaluated so that there will be

growth in the turnover over the next few years. Among the growth-oriented countries bank loans are the most preferred type of external financing, except in Hungary.

The SAFE Survey is focusing on the external financing not the internal methods. The most common purpose for external financing among the respondents includes: Fixed investment (30%), Inventory and working capital (28%), Refinancing or paying off obligations (11%) Developing and launching new products or services (10%) Hiring and training of employees (8%). (Survey on the access to finance of enterprises, 2014)

#### **4.4 Access to Finance in Hungary**

In the first chapter I introduced the Small Business Act, and its 10 principles that were set to improve the situation of SMEs in the European Union. Every year there is a fact sheet created upon the SBA implementation in the Member States. With that document, and with the results of the SAFE Survey, I would like to show the recent access to finance of the Hungarian SMEs.

The SBA Fact sheet published in 2014 showed that the Hungarian small and medium sized businesses are still not recovered totally from the recession. Since 2008 the financial difficulties affected mostly the enterprises that employ less than 250 people. There was only a little change in the country's SBA profile. From Figure 3 we can see that Hungary is still lagging behind the EU standard in the areas like Entrepreneurship, Second chance, Internationalization, Environment, Skills and innovation. There is only one section that is slightly above the average – State aid & Public procurement, however all the rest such as Responsive administration, Access to finance, and Single market are in the EU average. (SBA Fact Sheet, 2014)

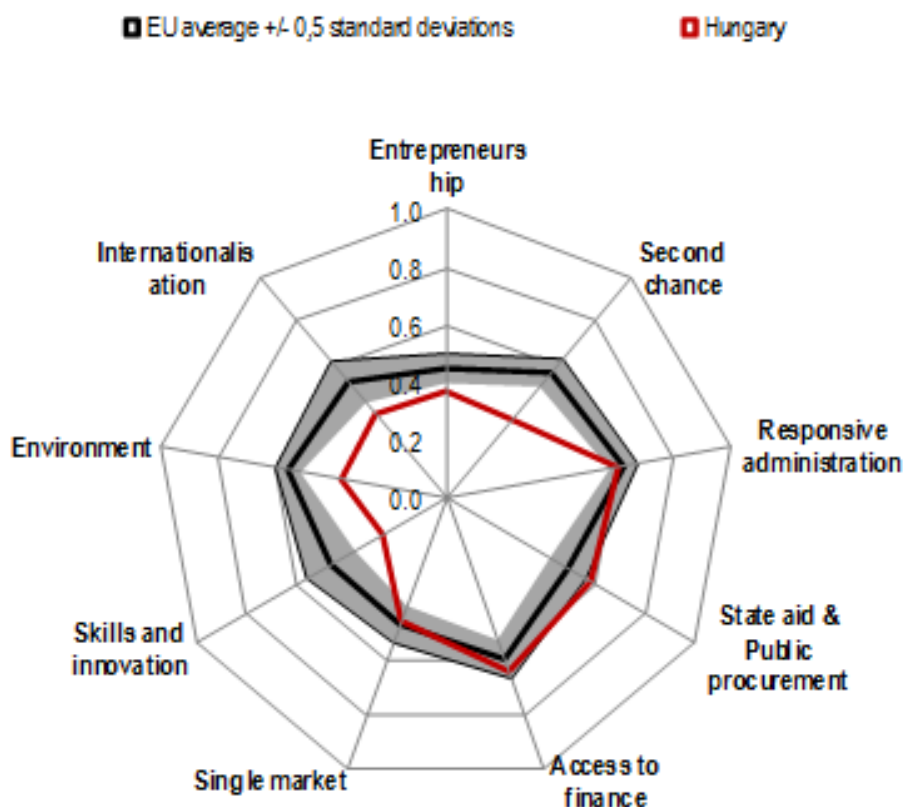


Figure 3 SBA Profile of Hungary 2014 (compared to the EU average)

Source: SBA Fact Sheet 2014

The Hungarian government put effort to the administration system and entrepreneurship with new policies in the last years, while the new public procurement law broadened the access for SMEs in the public tenders. Due to these actions and with the publication of the 'Strategy for Small and Medium Enterprises from 2014 to 2020' there is a slight positive development forecasted for the near future. The plan aims to improve the growth potential of the SMEs, help the access to finance with external sources, and generates a business environment. This will happen by the application of the SBA Coordination Committee to develop a National Action Plan for SBA. (SBA Fact Sheet Hungary, 2014, 5)

However as it is written in many reports, in the previous years, some of the plans and measures were not implemented as planned beforehand, therefore results of improvement is not seen. The edification of the SBA Factsheet report is, that the role of the government is essential however not sufficient. The primary focus should be on Access to finance, Internationalization and Supporting second chance entrepreneurs. It

must be applied in the level of government by changing the legislative process in order for future development.

Hungary showed similar results in access to finance for SMEs as the EU average, however it is mostly due to the other Member States' declining position in this indicator. The financing conditions in the other EU states got worse. (Figure 4)

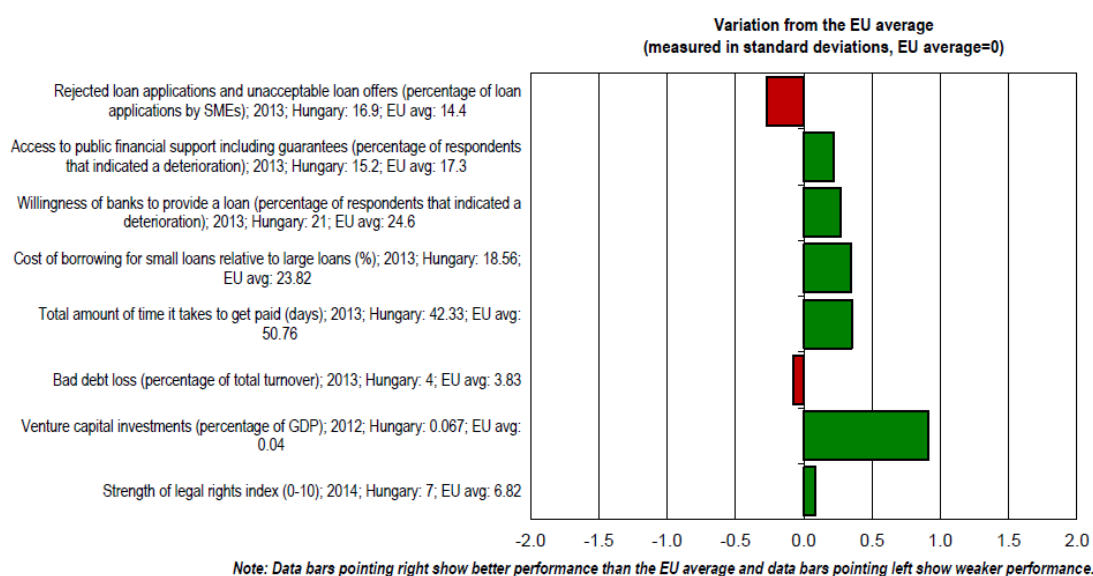


Figure 4 Access to Finance - SBA Indicator 2014

The JEREMI (Joint European Resources for Micro to Medium Enterprises) venture capital and the Széchenyi Card had a significant role in the good results in Hungary. Unfortunately the SME's access to finance is still difficult. Access to bank loans showed improvements, but it has also become more expensive. Cost of borrowing for small loans relative to large loans in 2013 for Hungary is 18.56% while the EU average is 23.82 %. This is lower but important to note that the same indicator in 2007 was only 12% in Hungary. There was a great improvement in the rate of rejected loan applications as it came down from 26 % in 2012 to 17 % in 2013, but it is still worse than the EU average. In the other indicators showed that Hungarian SMEs do not fare worse than their EU peers. (SBA Fact Sheet, Hungary, 2014, 11)

In order to improve the financial situation numerous economic policy programs were introduced by the Hungarian government in the past couple of years. Just to mention couple of those, the New Széchenyi Guarantee Program, the National Microcredit Program.

The National Bank of Hungary in 2013 launched the Funding for Growth Scheme as part of the monetary policy. Under the Scheme, the Bank provides liquidity to credit institutions using its monetary policy instruments, in order to alleviate disruptions in lending to small and medium-sized enterprises. As Hungary does not have a developed capital market, the MNB, differently from other central banks, promotes lending to small and medium-sized enterprises, which is a key condition for long-term economic growth, through the banking sector rather than by launching an asset purchase programme. (Launch of the MNB's Funding for Growth Scheme – mnb.hu)

As a big achievement we must note, that during these programs, 701 billion HUF (approximately 2200 million Euro) was spent on SME loans. The enterprises could get loans with the maximum of 2,5% interest rate. During the program, over 9800 contract were signed, from which 41% was for new loans, and 59% was to replace the existing loans with this more favourable condition. (KSH Statisztikai Tükör, 2013)

#### **4.5 Funding options**

Small and medium-sized enterprises might benefit from EU funding through grants, loans or guarantees. It is either available directly from the EU, which is called EU grants, or from the national programmes. Non-financial programmes and business supports are also available. In the following I would like to collect the most important funding programs for SMEs, coming directly from the EU. I do not focus on the National level Structural funds in this thesis, however I will mention them in this chapter.

The EU provides thematic funding opportunities, with specific objectives. The sources are available directly from the EU, with the aim that the SMEs present sustainable, value-added and trans-national projects using the money. Co-funding is the general rule: the support of the European Union usually consists of subsidies which only cover part of the costs of a project. . (European Union Support Programmes for SMEs, 2012, p.2)

Structural funds (European Regional Development Fund shortly ERDF, and European Social Fund also called ESF) are the largest Community funding instruments benefiting SMEs, through the different thematic programmes. These programs are implemented in



a regional and national level. (European Union Support Programmes for SMEs, 2012, p.2)

Financial instruments are mostly available through national financial intermediaries, mostly managed by the European Investment Fund. Support for the internationalisation of SMEs helps them to access markets outside the EU with the assistance of intermediary organisations. (European Union Support Programmes for SMEs, 2012, p.2)

#### **4.5.1 COSME - Competitiveness of Enterprises and Small and Medium-sized Enterprises**

Competitiveness of Enterprises and Small and Medium-sized Enterprises program, also called COSME has a budget of 2,3 billion Euro for the next financial period between 2014 and 2020. The two main areas for better access of finance for SMEs advertised in COSME are the following:

- The Loan Guarantee Facility – ensuring more loans and lease finance to SMEs
- The Equity Facility for Growth - venture capital and mezzanine finance to expansion and growth-stage SMEs

The Enterprise Europe Network with 600 partner organizations in 54 countries have created a well-functioning system for SMEs. The inquiring businesses can get help and information about the regulations, and EU instruments, and can create new connections with other SMEs worldwide.

With a budget of 2.3 billion Euro, COSME will support SMEs in the following areas:

- Better access to finance for Small and Medium-sized Enterprises (SMEs)
- Access to markets
- Supporting entrepreneurs
- More favourable conditions for business creation and growth

(European Commission's webpage, COSME)

In 2007 to 2013 with an overall budget of €3621 million the Competitiveness and Innovation Framework Programme (CIP) supported the innovation for SMEs. The CIP was divided into 3 sections:

- The Entrepreneurship and Innovation Programme (EIP)
- The Information Communication Technologies Policy Support Programme (ICT-PSP)
- The Intelligent Energy Europe Programme (IEE)

(European Union Support Programmes for SMEs)

#### **4.5.2 LIFE (2014-2020) (the Financial Instrument for the Environment)**

The LIFE (the Financial Instrument for the Environment) Regulation, which was published on 20 December 2013, sets a budget for the next funding period, 2014–2020, of 3.4 billion Euro in current prices.

The predecessor of this program was called LIFE+ between 2007 and 2013 with the budget of 2.1 billion Euro.

#### **4.5.3 HORIZON 2020 – the new framework program for the period 2014-2020.**

I will write about this more in the next section – under research and innovation.

Before Horizon 2020, the Seventh Framework Programme was for Research and Technological Development during 2007-2013. It is also called FP7. The SME designed programs were called “Co-operation” (circa €2.3 billion), “Ideas” (circa €7.5 billion), “People” (circa €4.7 billion) and “Capacities” (circa €4 billion).

#### **4.5.4 EUREKA – A Network for market oriented R&D**

European network developing cooperation between SMEs, research centres and universities for industrial innovation. Created as an intergovernmental initiative in 1985, EUREKA aims at enhancing European competitiveness through its support to pan-European projects to develop innovative products, processes and services. (Global budget: 1,114 billion Euro) (EUREKA network, 2014)

#### 4.5.5 Structural Funds – Hungary

Structural Funds are designed to help reduce disparities in the development of regions, and to promote economic and social cohesion within the European Union. As the programmes are managed and the projects selected at national and/or regional level, I will highlight the Hungarian perspective.

European Structural and Investment Funds include the European Regional Development Fund (ERDF), the European Social Fund (ESF), the Cohesion Fund, the European Maritime and Fisheries Fund (EMFF), the European Agricultural Fund for Rural Development (EAFRD).

This agreement will provide the country with a total of 21.9 billion Euro under the cohesion policy (including the first three funds) for the period 2014-2020. In addition, Hungary will also receive a grant of 3.45 billion euro for rural development and a budget of 39 million euro will be available for the maritime sector and fishing.

The financial breakdown is as follows:

- 15 billion euro for less developed regions (Közép-Dunántúl, Nyugat-Dunántúl, Dél-Dunántúl, Észak-Magyarország, Észak-Alföld and Dél-Alföld)
- 436.7 million euro for more developed regions
- 6 billion euro through the Cohesion Fund
- 361.8 million euro for European Territorial Cooperation
- 49.8 million euro for Youth Employment initiative

Hungary has taken benefits from ERDF yet by 25.3 billion euro between 2007 and 2013. The fund investments helped Hungary to create more than 75 000 jobs, to assist the start-up of more than 1 250 businesses, to provide direct investment aids to more than 32 000 SME projects and almost 50% of the Hungarian population benefit from improved urban transport. (Structural Funds in Hungary for 2014-2020, 2014. [welcomeurope.com](http://welcomeurope.com))

#### 4.5.6 Financial Instruments - JEREMIE

In the 2007-13 period, special support instruments were established, just like:

- JASPERS: Joint Assistance to Support Projects in European Regions
- JEREMIE: Joint European Resources for Micro to medium Enterprises
- JESSICA: Joint European Support for Sustainable Investment in City Areas
- JASMINE: Joint Action to Support Micro-finance Institutions in Europe

In the following I will write more detailed about the JEREMIE Program, as it was very important for the Hungarian early age SMEs.

Realising the lack of early-stage investments, the European Commission initiated the JEREMIE program in 2007. It is financed by the European Investment Fund (EIF) which is part of the European Investment Bank (EIB) Group.

The JEREMIE initiative (“Joint European Resources for Micro to Medium Enterprises”) offers EU Member States, through their national or regional Managing Authorities, the opportunity to use part of their European Union (EU) Structural Funds to finance small and medium-sized enterprises (SMEs) by means of equity, loans or guarantees, through a revolving Holding Fund acting as an umbrella fund. (<http://www.eif.org> JEREMIE 2012).

The EU gives 85% of the money, while the National contribution is 15% of the total investment funds. JEREMIE helps early stage businesses (less than 5years) when credit institutions (banks, saving co-operatives) do not invest due to high risk. The application criteria differs in the different financial instruments: Micro loans, Small loans, SME loans, Working capital loans, Credit guarantee and Venture capital. (<http://www.eif.org> JEREMIE 2012)

#### **Venture capital in Hungary**

In Hungary the JEREMIE program was launched in 2009. Among the EU Member states the first venture capital program financed by EU was launched in Hungary. Since that 4 rounds of winners were proclaimed. It is considered as a highly successful

program, as in 2012 the venture capital ratio in relation to GDP was 0,067% in Hungary, the highest in EU (while the EU average was 0,024%).

By now over 520 billion (including the contributions) Euro is available in risk and venture capital for the Hungarian businesses aiming dynamic growth (including the national contribution plus the 30% contribution from the venture capital management businesses). (JEREMIE Program in Hungary, 2013)

JEREMIE helped many early stage businesses, however the funding conditions of venture capital might not be acceptable for many start-ups. Venture capital in general is highly important for early stage businesses due to high costs while the operating history is limited. With less obligations than a bank loan, the investors take the risk as they believe in the company's potentials. Venture capitalist do not only become the member of the board, and take part of the ownership but provide useful advices and connections for the start-uppers. Loosing autonomy, and the full control of directing the company might be the biggest disadvantage for the business owners.

## 5 Research and Innovation

Innovation is the most important key to maintain competitiveness in the global market. All the investments to innovation are at the same time a future growth investments to the businesses, so as to the country and region. Innovation is a key to create new jobs, smart and sustainable growth, improve the quality of life. Competitiveness is the additional knowledge that the competitors in the market does not have. In the future only those businesses can survive that invest into this additional knowledge and increase it.

### 5.1 Innovation Union

Innovation Union is one of the seven most important initiatives of the Europe 2020 Strategy, with over thirty actions points that mainly focus on:

- make Europe into a world-class science performer;
- revolutionise the way the public and private sectors work together, notably through Innovation Partnerships
- remove bottlenecks – create an internal market for skills, patents, venture capital, innovation procurement and standard setting to foster ideas being quickly implemented on the market

(Innovation Union, 2013)

The competitors of the European Union, such as the United States, Japan, India, China and Brazil are improving their economic performance much faster than the EU, therefore the forecast shows that by 2050 Europe's share of world GDP is going to be halved. The main economic driver of economic growth in the EU is innovation. The EU is still strong in innovation due to its world-class researchers, entrepreneurs and businesses, values, strength, creativity and diversity. (Innovation Union, 2013)

In the European Union the R&D investment rate was 2,06% of the GDP (Eurostat), less than its competitors. In 2012, the R&D investment rate was 2,7% of the GDP in the United States, and 3,4% in Japan. I must mention that the EU objective was to increase the R&D investments of the GDP to 3% by 2010, however this target was not reached. The new Framework Program, Horizon 2020 has a much bigger budget than the

previous 7<sup>th</sup> Framework Program and the new target is again set to 3%. The investments in R&D ensures long term growth.

From the Figure below, we can see that the Innovation performance in the EU is classified into four types. Modest and moderate innovators, innovation followers and leaders. While the public R&D investments are increasing in Germany and the Nordic countries, they are decreasing in other larger EU economies such as France, the United Kingdom, Italy and Spain. (Innovation Union Competitiveness Report 2013, p41)

Hungary is a moderate innovator as can be seen from the figure.

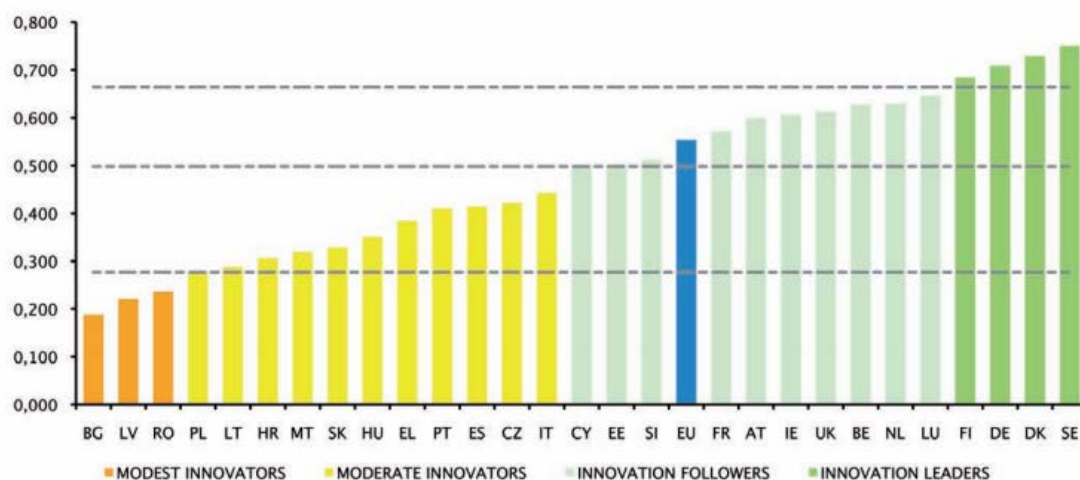


Figure 5 EU Member States' Innovation performance Source: Innovation Union Scoreboard 2014

## 5.2 Research and Innovation in Hungary

Investments in R&D and Innovation equals to investments into the future of the enterprises and to the future of the country. With this surplus of knowledge the enterprises, - and ultimately the country - gets a competitive advantage. In the longer terms, only those companies can survive that invest into this knowledge and become better than its competitors. Which is also true for the national economies. Therefore we can state that the economic growth and increasing prosperity is upon two basis: expansion of resources (capital and work), and the more efficient use of resources which means technological development. The examples of the successful countries show, that technological development has a greater impact and contributes more permanently to the economic growth than the extension of resources. (Prof. Cséfalvy Zoltán, 2012.nov. Budapest)

Research and development is only a profitable investment, if it gets to the customer, therefore really becomes an innovation. If something is new or innovative, it is not necessarily an innovation, unless it meets the consumer's expectations. The essence of the company is to develop new products and solutions, and open up new markets - which is also the core of the nation's economic growth. Therefore the focus is mainly on the enterprises in the research and development and innovation strategy. However this strategy should not only promote the birth and practical utilization of new knowledge, but also support the wide spreading of the existing technologies and innovations. (Prof. Cséfalvy Zoltán, 2012.)

The really big technological breakthroughs are mostly linked to small companies or inventors. However the large companies are essential because those are capable of developing mass-market products, taking advantage of economies of scale. While a discovery is primarily linked to a small business or an inventor, the investment into the innovation process is related to large companies. Therefore the SMEs must have an as good position in this process as the large enterprises and research centres. We must realise that the governments' role in this question is quite complex. How could they help the economic growth? The large enterprises have capital for the continuous improvements in R&D, creating advantages in the market competition, while it is impossible to support unborn SMEs. This does not mean that there is no need for investments in R&D, exactly the opposite, especially in Hungary. (Prof. Cséfalvy Zoltán, 2012. Budapest)



From the Figure 6 below, imported from the SBA Factsheet we can see that Hungary is behind the EU average in the fields of Skill and Innovation.

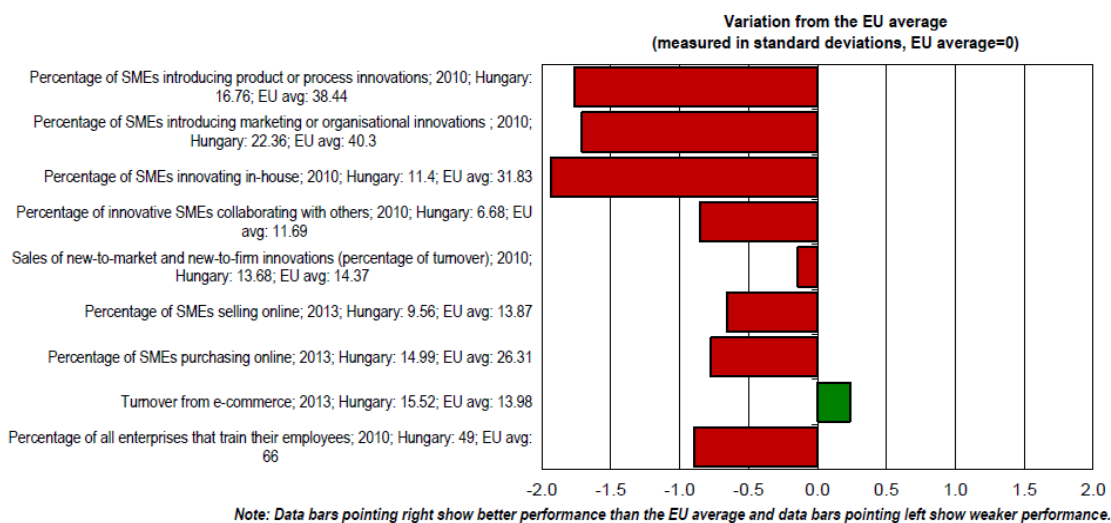


Figure 6 SBA Factsheet - Skill and Innovation in Hungary compared to the EU average

The results are not far from the EU average, however there are big gaps in the fields of SMEs introducing process innovation and SMEs innovating in-house. Thanks to the newly introduced Gazella incubator programs, and the so called Go!nno mentoring program that helps the innovative start-ups with advices from seniors and professionals, the early stage companies can get more support. Plus there is a newly launched programme, called Researcher Contribution Allowance that offers entrepreneurs a tax allowance of up to EUR 1 550 if they hire researchers with a Ph.D. (SBA Fact Sheet Hungary)

The National Research and Development and Innovation Strategy aims to increase the R&D investments to 1,8% of the GDP until 2020. This Strategy focuses on three main areas of intervention: knowledge creation, knowledge transfer, and knowledge utilization. (Befektetés a Jövőbe, 2012)

The governmental sources and programmes are as important as the tax relief system, the competition legislation and the institutional environment of innovation, or the development of the higher education institutions and the academic research network. The government must create an ecosystem, where the R&D public institutions or companies and the innovative businesses are both able to develop and grow. Encouraging intelligent specialization, building a sustainable system able to create equal opportunities, providing stable financing conditions, raising public awareness,

strengthening the acknowledgment of knowledge and technology, and creating a stable, innovation-friendly economic and regulatory environment –could all lead to rising levels of R&D intensity in the coming years. (Research and Innovation Performance in Hungary – Country Profile 2014 – European Commission)

The countries that have good foundations and already invested into R&D creating competitiveness among the EU Member states are most likely to win in Horizon 2020 (I will write about it later in this chapter), ensuring a broad base of applicants. Therefore the new National R&D and Innovation Strategy formulates a major enhancement of capacity, including R&D workplaces, centres and R&D based SMEs. (Prof. Cséfalvy Zoltán, 2012.nov. Budapest)

The main Hungarian interests during the upcoming period until 2020 is to get as much funding as possible through the Horizon 2020 program. However these financial resources are acquired in a European level competition, requiring excellent performance. (Investment to the Future – National R&D and Innovation Strategy 2020)

In Hungary the R&D Investment rate of the GDP reached its highest in 2011 with the 1,2% however it is still far behind the EU's 1,9% (As one can see in the Figure 7). The R&D investments by the enterprises is more than the national budget in the past couple of years. (Befektetés a Jövőbe - Investment to the Future 2012)

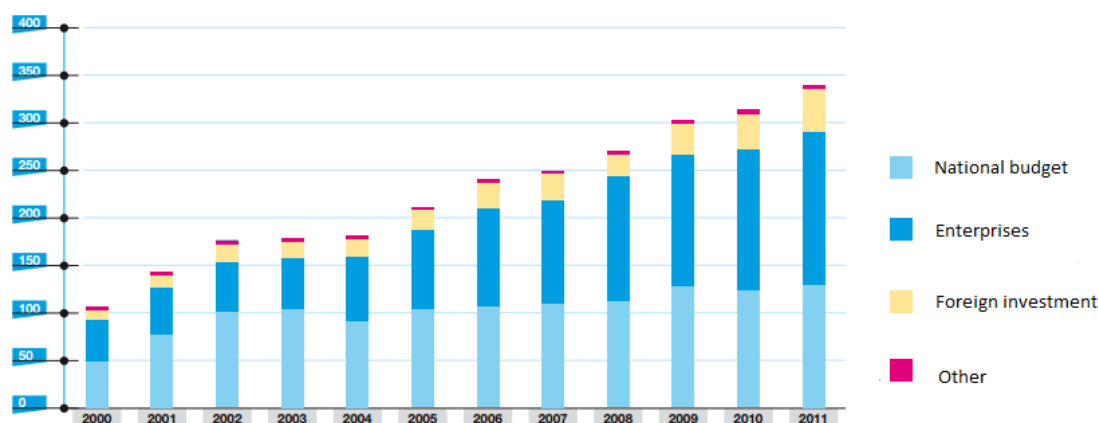


Figure 7 R&D investments in Hungary between 2000-2011 distribution of sources (Billion HUF)

Source KSH Statisztikai Tükör 2013/52.

To show the importance of my research, and the need for more attention to the R&D and Innovation in the SME Sector, please see Figure 8 below.

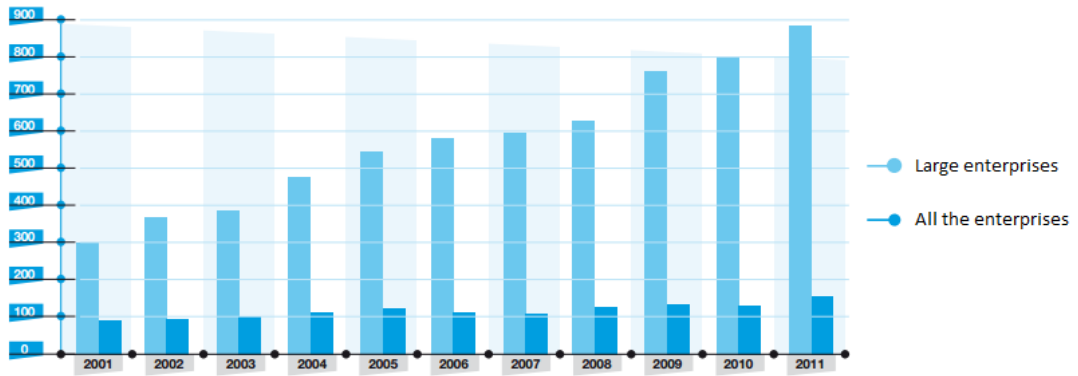
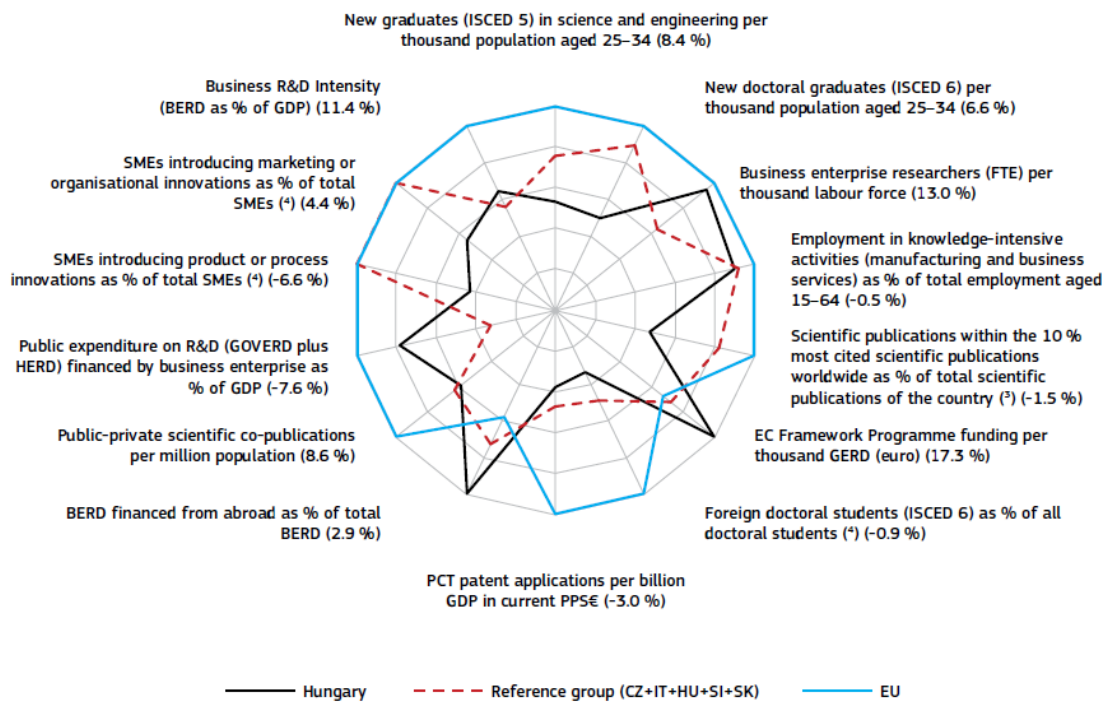


Figure 8 R & D expenditure per company in Hungary from 2001 to 2011, by size category (large enterprises and the average of all companies, million HUF)

Large companies have more money for R&D, while as I wrote before, the small and medium sized companies are as important in the R&D processes as the large ones. Moreover, this is also coupled with a strong regional concentration- Budapest and its agglomeration are more active in R & D. The pharmaceutical industry, the automotive industry and information technology are the sectors that provide the vast majority of corporate expenses in R&D.

► **Hungary, 2012 <sup>(1)</sup>**

In brackets: average annual growth for Hungary, 2007–2012 <sup>(2)</sup>



Source: DG Research and Innovation – Unit for the Analysis and Monitoring of National Research Policies

Data: DG Research and Innovation, Eurostat, OECD, Science-Matrix/Scopus (Elsevier), Innovation Union Scoreboard.

Notes: <sup>(1)</sup> The values refer to 2012 or to the latest available year.

<sup>(2)</sup> Growth rates which do not refer to 2007–2012 refer to growth between the earliest available year and the latest available year for which comparable data are available over the period 2007–2012.

<sup>(3)</sup> Fractional counting method.

<sup>(4)</sup> EU does not include EL.

Figure 9 Average annual growth of Hungary

Figure 9 above indicates the Innovation Union results, and I would like to focus on the "SME introducing product or process innovation as % of total SMEs" section, which is far behind the EU average.

### 5.3 SWOT Analysis of the Hungarian Research and Development and Innovation system

In the table below, I would like to illustrate the strengths, weaknesses, opportunities and threats of the Hungarian RDI sector.

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Some scientific fields are close to the global forefront (eg. The Hungarian mathematical research and teaching is world famous).</li> <li>• In some segments, growing university and enterprise cooperation.</li> <li>• The research elite uses the international funding resources, infrastructure and databases.</li> <li>• Well-trained and high academic performance capable leading researchers,</li> <li>• Leading work culture in many large companies, focused R&amp;D.</li> <li>• Start-up companies with high growth capacity, and with own high-tech development ("born global" attitude).</li> <li>• Modern RDI infrastructure in large companies, promising collaborations with universities.</li> <li>• Essential legislations that determine the economic and innovation environment is accordant with the developed countries (e.g. company law, competition law, consumer protection, accounting standards, intellectual property protection, etc.).</li> </ul>	<ul style="list-style-type: none"> <li>• The market and social needs / expectations do not get enough attention in the research, weak R&amp;D utilization</li> <li>• Research capacities and performances are not focused.</li> <li>• Untimely and scattered infrastructure, not enough researchers, slow institutional education.</li> <li>• Inadequate and waving financial funding for research, R&amp;D institution's financing is low.</li> <li>• Outdated Science and Technology Education</li> <li>• Not harmonized innovation policy instruments ("policy mix").</li> <li>• In the case of SMEs, lack of capital, in global comparison weak innovation and growth ambitions and abilities.</li> <li>• Deficiency of RDI management in the majority of SMEs, low level of innovation and intellectual property protection awareness.</li> <li>• No contact between the SMEs and research institutions, no efficient collaboration</li> <li>• Weak links within the R&amp;D value chain actors, not enough effective cooperation.</li> <li>• Lack of seed capital, undeveloped technological incubation system.</li> <li>• No effective technology transfer processes</li> <li>• Lack of spin-off processes</li> </ul>

	<ul style="list-style-type: none"> <li>• Lack governmental innovation-management services.</li> </ul>
<b>Opportunities</b>	<b>Threats</b>
<ul style="list-style-type: none"> <li>• Strengthening the RDI friendly economic and regulatory environment.</li> <li>• Strengthening the knowledge-centres, entering the research results to the everyday education.</li> <li>• Increasing the economic role of the industrial clusters.</li> <li>• Development of "entrepreneur universities.", which would satisfy more the economic and social needs</li> <li>• Strengthen the new R &amp; D intensive industries, and expansion of Hungarian medium and large companies abroad</li> <li>• Expansion of a more practical education (dual education), more entrepreneurial education, trainings on innovation management.</li> <li>• Developing the tax relief system</li> <li>• Spreading the EU instruments (innovative public procurement, Smart specialization, pre-commercial procurement etc).</li> <li>• Joining the large EU co-operation programs.</li> <li>• Strengthens R &amp; D diplomacy.</li> <li>• Development of new tools for effective incubation (eg. open lab, tech shop).</li> <li>• Development of scientific and technical education.</li> <li>• Strengthening the dialogue between universities and large companies.</li> </ul>	<ul style="list-style-type: none"> <li>• Falling behind in the global forefront, the junior researchers may not be sufficient and competitive in the internationally level.</li> <li>• Deficiencies in the education persist, causing lack of trained professionals.</li> <li>• The trained and educated professionals, after finishing the university, move abroad due to the higher salaries and better equipment.</li> <li>• The economic and social need and interest of R&amp;D remain weak</li> <li>• Less publicly funded research.</li> <li>• The gap between the regions, and types of companies remain.</li> <li>• The SME sector stays weak, cannot create demand for generating RDI, and building capacities.</li> <li>• We cannot take advantage of the international RDI cooperation.</li> <li>• There will be no, or very few businesses that strengthen with the domestic RDI.</li> <li>• Short-term budgetary considerations overwrite the long term development goals.</li> <li>• The growth of regional disparities,</li> <li>• No effective use of EU funds.</li> <li>• R &amp; D funding generally weakens.</li> </ul>

*Table 10 SWOT Analysis of the Hungarian RDI sector*

According to the Ministry of National Economy (NGM – Nemzetgazdasági Minisztérium) other than the horizontal weaknesses, RDI has 3 main problem areas Hungary.

The first is the weaknesses of the university, academic, governmental both domestic and foreign **Knowledge Bases**, with other words the weaknesses of the knowledge creation. There is a lack of competitive knowledge centres, entrepreneurship ("Spin-off") processes stuck, the new researchers are not sufficient for the international competitive level, insufficient and waving research funding, fragmented and unfocused R & D in the

public research facilities, outdated scientific education, continuous education reform, decreased prestige in the teaching career, eroded R&D infrastructure, inadequate attention to the market trend and social development. (Befektetés a Jövőbe, Investment to the Future, 2012)

The second is the weaknesses of **Knowledge Transfer**, including: weak intersectoral relations (corporate research facility), weak engagement to the international RDI processes, the encouraging technology transfer is not effective, inadequate incubation, slowly growing venture capital, missing national innovation management services, lack of international-level "RDI managers ". (Befektetés a Jövőbe, Investment to the Future, 2012)

The third is the obstacles of knowledge utilization: Inefficiently adaptive innovations, there are few high-tech small business (based on R&D), uncertain and constantly changing R&D tax system, the innovation potential of the public sector is unexploited, medium-sized enterprises sector is weak, Spin-off processes stuck, only few market-driven development, narrow demand, only the large enterprises are competitive. (Befektetés a Jövőbe, Investment to the Future, 2012)

The innovative SMEs get direct and indirect support from the government according to the business lifecycle. These instruments are mainly non-refundable grants, tax incentives, or indirect fiscal instruments and capital, loan, and guarantee based financial instruments. Direct support instruments are (early stage) intellectual property protection support, mentoring programs, incubation, seed-capital, venture capital, (growth stage) innovation voucher, cooperation researches, ICT based innovation support. The indirect support instruments are (early stage) innovation performance incentive stock options, PCP, innovative public procurement, and for the subsequent stages the indirect R&D tax incentives, and tax compensation. The direct instruments are mostly financed by the European Regional Development Fund, Research and Technology Innovation Fund and European Social Fund. (Befektetés a Jövőbe, Investment to the Future, 2012)

#### **5.4 Funding for research and innovation from the EU Community budget**

Other than the national government budget for R&D, the EU investments through Structural funds and Framework programs has a key role in supporting Innovation.

In Hungary, EC financial contribution in retained proposals was 242 million euro during the 7<sup>th</sup> Financial Framework Program between 2008 and 2012. FP funding received as % of gross domestic expenditure on R&D in 2011 was 20.1%. The reason why I consider writing about FP7 and H2020 so important (and not the business enterprise expenditure, national or regional R&D budget), is that the Hungarian financial success rate was only 14,8%, while the same rate in Switzerland, France or Belgium it was close to 24%. There is a huge potential in H2020 for the Hungarian businesses unexplored. The H2020 program is highly unknown among the Hungarian SMEs, while this program could provide great financial help investing in innovation and therefore providing long-term growth. (Innovation Union Competitiveness Report 2013)

As I mentioned the industrial distribution of the Hungarian SMEs (in chapter 2) the second biggest field where SMEs are set up is professional, scientific and technical activities, as another important reason to pay more attention on the Framework Programs.

## 5.5 Framework Programmes

### 5.5.1 FP7 Results

In the following I would like to show the results of the 7<sup>th</sup> Framework Program, including the number of participants, grant amount won and the success rate. Hungary was the 16<sup>th</sup> among the Member States by the successful project participation as Figure 10 shows below.

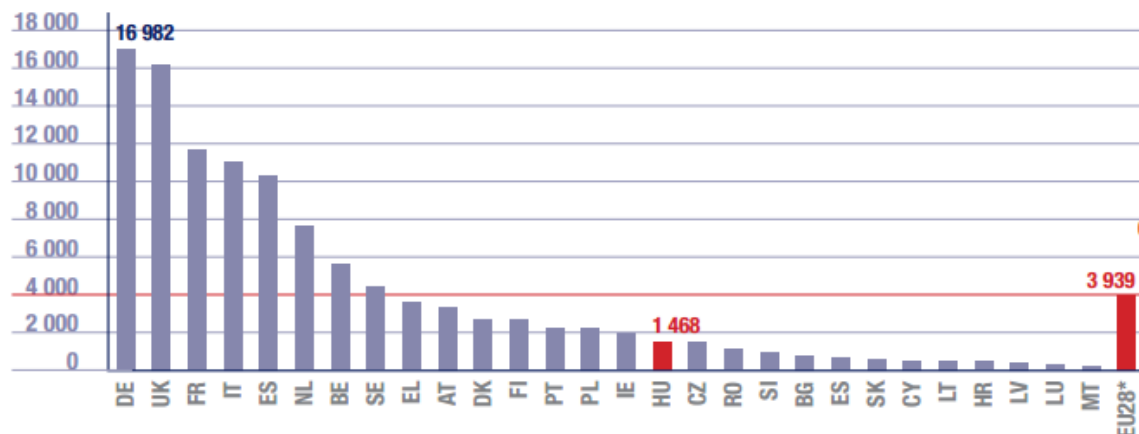


Figure 10 Number of Project participants who won support in FP7 by EU Member States (EU-28)

Source: FP7 Success stories, NIH - eCORDA, 2013. November

As Figure 11 shows, Hungary is the 16<sup>th</sup> also considering the amount of grant the participants won, by 260million Euro.

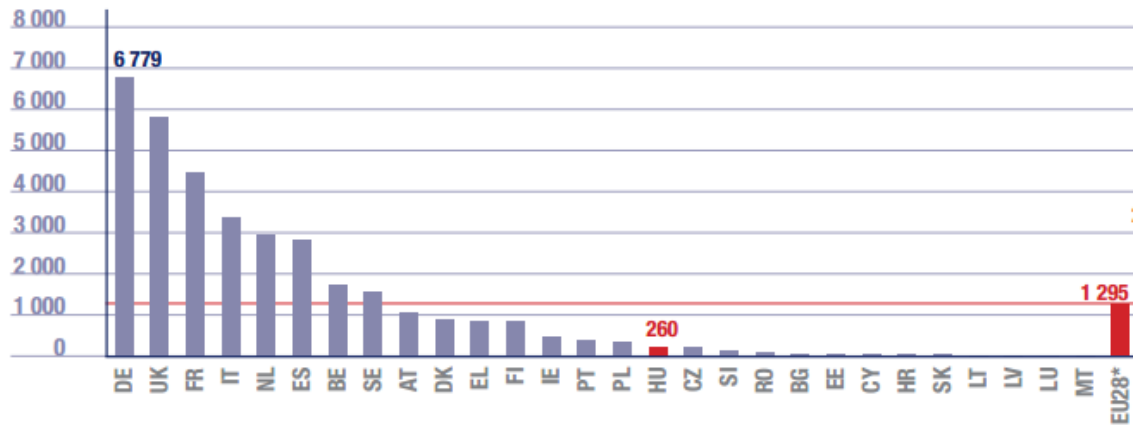


Figure 1 The amount of grant the project participants won by Member States (in EUR million)

Source: FP7 Success stories, NIH - eCORDA, 2013. November

Hungary was the 14th with the 20% success rate among the participants, as figure 12 shows.

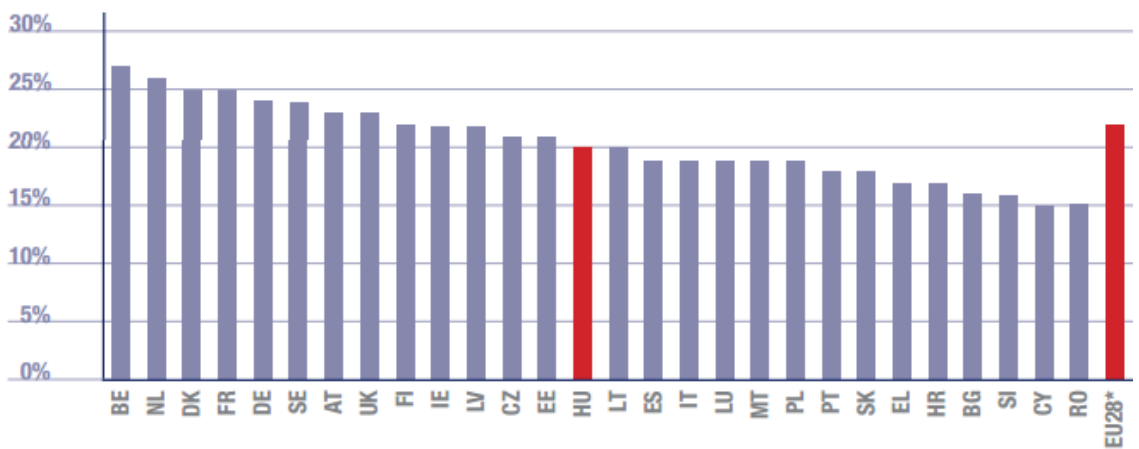


Figure 12 The success rate of the participants in FP7

Source: FP7 Success stories, NIH - eCORDA, 2013. November

### 5.5.2 Horizon 2020

Horizon 2020 is the biggest EU research and innovation programme with its almost 80 billion euro funding that is available from 2014 to 2020. There are many great result expected due to the enormous budget and the additional investments from the national



and private sides that it will attract. Horizon 2020 is an important part of the Europe 2020 Strategy I mentioned already. It focuses on three main areas: excellent science, industrial leadership and societal challenges. Figure 13 shows the budget allocation for the 7years period. (Horizon 2020 in brief)

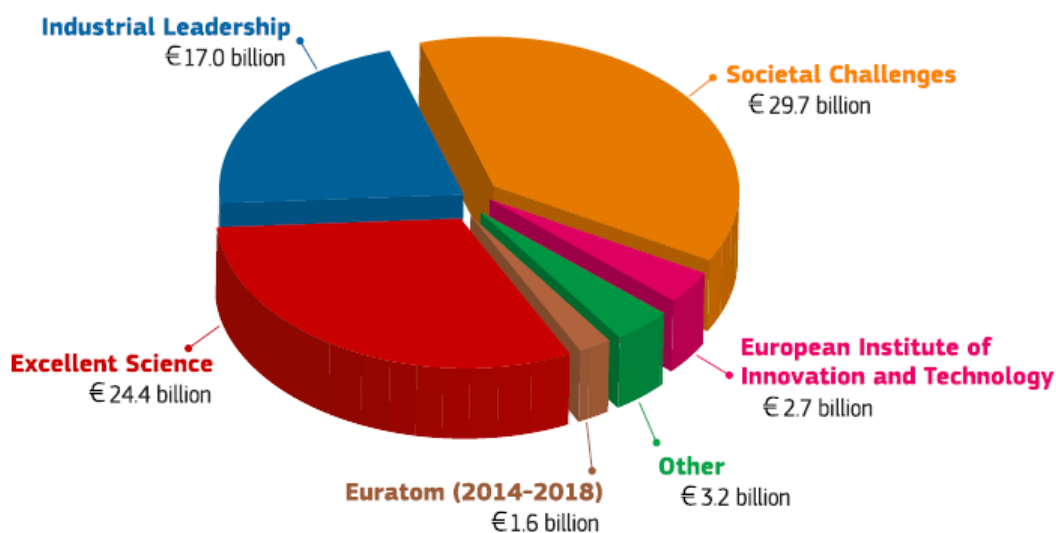


Figure 132 Horizon 2020 Budget (in current prices 2013)

Source: HORIZON 2020 in brief, 2014

The framework programme aims to bring together scientists to find solutions to scientific and technological problems that in the long term will create economic growth. It is open for high-class researcher from all over the world to make the European industry more competitive and sustainable. In this part of my thesis, I would like to show the practical part of Horizon 2020, and I will not write about the funding areas, and calls.

While structuring Horizon 2020 the most important was to take into account the experiences of the previous framework programs. Therefore the most important change was simplification, the make H2020 applier friendly, with less administrative obligations for example. The other most important objectives are innovation and coherence. The “simple set of rules” principle covers all the research and innovation programs, maintaining flexibility where needed.

The application criteria for the standard research project is a consortium of at least three legal entities that must be established in an EU Member State or an Associated Country.

For the special programmes, just like European Research Council (ERC), SME Instrument, coordination and support the application criteria is one legal entity established in a Member State or in an Associated Country. However additional conditions may apply, just like in the case of SME Instruments, where the legal entity must be a small or medium sized enterprise. (General Annexes 2014)

The action types may vary, I would like to show some, but this list is incomplete. (I will use the source of General Annexes)

- Research and Innovation actions

Supports research project with clearly defined challenges, which can lead to the development of new knowledge or a new technology. The calls are designed for consortium. The maximum funding rate is 100%.

- Innovation actions

The innovations actions are focused on creating a market ready new, altered or improved products, processes or services. For this the actions might include prototyping, testing, demonstrating, piloting, scaling-up etc.

The funding rate is 70%, except for non-profit legal entities, where a rate of 100% applies.

- Coordination and support actions

This action does not require a consortium, but only one legal entity that is aligned for the application. The programme aims coordination and networking activity of research and innovation projects. The maximum funding rate is 100%.

- SME Instruments

SME Instrument is open for innovative SMEs with the ambition to develop their growth potential. It offers lump sums for feasibility studies, grants for an innovation project's main phase (demonstration, prototyping, testing, application development...); lastly, the commercialisation phase is supported indirectly through facilitated access to debt and equity financial instruments. (Horizon2020 in brief)

The SME Instrument are open only for small and medium sized enterprises. They can apply either alone or as part of a consortium from the EU or an Associated Country.

There instruments has three phrases.

- Pre-Commercial Procurement (PCP) Cofund actions, ERA-NET Cofund, Public Procurement of Innovative Solutions (PPI) Cofund actions are quite complex therefore I will not write about them now.

H2020 aims to speed up the 'time to grant' process. The calls are continuously open, and the speeding occurs, as the results should arrive 5 months from submitting the proposal, and 3 months from that the grant agreement should be signed. This means also, that after submission there is no possibility for additional changes, the project plans will be evaluated as they were submitted. The whole process is online now, including the communication and signature.

The selection criteria includes a check in the financial and operation capacity. Before applying the applicants must fill a financial viability self-check. It's a set of calculations upon the applicant results in profit and loss, and it simulates e.g. the profitability, solvency and other indicators.

The award criteria is upon excellence, impact and quality and efficiency of implementation. These will indicate whether the proposal meets the call, and aim of the programme, in the EU and international level. The projects must create value and bring impact for growth. There is a self-evaluation template available to everyone in the participate portal. I consider it important to mention that proposals with big budget will be receive less points with a justification that the project is uneconomical and not cost effective. All the project are evaluated by experts with the stages of individual evaluation, consensus group and panel review.

There is simplification also in the funding and reimbursement rates and costs. The funding rates cover all eligible costs that are defined as actual costs than incurred during the funding period, and related to the project. These must be also reasonable, economically and financially cost-effective. The indirect eligible costs (e.g. administration, communication and infrastructure costs) are reimbursed with a 25 % flat rate of the direct eligible costs.

The research results that are generated in the projects should be available to everyone, however protecting the intellectual property rights. When publishing results in scientific publications, open access to the publication must be ensured.

IPR belongs to the team that generates the results. In very specific circumstances, joint-ownership may apply. Once results have been generated the joint owners may agree on a different ownership system. (H2020 in brief)

## 6 Questionnaire

I decided to make a research in a form of questionnaire. My questionnaire is about the financial framework programs of the European Union for small and medium-sized enterprises. I created a complex questionnaire to focus on two fields. First to show how many of the SMEs know about the Research and Innovation Programs, and see how many applied for grant. Second to find out the biggest problems an average SME face before or during the application to the framework programs, so to find the most important areas that need to be improved for more successful participation rate.

### 6.1 The questions

The questionnaire consists of 3 pages for every respondent. In the first page I ask about general information of the company: size, main activity of the company, number of employees, location, and in what areas would the company need financial help, and if the company is considered an SME.

The second page is about the Horizon 2020, 7<sup>th</sup> and 6<sup>th</sup> Framework Programs. I ask whether the company of the respondent has participated in any of the Framework Program before. And if yes, did they win, were they rejected or both. Upon the answer of this question the questionnaire jumps to the 3<sup>rd</sup> page:

- Participated and won: did they apply alone or in a consortia, who made the proposal (the company, or a proposal writer office), what was the money spent on
- Participated but did not win: did they apply alone or in a consortia, who made the proposal (the company, or a proposal writer office), why was the project rejected
- Participated more than one time with both successful and rejected project: did they apply alone or in a consortia, who made the proposal (the company, or a proposal writer office), what was the money spent on, why was the project rejected
- Did not participate: if the company needs financial help, in which area should they improve to be able to apply

In the second page I also ask the respondents to rank the problems they faced during or before the application (this question is not relevant for those who never applied or do not know the Framework program):

- the maximum amount of support available was too low
- the minimum grant amount available was too high
- no possibility for payment in advance
- high volume of own resources was needed
- administrative requirements, the application process was too bureaucratic
- English was the official language during the tendering process
- to apply with and international consortium
- intellectual property protection
- strict accounting conditions
- the time gap between the announcement of results and contract signing
- there was not enough information available for tender opportunities
- the call did not fit our company's profile
- the calls and proposals did not meet the market needs and demand
- being SME

## **6.2 Finding respondents**

To have basis for comparison, I decided to ask both Hungarian and International or Foreigner Small and Medium Sized Businesses to answer my questionnaire. With this I would be able to show how well-known are the EU Framework Programmes in Hungary and outside, and also show the differences in the difficulties they face.

I wanted to find companies that applied but got rejected to show that there are problems to receive a grant in this field, and many reasons for refusal. I found Horizon 2020 and FP7 Partner finding portals, where I sent out my questionnaire expecting enterprises with knowledge and experience on this field, whether this experience meant successful or rejected projects.

The CORDIC webpage collects the winner projects from the previous framework periods. However in that webpage I found mostly research centres, research labs, large enterprises or universities, and they were not considered as SME or did not respond to my mails.

Finding relevant answers was hard, and I sent more than 500 mails, until 100 person filled my questionnaire.

### 6.3 Results and conclusion of the Questionnaire

I will conclude the results of 104 responds. 69 answers coming from the English or International survey, and the rest, 35 is from the Hungarian part.

Most of the answers were coming from the administration and services, education, and information and communication fields.

The majority of the companies that filled my questionnaire are small companies with employees less than 20 people, as can be seen in the diagram below.

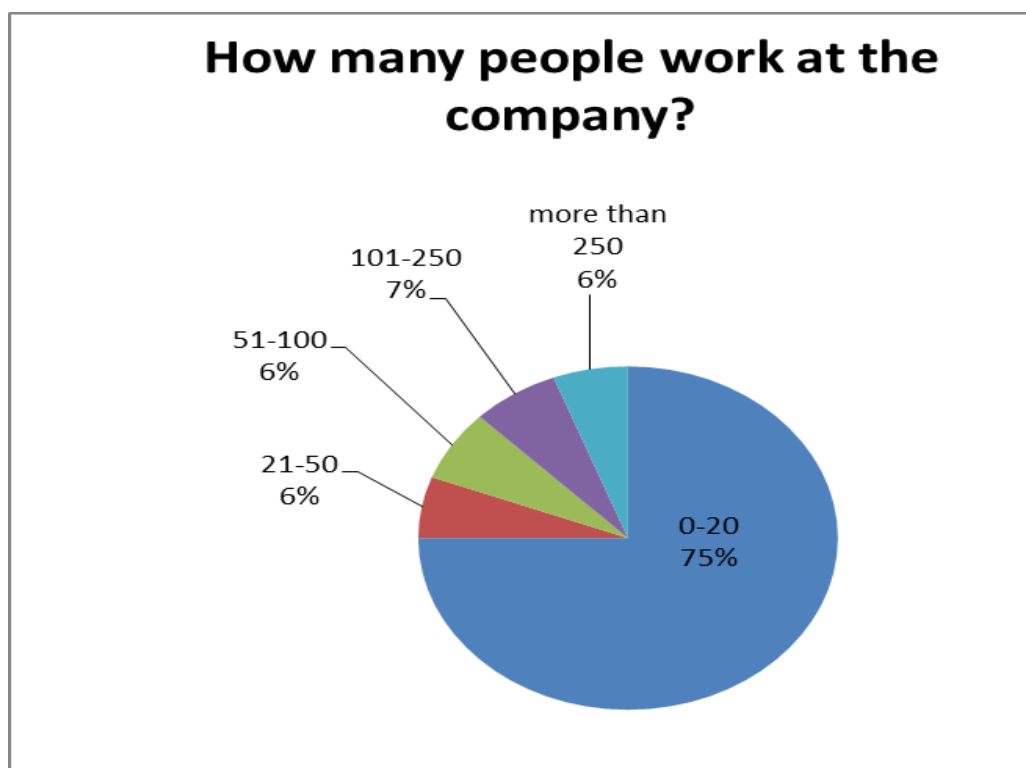


Figure 14 "How many people work at the company?" result of the questionnaire

In the English survey, answers came from Germany, France, Greece, UK, Latvia, Serbia, Turkey, Croatia, Italy, Romania, Moldova, Tunisia, Ireland, Spain, Cyprus, Bulgaria, Slovakia, Estonia, Poland, Albania, Slovenia, Portugal, Israel and Finland. The companies that won in the Framework programs are located in the capital cities. This centralisation can be also seen in the Hungarian respondents as more than 60% were located in Pest region, or Budapest.

To the question that “In which fields could your company use financial help?” more than 30% of the companies answered that they could use help in the fields of:

- Research and Innovation
- Training, hiring and staff motivation
- IT development (software, hardware, licenses)
- Marketing communication

Figure 15 shows the responses among the international and Hungarian companies. This proves that many more companies need financial help, than how many applied for grants in Research and Innovation.

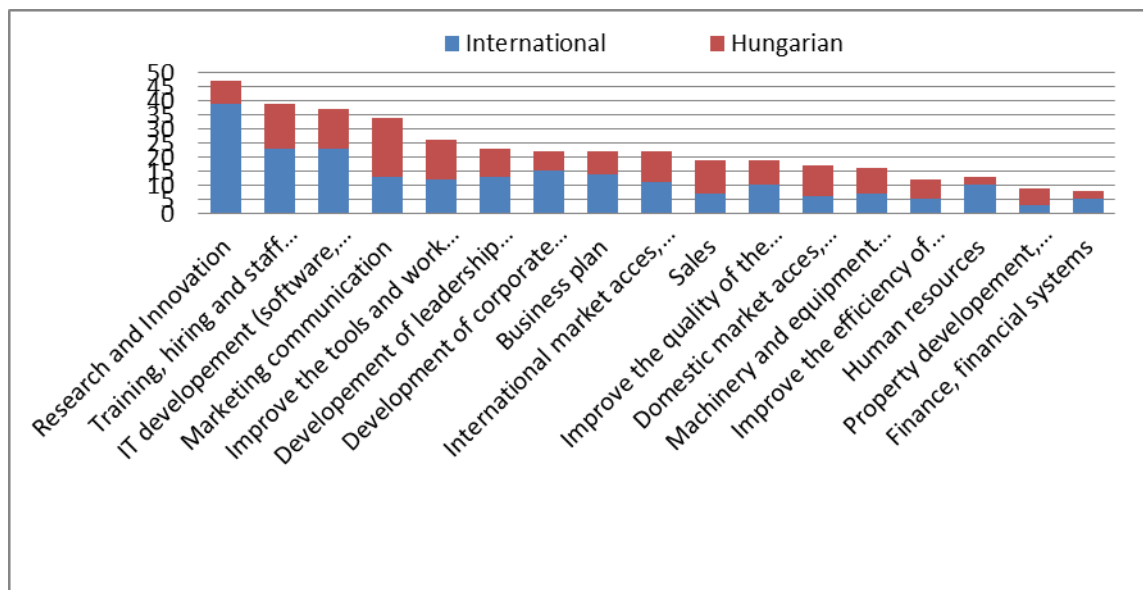


Figure 35 “In which fields could your company use financial help?”

I would like to highlight, that only 96 of the companies are considered as an SME, 8 of the respondents are not. However I will use the answers from their part as well, to show, the main difficulties and experience a company face during the application process.

The participation percentage is very different among the international and Hungarian answers. In the international survey, most of the companies were asked through partner-financing portals, therefore their knowledge about the framework program is much bigger, than the Hungarian ones. In the Hungarian questionnaire I asked SMEs, not related to the Framework programs. From the following table it can be clearly seen.

	International	Hungarian	Total
We did not participate in any EU Framework Program	45	34	79
We participated, but did not win at any of the Framework Programs.	7	0	7
We participated, and won in a Framework Program	3	0	3
We participated several times. We had both successful and rejected projects.	14	1	15
TOTAL	69	35	104

*Table 11 Participation in the Framework Programs among the respondents in my questionnaire*

The biggest reason why companies could not participate on the framework programs included the high volume of own resources needed and that the calls did not fit the company's profile. The biggest problems the businesses had to face included problems such as: the minimum grant amount available was too high, no possibility for payment in advance and the administrative requirements, the application process was too bureaucratic. While problems like: English was the official language during the tendering process, to apply with and international consortium, intellectual property protection and strict accounting conditions caused problems only to a few businesses.

In the following I will analyse the participants who applied for a programme and won project. There was none among the Hungarian SMEs, but there were 3 foreigner SMEs who participated successfully. They all applied in a consortium, 2 of the projects were written by a proposal writer office, and one by an employee of the company. The money was spent on Research and Innovation, Research and Development, Improve effectiveness of marketing communication, and IT development (software, hardware). The companies applied to FP7 and one applied also to FP6 successfully. They would apply again.

Among the 7 companies that participated, but did not win at any of the Framework Programs 5 is considered as SME. 3 applied alone, 1 as part of the consortium and 3 in both ways. Interesting to see that all 7 of the projects were written by one of the employee of the company, this might show the importance of experienced proposal writer offices. The main reasons for rejection was lack of documents. However they would all try again.



Businesses that participated several times with both successful and rejected projects, had one Hungarian participant as well. All in all I will analyse the results of 15 companies.

<b>Who made the proposal for your company?</b>	<b>Answers</b>
Proposal writer office	3
An employee of the company	7
The owner of the company	4
Other	3

*Table 92 Answers to the question "Who made the proposal for the company?" It was possible to give more answers*

11 of the companies received grant from the 7th Framework Program, 7 companies from FP 6, and already 5 companies received grant from H2020. The grant was mostly spend on Research and Innovation, as it is obvious, but some responded that they spent on business plan, improve the quality of product or service, and hiring, training and staff motivation. The unsuccessful project were rejected due to lack of own resources, didn't meet all the bureaucratic requirements, not motivated enough ("the difference was of 7 points"), digital agenda and competition.

From the 79 companies that did not participate in any EU Framework Program, 59 answered that they would like to participate later, and the same amount needs financial help. In the following areas should the business develop for a successful participation in the future: Internationalization, finding consortium partners, improving expertise, competence, knowledge, skills, research and development facilities, equipment.

## 7 Conclusion

As conclusion from my questionnaire, much more companies would need financial help in the field of research and innovation that applied for any of the previous framework programs. The grant application system is still too complex for the SMEs, and the international competition does not let Hungarian SMEs to receive enough grant for sustainable growth. There is a need for proposal writer offices, as the companies do now have enough own resources and knowledge of the competitive project writing.

Hungary has the potential to become more successful and competitive in the future, however the government's role is not negligible in this question. Creating an ecosystem where both R&D institutions or companies, and innovative enterprises can develop and grow should be the number one focus in the future strategies.

In Hungary it is still necessary to create a stronger collaboration and knowledge transfer between the academic and public higher education institutions and the corporate sector. This is the key that the new knowledge is incorporated into the companies, and so that the novelty really gets to the consumers.

There is a huge gap in the SME financing, therefore the start-ups and spin-off businesses usually end shortly due to lack of seed capital. In the medium sized enterprises there is a rather low number of market-driven research and development, and therefore the demand for R&D and Innovation.

The precious and hidden Intellectual Property and the innovations that come out of the large enterprises, and their research centres are not published. The attitude to IP should change, and the results should be published also for the smaller businesses. There is only a really few innovative small business in Hungary, and there is no organizational base that would motivate or implement innovation strategy development.

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**APPENDICES****Questionnaire Page 1****Questionnaire about funding opportunities for SMEs**

General information

**\*Required****1. What is the main activity of your company? In what industry does your company operate? \****Mark only one oval.*

- Administration and services
- Agriculture, hunting, forestry
- Arts, entertainment and recreation
- Construction, building industry
- Community or personal services
- Education
- Electricity, gas and water supply
- Financial intermediation
- Fish farming
- Health care, social services
- Hotels, accommodation, restaurants, hospitality
- Households
- Industry
- Information and communication
- Manufacturing, processing industry
- Mining
- Public administration, defence, social insurance
- Real estate, renting
- Trade and repair
- Transportation, storage, logistics
- Other

**2. How many people work at the company? \****Mark only one oval.*

- 0-20
- 21-50
- 51-100
- 101-250
- more than 250

**3. Where is the company located? \***

City and Country

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**4. In which fields could your company use financial help?**

(More than one answer possible)

*Tick all that apply.*

- Research and Innovation
- Marketing communication
- Sales
- Development of corporate strategic goals
- Business plan
- Finance, financial systems
- Improve the quality of the product / service
- Research and Development
- Improve the tools and work conditions
- Improve the efficiency of Customer Relationship
- Training, hiring and staff motivation
- Development of leadership skills
- Machinery and equipment purchase
- Property development, expansion
- IT development (software, hardware, licenses)
- Domestic market acces, facilitating the acquisition of the market activities
- International market acces, increase competitiveness
- Supply chain
- Procurement
- Manufacturing
- Maintenance
- Production
- Human resources
- Services
- Other: \_\_\_\_\_

**5. Is your business considered as Small and Medium Sized Enterprise? SME? \***

Please see the table below

*Mark only one oval.*

- Yes
- No

## "SME" stands for small and medium-sized enterprises – as defined in EU law: EU recommendation 2003/361

The main factors determining whether a company is an SME are:

1. **number of employees** and
2. either **turnover** or **balance sheet total**.

Company category	Employees	Turnover	or	Balance sheet total
Medium-sized	< 250	≤ € 50 m		≤ € 43 m
Small	< 50	≤ € 10 m		≤ € 10 m
Micro	< 10	≤ € 2 m		≤ € 2 m

Questionnaire Page 2

## EU Funding FP6 - FP7 - Horizon2020

6th and 7th Framework Program, Horizon2020

### 6. Please choose the option that is true for your company. \*

Mark only one oval.

- We did not participate in any EU Framework Program      *After the last question in this section, skip to question 20.*
- We participated, but did not win at any of the Framework Programs.      *After the last question in this section, skip to question 16.*
- We participated, and won in a Framework Program      *After the last question in this section, skip to question 9.*
- We participated several times. We had both successful and rejected projects.      *After the last question in this section, skip to question 23.*



### 7. In the EU projects....

Please rank the problems

Mark only one oval per row.

	was not a problem for us	we managed to solve this problem	it was a big problem	we could not participate because of this problem
the maximum amount of support available was too low	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
the minimum grant amount available was too high	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
no possibility for payment in advance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
high volume of own resources was needed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
administrative requirements, the application process was too bureaucratic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
English was the official language during the tendering process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
to apply with and international consortium	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
intellectual property protection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
strict accounting conditions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
the time gap between the announcement of results and contract signing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
there was not enough information available for tender opportunities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
the call did not fit our company's profile	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
the calls and proposals did not meet the market needs and demand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
being SME	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 8. Other problems we faced

.....



## Questionnaire Page 3 A

**We participated and won in Framework Program.**

FP6 FP7 H2020

**9. Did you apply for a grant in FP6, FP7 or H2020 alone or as part of a consortium? \****Tick all that apply.*

- Alone
- In a consortium
- Both

**10. In case you applied in a consortia, what were the other nations?**

Please write down the other countries.

---

**11. Who made the proposal for your company?***Tick all that apply.*

- Proposal writer office
- An employee of the company
- The owner of the company
- Other: \_\_\_\_\_

**12. In wich Framework Program did you get grant?***Tick all that apply.*

- FP6
- FP7
- H2020

**13. What did your spend the grant on?**

More than one answer can be given

*Tick all that apply.*

- Development of corporate strategic goals
- Development of business plan
- Improve the effiency of the financial system
- Improve the quality of the product / service
- Research and Innovation
- Improving efectiveness of sales
- Research and Developement
- Market expansion
- Improve the tools and work conditions
- Improve effectiveness of marketing communication
- Improve the efficiency of Customer Relationship

- Improve the efficiency of Customer Relationship  
 Training, hiring and staff motivation  
 Development of leadership skills  
 Machinery and equipment purchase  
 Property development, expansion  
 IT development (software, hardware)  
 We could not spend all the money effectively  
 Other: \_\_\_\_\_

**14. Would you apply again?**

*Mark only one oval.*

- Yes  
 No

**15. Did the Framework Program give the expected results?**

*Mark only one oval.*

	1	2	3	4	5	
Yes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	No

*Stop filling out this form.*

Questionnaire Page 3 B

**We participated, but did not win at any of the Framework Programs.**

FP6 FP7 H2020

**16. Did you apply alone, or in a consortia?**

*Tick all that apply.*

- Alone  
 In a consortia  
 Both

**17. Who made the proposal for your company?**

*Tick all that apply.*

- Proposal writer office  
 An employee of the company  
 The owner of the company  
 Other: \_\_\_\_\_

**18. Why was your project rejected?**

\_\_\_\_\_

**19. Will you try again?**

*Mark only one oval.*

- Yes  
 No

*Stop filling out this form.*

## Questionnaire Page 3 C

**We did not participate in any EU Framework Program**

20. **Will you participate later? \***

*Mark only one oval.*

- Yes  
 No

21. **Does your company need financial help?**

*Tick all that apply.*

- No  
 Yes

22. **In which areas should your business develop for a successful participation in the future?**

*You can choose more than one answer.*

*Tick all that apply.*

- Internationalization, consortium partners  
 English language knowledge  
 Intellectual property protection  
 Expertise, competence, knowledge, skills  
 Research and development facilities, equipment  
 Other: \_\_\_\_\_

*Stop filling out this form.*

## Questionnaire Page 3 D

**We participated several times. We had both successful and rejected projects.**

FP6 FP7 H2020

23. **Who made the proposal for your company?**

*Tick all that apply.*

- Proposal writer office  
 An employee of the company  
 The owner of the company  
 Other: \_\_\_\_\_

24. **Did you apply for a grant in FP6, FP7 or H2020 alone or as part of a consortium?**

*Mark only one oval.*

- Alone  
 In a consortium  
 Both

25. **In case you applied in an international consortia, who were the other nations?**

.....

26. **In wich Framework Program did you get grant?**

You can choose more than one option,

*Tick all that apply.*

- FP6
- FP7
- H2020

27. **What did your spend the grant on?**

More than one answer can be given

*Tick all that apply.*

- Development of corporate strategic goals
- Development of business plan
- Imporve the effiiency of the financial system
- Improve the quality of the product / service
- Research and Innovation
- Improving efectiveness of sales
- Research and Developement
- Market expansion
- Improve the tools and work conditions
- Improve effectiveness of marketing communication
- Improve the efficiency of Customer Relationship
- Training, hiring and staff motivation
- Developement of leadership skills
- Machinery and equipment purchase
- Property developement, expansion
- IT developement (software, hardware)
- We could not spend all the money effectively

28. **Why was your project rejected?**

.....