1. INTRODUCTION

In this study we intended to review some aspects of one of the most significant cooperations in Central and Eastern Europe, namely the Visegrad cooperation. It has been a very important economic, social and political collaboration of the four countries (Poland, Slovakia, Czech Republic and Hungary) for long. The basic principle in the cooperation has always been to strengthen the links among the abovementioned countries, and due to the EU funds available, it has received greater importance even 10 years after their accession to the European Union. Based on the historical links and geographical proximity, we believe that the Visegrad group should find common ways of development even if their development level is not the same. It is important to find out whether the Visegrad countries could get closer to the targets defined by the European Commission by now or they need further improvements in some of the fields.

2. LITERATURE REVIEW

2.1. Visegrad Group

The Czech Republic, Hungary, Poland and Slovakia, also known as the Visegrad Group countries, have long shared common ground in history, culture, religion, and economics. Over the centuries this shared past has been marked by a striving
for unity as well as frequent frictions, peaceful times and military conflicts. The name of the cooperation refers to the historical meeting of 1335 in the royal palace of Visegrad, where Hungarian, Czech and Polish kings took strategic decisions for political and commercial purposes in order to strengthen the role of the region. On 15 February 1991, the renewed Visegrad Cooperation was set up with the aim of supporting the three post-socialist Central and Eastern European countries’ (Hungary, Czechoslovakia and Poland) Euro-Atlantic integration. (The V4 configuration was formed in 1993 following the dissolution of Czechoslovakia and the establishment of the independent Czech and Slovak Republics) – Visegrad Declaration. The Visegrad Group represents a consistent geographical region on the Eastern border of the European Union. This makes the region strategically important and also creates opportunities for the group’s member states to utilise their partnership at the regional level as well as within the European Union, though they often regard each other as competitors rather than friends, even after 25 years of systemic changes (Rácz, 2009). After the EU accession, their cooperation has got even more importance than earlier. It is known that the former EU countries are in a far better economic and social situation so the Visegrad Group does not only need to catch up with them but it must find ways how to represent common interest as a group and how to achieve higher cohesion in V4 and in the CEE region. The countries have to define their own endogenous strategies how to achieve economic cohesion and they also need to work on finding new ways for mutual benefits. Common goals are laid down in the New Visegrad Declaration signed by the Prime Ministers of the four countries on 12 May 2004 in Kroměříž, Czech Republic. Under the declaration it was undertaken that in the future, the V4 endeavour to take advantage of the opportunities opened up by joint actions in a pragmatic way, focusing on the common interests, free of illusions (Rácz, 2009). Since it is clear that there are some regions, e.g. Prague which does not belong to the regions lagging behind as most of the regions in the CEE region, it is a challenge how to carry out joint actions which are beneficial for all the Visegrad countries. It is also a fact that the development level of the countries has changed in the past 10 years due to the different progress in development and e.g Hungary, which used to be one of the developed countries of the region, now is at the bottom of the line. It means that the countries need to face not only national challenges but need to find ways of real collaboration as well as need to be able to meet the targets set in European Union strategies, like Lisbon strategy or EUROPE 2020.

2.2. Lisbon Strategy

The original Lisbon strategy was launched in 2000 as a response to the challenges of globalisation and ageing. The European Council defined the objective of the strategy for the EU ‘to become the most dynamic and competitive knowledge-based economy in the world by 2010 capable of sustainable economic growth
with more and better jobs and greater social cohesion and respect for the environment’. Underlying this was the realisation that, in order to enhance its standard of living and sustain its unique social model, the EU needed to increase its productivity and competitiveness in the face of ever fiercer global competition, technological change and an ageing population. It was recognized that the reform agenda could not be pursued at EU level alone (as had for instance been the case with the 1992 single market programme), but that since many of the policy areas involved member state competences, close cooperation between the EU and member states would be necessary to achieve results. It also reflected a first acknowledgement that member states’ economies are inherently linked, and that the action (or inaction) of one member state could have significant consequences for the EU as a whole. However, the original strategy gradually developed into an overly complex structure with multiple goals and actions and an unclear division of responsibilities and tasks, particularly between the EU and national levels. The Lisbon strategy was therefore re-launched in 2005 following a mid-term review. In order to provide a greater sense of prioritisation, the relaunched strategy was focused on growth and jobs. A new governance structure based on a partnership approach between the Member States and the EU institutions was put into place. In assessing ten years of the Lisbon strategy, what ultimately counts is the impact on growth and jobs. Assessing this impact, however, is not straightforward, as the economic cycle and external events, as well as public policies, play a determining role. Ultimately, the objective of the Lisbon strategy was to improve the pace and quality of reforms at national and European level: therefore the assessment needs also to consider whether the strategy shaped reform agendas by forging greater consensus amongst stakeholders on challenges and policy responses (SEC, 2010).

Overall, the Lisbon strategy has had a positive impact on the EU even though its main targets (i.e. 70% employment rate, and 3% of GDP spent on R&D) have not been reached. The EU employment rate reached 66% in 2008 (from 62% in 2000) before it dropped back again as a result of the crisis. However the EU has failed to close the productivity growth gap with leading industrialized countries: total R&D expenditure in the EU expressed as a percentage of GDP only improved marginally (from 1.82% in 2000 to 1.9% in 2008). It would, however, be too simplistic to conclude that the strategy has failed because these targets were not met. We can state that the strategy has broken new ground by promoting common actions to address the EU’s key long-term challenges (SEC, 2010).

2.3. Europe 2020

As a sort of continuation of the sustainable development measures taken in the framework of the Lisbon strategy, and to achieve the goals which could not be met by 2010, the EU published another strategy in 2010, namely EUROPE 2020, to
enhance the sustainable economic and social cohesion among the member states. EUROPE 2020 was being developed and was in the finalisation phase when the global financial crisis hit the world, including the EU. Thus, the European Commission had to define strategies which continue the activities of the Lisbon strategy, as well as to define totally new ones to meet the changed conditions due to the financial crisis and also to set long-term objectives to achieve further convergence within the Union. It is the first global strategy in the EU aiming at economic and social development in long-terms, considering sustainable aspects. It has been in effect since 1 January 2011, therefore all the development projects, carried out or to be carried out in the territory of the EU in the near future, have to meet the requirements of the abovementioned strategy. It is also a well-known fact that the member states are in different stages of development and there are great differences in meeting the EUROPE 2020 target indicators.

EUROPE 2020 focuses on three key priorities:

- *smart growth*: developing an economy based on knowledge and innovation
- *sustainable growth*: promoting a more resource efficient, greener and more competitive economy
- *inclusive growth*: fostering a high-employment economy delivering economic, social and territorial cohesion.

The headline targets related to the strategy’s key objectives at the EU level, as defined in the Council Conclusions, are:

- 75% of men and women aged 20 to 64 years to be employed;
- 3% of GDP to be invested in the research and development (R&D) sector.

Climate change and energy targets:

- reduce greenhouse gas emissions by 20% compared to 1990 levels;
- increase the share of renewables in final energy consumption to 20%;
- 20% increase in energy efficiency;
- reduce the rates of early school leaving to below 10%, and at least 40% of 30 to 34 year olds to have completed tertiary or equivalent education;
- reduce poverty by lifting at least 20 million people out of the risk of poverty or social exclusion (Eurostat, 2013).

To ensure that the Europe 2020 strategy is delivered a strong and effective system of economic governance has been set up to coordinate policy actions between the EU and national levels. These targets are closely related to each other, therefore progress achieved in one may have direct positive impact on the others. For example, better educational levels help employability and progress in increasing the employment rate helps to reduce poverty. A greater capacity for research and development as well as innovation across all sectors of the economy, combined with increased resource efficiency will improve competitiveness and foster job creation. Investing in cleaner, low carbon technologies will help our environment, contribute to fighting climate change and create new business and employment opportunities. The targets represent an overall view of where the
Commission would like to see the EU on key parameters by 2020. They do not represent a ‘one size fits all’ approach. Each member state is different and the EU of 27 is more diverse than it was a decade ago. Despite disparities in levels of development and standards of living the Commission considers that the proposed targets are relevant to all member states, old and newer alike. Investing in research and development as well as innovation, in education and in resource efficient technologies will benefit traditional sectors, rural areas as well as high skill, service economies. It will reinforce economic, social and territorial cohesion (COM, 2010). To ensure that each member states tailors the EUROPE 2020 strategy to its particular situation, the Commission proposes that these EU targets are translated into national targets and trajectories to reflect the current situation of each member state and the level of ambition it is able to reach as part of a wider EU effort to meet these targets. Therefore, the strategy includes measures that have to be taken at EU level and the member states should define their own tasks in line with the European level objectives based on their own economic and social conditions. Thus, neither the concrete targets nor the way to achieve them are the same in all the member states (COM, 2010). Based on the abovementioned, EUROPE 2020, i.e. a strategy for jobs and smart, sustainable and inclusive growth, is based on five EU headline targets which are currently measured by eight headline indicators.

As the cohesion policy focuses on the regional inequalities and set the strategies based on the endogenous development of the regions, it is important to see the diverse development levels and progress of the regions of each country, and not only focus on the EU-level targets set for 2020. In this study it is not an aim to go into the regional details but to highlight the national differences within the Visegrad Group. In order to take the regional specifications into account, the member states set and published their own national targets which in some cases do not match the EU targets. The major fields of development are closely related to the ones urged in the Lisbon strategy, i.e. research and development and employment. In addition to these, innovation, lifelong education and energy efficiency/sustainability also gained importance in this advanced strategy. Hungary had an important role in launching EUROPE 2020 and its first semester, since the EU presidency was held by Hungary between 1 January and 30 June 2011. We can consider the efforts successful and we are extremely proud of such efforts, since Gödöllő, our city, was the host for the EU presidency official meetings and events.

3. MATERIAL AND METHOD

In order to see how efficient the Visegrad Group is in meeting the targets of EUROPE 2020, relevant data for the Visegrad countries for the years 2000, 2004, 2010 and 2013 has been collected. The reason for selecting these years is that
2000 was the starting date of Lisbon strategy, 2004 was the year of accession of the Visegrad countries to the EU, 2010 was the deadline to achieve the Lisbon goals and 2013 is a year for which the latest data from EUROPE 2020 is available. The major data source for the research was the Eurostat, the official database of the European Union. In addition to the headline indicators, we considered it important to see how the GDP per capita (as one of the most significant economic indicators of the EU) and the GDP growth varied in the examined period. In table 1 it can be seen that the GDP per capita, which is the indicator used for eligibility in the case of Structural Funds, has gradually increased in all four countries.

Table 1. GDP per capita in PPS in the Visegrad countries, 2004–2013

<table>
<thead>
<tr>
<th>Country</th>
<th>GDP per capita, % (PPS)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2004</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>75,1</td>
</tr>
<tr>
<td>Hungary</td>
<td>63,4</td>
</tr>
<tr>
<td>Slovakia</td>
<td>57</td>
</tr>
<tr>
<td>Poland</td>
<td>50,6</td>
</tr>
<tr>
<td>EU 27</td>
<td>100</td>
</tr>
</tbody>
</table>


However, in the case of the Czech Republic, the increase was only 5%, which might be due to the decrease in the average of the EU as a basis for calculations (meaning mathematical increase only). Due to the accession of Romania and Bulgaria, the EU average GDP per capita decreased, therefore the real GDP per capita growth can only be mentioned for Slovakia and Poland with increase of 15–20% in the examined period. The GDP growth, however, was decreasingly moderate, especially from the year 2012 to 2013. The rate of growth is extremely low compared to former years; in the case of the Czech Republic, it even reached a negative value. In order to reflect the progress of each member state, indices have been created for each indicator, using the formula below:

\[
\frac{X_i - X_{\min}}{EU \ target - X_{\min}},
\]

in which \(X_i\) was the actual data of the member state in a given year, \(X_{\min}\) was the minimum value achieved by any member of the Visegrad Group. The target was always equal to the target defined by the EU to be achieved by 2020. In the case of
indicators where it was desirable to reach the lowest figures, we deducted this from 1 to reflect the real performance of the member states. Although in 2000, 2004 and 2010 the Lisbon targets were in effect regarding the employment, we compared all the data to the EUROPE 2020 targets because Lisbon ones can be considered as preparation for EUROPE 2020 and in the long term EUROPE 2020 targets need to be met. Regarding the values of indices in the case of employment, R&D, the share of renewables and the tertiary education attendants (where the member states need to achieve higher values than the current ones), the range was between 0 and 1, except for those countries which already exceeded the target. Such countries had over 1. In the case of those figures where the member states need to reduce the values, the range was between below and above zero. The further they are from meeting the target, the lower the negative value was. It is a fact that indicators and national data reflect only some of the issues and deeper investigations are necessary, but nevertheless it is useful to see how efficient the Visegrad countries are in achieving the EUROPE 2020 targets.

4. RESULTS AND DISCUSSION

This part of the study identifies tendencies in economic and social development of the Visegrad countries over the last decade. The figures show not only the real values but also the average of indices in each examined year (it is the average of the indices of the four countries), which allows to see what the cohesion looks like in the different years in relation to the EUROPE 2020 indicators.

4.1. Headline Target No. 1: 75% of the Population Aged 20–64 Should Be Employed

As it can be seen in figure 1, none of the countries have reached the EU target (75%) – which is supposed to have the value 1.0 refers to the country with the lowest figure in the Visegrad Group. However, it is clear that only the Czech Republic is close to meeting the EU target with over 70% employment rate for the whole period examined. The rest of the countries are relatively far from it, having around 57–63% employment rate. However, it needs to be mentioned that 2 countries have lower national targets for employment than the EU target: Slovakia and Poland – 72% and 71%, respectively. If we look at the indices of the 4 examined years, it can be seen that Poland was in the last place in 2000 and 2004 but later Hungary took its place and has become the last in the ranking, which means obvious recession for Hungary. Regarding Poland, there is a surprising tendency observed: employment rate in Poland was the lowest in 2004 (57.3%) and by 2010 it managed to achieve the highest increase reaching 64.3% and to maintain it later on. The abovementioned Polish increase is reflected in figure 2.
The average of the group was the highest in 2004, however, the trend of average figures shows the distance between the real performance and the expected one. After a gradual increase until 2004, a sharp decrease can be observed by 2010 in all the countries except for Poland. Poland is the only country which had shown increase by that year. If we consider the average, we can see that the strong situation of the Czech Republic pulled up the figure, while the rest of the countries had figures around or under the average, with the exception of Slovakia for the
year 2004. In general, the countries were in a relatively good economic situation in the year of their EU accession. Later on they lost some of their strengths, partly due to the global financial crisis in 2008–2009.

4.2. Headline Target No. 2: 3% of the EU’s GDP Should Be Invested in R&D

As for R&D expenditure as GDP percentage, it has to be stated that none of the countries reached the index value 1, meaning that none of them reached the EU target (3%), while one country – the Czech Republic – managed to reach its national target (1%), which is significantly lower than the EU target. National targets of the countries reflect their handicap compared to Western Europe: Hungary set 1.8%, Slovakia 1%, the Czech Republic 1% (public sector only) and Poland 1.7% as national targets to be reached. While in 2000 Poland had the lowest value (0.64%), later on Slovakia took the last place, having the poorest figure for R&D expenditures in each examined year. In figure 3 it can be seen that the countries achieved gradual increase, however, they are still far from reaching the expected EU target.

Looking at figure 4, it is clear that there was a gradual increase in the average index of the four countries, meaning that the average performance of the region was improving. The Czech Republic was the best performer and Hungary was continuously catching up over the years.

![Fig. 3. Index for R&D expenditures in GDP percentage of the Visegrad countries (according to countries)
Source: authors’ elaboration based on Eurostat (2014)](image-url)
4.3. Headline Target No. 3/a: Reduction of the Greenhouse Gas Emissions by 20% Compared to 1990

It can be observed in figure 5 that it is the first indicator in which at least one country met the EU target. Slovakia, Czech Republic and Hungary had very favourable positions in the examined period, since they had already met the 20% reduction target in 2000 and managed to keep their good position. The Czech Republic kept its figures at an approximately similar level, while Hungary managed to turn from negative to positive, meaning that it was able to reach the EU target after a recession in 2004. Poland had the poorest performance over the years, it did not achieve 20% reduction in greenhouse gas emissions compared to the year 1990 (showing negative values in figure 5).

As Figure 6 shows, the average of the four countries increased continuously, which means that overall the countries were approaching the EU target, with Slovakia and Hungary being the strongest. If we consider the national targets, we need to mention that none of the countries set 20% reduction as national targets. They defined more moderate reductions as official targets than the EU as a whole. Hungary was supposed to reach 10% reduction according to the national target, Slovakia 13%, the Czech Republic 9% and Poland 14%. As for meeting such targets, we have to state that all the countries have reached their national target indicators.
Fig. 5. Index for greenhouse gas emissions of the Visegrad countries (according to countries)
Source: authors’ elaboration based on Eurostat (2014)

Fig. 6. Index for greenhouse gas emissions of the Visegrad countries (according to years)
Source: authors’ elaboration based on Eurostat (2014)
4.4. Headline Target No. 3/b: Increase in the Share of Renewable Energy Sources in Final Energy Consumption to 20

Regarding this indicator, it needs to be mentioned that there is no data available for the year 2000, so only 2004, 2010 and 2013 have been included in the research. Figure 7 shows only 3 countries, because Hungary had the minimum values in all the years examined. Similarly to the other indicators, the country with the minimum value was designated as 0. Therefore, Hungary is not seen in the figure.

![Index for share of renewables in gross energy consumption in the Visegrad countries (according to countries)](image)

Source: authors' elaboration based on Eurostat (2014)

It is true for all the countries in question that they did not meet the EU target, which would mean a 20% share of renewables in gross energy consumption. It needs to be stated that Poland had the most favourable position in 2004, and it was the second best in the rank later on as well. In real values, all the countries managed to increase the share of renewables, however, the index does not show that continuous trend due to the changes in the minimum performance in the group applied in the formula. Despite the lower commitments made by the countries in their national targets (Hungary – 14.65%, Slovakia – 14%, Czech Republic – 13% and Poland – 15.48%), the general picture is not really bright. None of the countries managed to reach even their own national targets in the examined years. The Czech Republic managed to reach the maximum share, namely 11.2% in 2013. In figure 8 the tendency of the average index is fluctuating. There was a drop in 2010, but the value of 2004 was reached again by 2013.
4.5. Headline Target No. 4: The Share of Early School Leavers Should Be under 10% and at Least 40% of 30–34 Years Old Should Have Completed a Tertiary or Equivalent Education

In the case of the early school leavers’ indicator, the best-performing countries had data over 0 if they reached the required EU target. According to the figures, only Hungary has to make further efforts to meet the EU target, with value below zero. Figure 9 shows its handicapped situation compared to the other Visegrad countries. Figure 10 reflects the different positions of the countries in this regard. There is a strong similarity among three countries, while Hungary is lagging behind despite the gradual improvement (see figure 10).

It is a positive tendency that the average values increased gradually over the years (with a slight drop by 2013). Similarly to other headline indicators, the countries set various targets at national levels. It is only Hungary which has the same target as the EU (10%). All the other countries set lower targets, meaning that they wish to reduce the share of early school leavers to 6% (Slovakia), 5.5% (Czech Republic) and 4.5% (Poland). As for the tertiary school attainment, it needs to be stated that the Czech Republic was in the last place in 3 years out of four in the research. It had the lowest figures in this regard, having zero in 3 years on the figure. What should be highlighted is that Poland reached the target (indicated as 1 in figure 11) in 2013, meaning that the tertiary school attainment reached 40% among the 30–34 year-old population due to gradual increase.

It should be added that except for the year 2000, Poland occupied the first place in the ranking over the period. In addition, Hungary also increased its figures over the
years but it is still below the EU target. National targets also show various picture, with the Hungarian 30.3%, Slovakian 40%, Czech 32% and Polish 45%. If we compare the performance of the countries to their national targets, we can see that Hungary managed to reach the national target by 2013 (having the lowest target compared to
the others!) and even Poland was quite close to its target (45%), which is a much more spectacular success, since its national target is higher than that of the other countries. So Poland’s No. 1 place is unquestionable. Improving situation in tertiary education is reflected by the gradual increase in the average value, as can be seen in figure 12.

Fig. 11. Index for tertiary school attainment in the Visegrad countries (according to countries)
Source: authors’ elaboration based on Eurostat (2014)

Fig. 12. Index for tertiary school attainment in the Visegrad countries (according to years)
Source: authors’ elaboration based on Eurostat (2014)
The question is whether the countries have planned to take measures on the labour market to provide appropriate jobs for the large number of people with college/university diplomas.

4.6. Headline Target No. 5.: Reduction of Poverty By Aiming to Lift at Least 20 Million People out of the Risk of Poverty or Exclusion

Due to lack of data for the year 2000, only the years of 2004, 2010 and 2013 were taken into consideration. We need to mention that the variation between the indices of the countries was the largest in the case of poverty indicator, referring to the great social discrepancies within the Visegrad Group. When interpreting the data in figure 13, we need to see that the lower is the figure below zero, the further is the country from meeting the target. What could be surprising is that Poland achieved a significant improvement from 2004 to 2010 and it managed to further improve slightly that position by 2013 (see figure 14).

Figure 14 clearly shows the strong position of the Czech Republic, which had the maximum values already in 2004. Hungary had stagnating or slightly increasing values, which is the opposite of the expected results. As the averages gradually increased, we can state that social conditions gradually improved in the countries. However, the national targets show a diverse picture again. For example, Hungary intends to reduce the number of people at risk by 450,000, while Slovakia by 40,000 and the Czech Republic by 30,000. The target of Poland, namely 1,500,000, is also a shocking data.

Fig. 13. Index for people at risk of poverty or social exclusion in the Visegrad countries (according to countries)
Source: authors’ elaboration based on Eurostat (2014)
5. CONCLUSIONS

In summary, the countries of the Visegrad Group have their own targets set at national level and additional challenges resulting from regional discrepancies. The aim of this study is to see how much progress the Visegrad countries have made since the beginning of the 21st century in relation to EU level strategies and development targets. The research results reflect the different starting points/situations of the countries, which made it more difficult to achieve cohesion. The economic situation of the Visegrad countries showed considerable diversity even at the time of their EU accession, which was further amplified by the use of European Union’s Structural and Cohesion funds. The differences between the countries were partly due to the various intensity rates of funds, the various levels of own funds, and different priorities assigned to the development objectives in their national operational programmes.

Based on the indicators detailed above, we can see that territorial cohesion within the Visegrad Group has not been achieved in all the aspects, which makes it more difficult for the countries to represent a strong cooperation within the EU28. There are fields where the countries performed well, e.g. greenhouse gas emissions, share of renewables, human resource development, and reducing the risk of poverty (except for Hungary), while there are sectors where they are still lagging behind (R&D expenditures, employment) not only in the light of EU targets, but also their
own national targets. Regarding some of the indicators, we can observe the specific situation of Hungary. There is strong correlation between the use of renewable energy and the share of population at risk of poverty. Of the four countries, Hungary’s energy-dependence is the greatest. Restructuring can be carried out by paying more attention to renewable energy sources. In our opinion, large investments in geothermal energy may bring a potential solution to this problem, because they can play a major role in job creation, thus in decreasing the proportion of people living in poverty. Geothermal energy can be found almost everywhere in Hungary, so it may contribute to sustainable development in several ways. Poland is lagging behind as regards the meeting of the greenhouse gas reduction target. The reason for it can be the economic structure of the country and the composition of the related energy portfolio. Alternative energy sources may bring the expected positive results to Poland as well, both in respect of reduction of greenhouse gases emission and poverty. As for the Czech Republic, the outstanding figures are primarily due to the structure of industry within the national economy. The rate of processed products, the car manufacturing industry, the gradual transfer of innovations into the economy are all explanatory factors for its favourable position among the countries, while in Slovakia, the positive effects of the introduction of the euro contributed significantly to the improving of the tendencies.

Overall, it can be stated that cohesion among the Visegrad countries has been growing, but the country-specific challenges (e.g. poverty – Poland, Hungary; high percentage of early school leaving – Hungary; low employment rate – Hungary; poor R&D sector – Slovakia) need to get more emphasis in the future. Considering the abovementioned (with special focus on the country-specific challenges), we believe that economic cooperation needs to be strengthened, national development priorities and directions should be harmonized and cross-border cooperation must be encouraged and developed. The results of joint R&D projects should be integrated and transferred to the economies and joint R&D directions need to be elaborated for the future.

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