„Socio-Economic Assessment of the Danube Region: State of the Region, Challenges and Strategy Development”

First Progress Report

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0 Progress Summary

The first progress report on the socio-economic assessment of the Danube Region presents very first results for individual topics of the prosperity and competitiveness diagnostics and describes progress of project Part I. Current results focus in particular on the comparative assessment (benchmarking) of the macroeconomic performance of the Danube Region vis-à-vis the EU-27 and OECD countries. For that purpose, novel aggregate indicators have been derived from the underlying country-specific – and in the case of Baden-Württemberg and Bavaria – federal state-specific data sources to obtain an overall view on the Danube Region. The analysis takes into account that the Danube Region comprises a very heterogeneous set of regions with wide disparities in economic performance. The Danube Region has some of the most successful but also some of the poorest regions in the EU. Therefore, an exclusive focus on the Danube Region as a whole would hide important differences.

In order to take these differences into account, we divide the Danube Region into five subgroups of countries or regions and make comparisons between these subgroups.

The main results of the assessment of the macroeconomic performance are the following (chapter 2):

- Growth performance: Total real GDP in the Danube Region clearly grew stronger than GDP in the OECD and EU-27 over the last decade. Regarding subgroups within the Danube Region, the Accession and Neighbouring Countries, the least developed members of the region, followed by Romania, Bulgaria and Croatia (Member States Area 3) and the group formed by Hungary, Czech Republic, Slovak Republic and Slovenia (Member State Area 2) exhibit substantially higher growth rates during the period of analysis than the subgroup consisting of Bavaria, Baden-Württemberg and Austria (Member States Area 1). However, the fast growing Accession Countries and Neighbouring Countries contribute only a share of 5% and 2% to the total Danube GDP.

- Prosperity performance: As an indicator for prosperity, real GDP per capita is commonly used. For the Danube Region a gradual increase
in GDP per capita over time can be observed, but this also holds for the OECD and EU-27. Consequently, there is little evidence of sustainable convergence so far. Furthermore, the OECD has an overall level of GDP per capita that is twice as large as that of the Danube Region. Here again, there are important differences within the Danube Region. Member State Area 1 enjoys the highest level of prosperity with a GDP per capita of approximately 37,000 US$. In fact, Member State Area 2 only narrowly reaches a level that is a little higher than half of Member State Area 1’s level. Similarly, a wide margin separates Member States Area 2 from the Member States Area 3 in terms of GDP per capita. At the bottom of this classification we find the Accession Countries and Neighbouring Countries with a GDP per capita of approximately 9,000 US$ and 7,000 US$, respectively.

- In the last centuries, there has been a shift in the composition of GDP in advanced economies from the primary sector towards the secondary sector, followed by a shift towards the tertiary sector. As such, the tertiary sector has currently become the main economic activity in these economies. While the share of services is still significantly smaller in the Danube Region than in the OECD and the EU-27, the shares of industry and agriculture are notably higher. Based on this finding, we conclude that the Danube Region as a whole is still going through a process of transformation, shifting from agriculture to industry and finally towards services. Each of the Danube Region’s subgroups is at a different stage of this transformation process. For instance, the Member States 3, the Accession Countries and the Neighbouring Countries exhibit a higher share of the agricultural sector than the Member States Areas 1 and 2. Nevertheless, at this point it is important to note that a significant reduction in the size of their agricultural sector took place between 2003 and 2011.

- Labour productivity measured as GDP per person employed is clearly higher in the OECD and EU-27 than in the Danube Region. While labour productivity is approximately 60,000 US$ for the OECD and
the EU-27, the Danube Region exhibits a GDP per person employed of approximately 40,000 US$. The differences within the Danube Region are, again, conspicuous.

The preliminary conclusions on the assessment of cooperation and networks to increase competitiveness in the Danube Region are as follows (chapter 3):

- Cooperation in the Danube Region with the aim of increasing competitiveness is at its inception while some long-standing organizations/initiatives at sub-regional and at EU level have been active for a longer period of time. Several initiatives set up specifically for the Danube Region are either projects with a limited number of participants from several countries in the region, or initiatives of one organization/country looking for partners. At this point of research it seems inconclusive to assess the potential of such initiatives.

- As a next step, cluster associations in the Danube Region have been targeted with a questionnaire to find out if they have activities or plan activities across borders within the Danube Region. Based on the first answers it is obvious that the definition of the Danube Region in some border countries is more restrictive than the border of the country. In Bulgaria only the Northern regions consider themselves part of the Danube Region. In Serbia only the DCCA members along the Danube consider themselves part of the Danube Region. Thus, for instance, the manager of the Chamber of Commerce and Cluster House in the town of Niš opines that they are not eligible for participating in Danube Region activities. A clarification in this respect would help mobilizing business networks in the Danube Region.

The remainder of the progress report proceeds as follows. The first chapter sets forth aims and concepts of the first part of the project. The second chapter reports the current progress on the indicator-based competitiveness analysis of the Danube Region. The third chapter describes the progress of the assessment on existing cooperation and networks in the Danube Region.
The Socio-Economic Study of the Danube Region: Aim and Concept

The aim of the project is an indicator-based analysis of potential opportunities, needs, challenges, and recommendations, in order to enhance the competitiveness, the innovative strength, the attractiveness, and the prosperity of the entire region of the Danube riparian countries and regions, and to develop a strategic orientation with regard to transnational and interregional cooperation for the period from 2014 to 2020. From this overall aim we derive the following concept of the project:

- First, to assess the levels of prosperity and competitiveness in the region from a broad, socio-economic perspective by means of macro- and microeconomic analyses drawing on a comprehensive set of outcome-based and input-based indicators. A further aim of the analysis is to take stock of the degree of economic integration within and across the Danube Region (DR). The outcome will be an indicator database for the DR and relevant benchmark countries and regions outside the DR.

- Second, to summarize the assessment in SWOT-styled, country- and region-specific tableaus in order to derive tentative suggestions for future pathways of political support. The outcomes are country- and region-specific scoreboards and tables with a set of preliminary recommendations for priority fields of action.

- Third, to assess the level and quality of network activities, the strength of current regional and interregional cooperation, and to identify potentials to stimulate cooperation since these are the means to enhance prosperity and competitiveness within the EU Strategy for the Danube Region (EUSDR). The outcome is a set of preliminary recommendations on cooperation potentials with which we enter the second stage of the project and continuously shape a vision for the implementation of the EUSDR in an on-going dialogue with the relevant stakeholders of the region. This vision should deliver strategies for fostering cooperation and identify pro-
jects that promote sustainable development and cover several re-
regions and countries.

1.1 Part I of the Project

Competitiveness is defined and measured in very different ways and there is
no unanimous definition of the concept.¹ Regarding the level of analysis, com-
petitiveness may be captured on different levels ranging from the supra-
national to the national and regional level, down to the sector and firm level.²
Concerning substance and content, the factors that are believed to reflect
competitiveness are equally varied and they are used and combined in a num-
ber of different ways.

The measurement of competitiveness is thus performed in as many ways as
the concept is defined: whereas some scholars deny that competitiveness as
such even exists, others construct sophisticated indicators including a large
number of parameters from the economic, social, environmental and political
context. Important groups of indicators can be allocated, for instance, to the
fields of market performance, price and quality, the ability to innovate, the
structure of the labour market, the level of markets’ international integration,
but even to the qualitative conditions of countries’ business environments.

As the present project aims at the comparative analysis of the competitiveness
of nations (and, in the case of Baden-Wurttemberg and Bavaria, federal states)
from which the competitiveness of the DR as a whole will be derived, im-
portant sources relevant for the present study are the European Unions’ (DG
Enterprise and Industry) yearly European Competitiveness Reports³ as well as
the Global Competitiveness Report provided by the World Economic Forum

¹ European Commission (2009), ‘Special Report: Competitiveness Developments within the
² With regards to the underlying data, competitiveness indicators can be measured on the
macro level (e.g. aggregate data on GNP) and on the micro level (e.g. firm-level data on
productivity).
The Socio-Economic Study of the Danube Region: Aim and Concept

Both reports include wide ranges of basic and composite indicators from the economic, societal and political spheres and they allow for detailed comparisons between countries. For our analyses in the present project, we will use readily available indicators of these and further reports as far as possible and reasonable, and we will complement them by additional indicators that will be specially compiled for the countries of the DR. In addition, our local experts will provide qualitative information, in particular in fields such as entrepreneurship and SMEs that are covered only sparsely by available sources.

Figure 1: The concept of prosperity and competitiveness measurement

The present study defines competitiveness as the set of factors, institutions and policies that affects the level of macroeconomic and microeconomic productivity which enables a country to achieve a high and sustainable path of income and prosperity. It thus builds on a broad understanding of competi-

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tiveness by including the relevant factors that make a country or region attractive for doing business and a place for generating job and employment opportunities. Fundamental requirements are the mobilisation of production factors (labour and capital), institutional, organizational and local conditions that enhance the efficiency of factor inputs, and factors that drive business and innovation.

We thereby distinguish between a macro dimension (mainly referring to framework conditions at the national level) and a micro dimension, which relates to factors driving business operation and success (see Figure 1). Important factors at the macro level are different types of institutions, e.g. regulatory frameworks, the educational system or openness to trade, countries’ endowments with infrastructure and characteristics of the labour market. At the micro-level, we focus on business dynamics, particularly with regards to SMEs, on innovation activities, as well as on the structure and development of sector and regional clusters.

**Figure 2: The pillars to assess the state of the Danube Region**

| Prosperity and Competitiveness | • Macroeconomic performance  
| | • Indicators of competitiveness  
| | • Labour markets and migration  
| | • Regional development, infrastructure, and environment |

| Entrepreneurship and SMEs | • SME growth  
| | • SME financing  
| | • Regulation and institutions  
| | • Development of clusters |

| Cooperation and Networks | • Stocktaking of existing networks and initiatives  
| | • International financing institutions, development aid and participation in EU programmes  
| | • Progress in competitiveness initiatives  
| | • Recommendations for improving cooperation |

At the operational level, we break down the work load of Part I along three work packages, each of which constitutes a pillar of the socio-economic and competitiveness assessment of the DR (Figure 2). The following leaders and scientific contacts have been assigned:
The Socio-Economic Study of the Danube Region: Aim and Concept

- Prosperity and Competitiveness (Work Package 1): lead by IAW, scientific contact: Günther Klee, guenther.klee@iaw.edu
- Entrepreneurship and SMEs (Work Package 2): lead by ZEW, scientific contact: Jürgen Egeln, egeln@zew.de
- Cooperation and Networks (Work Package 3): lead by wiiw, scientific contact: Gabor Hunya, hunya@wiiw.ac.at

The implementation of the socio-economic and competitiveness assessment rests on three layers (Figure 3):

- A database of quantitative and qualitative indicators that will be compiled from various sources according to the project’s topics and objectives. This annual database will cover indicators for each individual country of the DR, and in particular for the DR at the aggregate level since a central aim of the project is to assess and upgrade the competitiveness of the macro-region. Also relevant benchmark regions such as the Eurozone, the EU 27, EU 15, the USA and the OECD region will be considered. The database has a temporal dimension showing indicators for the past years up to the most recent available year in order to assess changes over the recent past. In addition, if available, the database will include forecasts for selected headline indicators.

- Scoreboards that are meant to condense the information from the database in order to provide clearly arranged region and country profiles. The scoreboards will contain selected headline indicators for each pillar and topic. Comparisons with analogue scoreboards for benchmarking regions or adjacent countries will help to identify country and DR specific strengths and potentials with regard to socio-economic development and competitiveness. The exact decomposition of the indicators will be elaborated over the course of the implementation of project Part I.

- Region and country profiles in SWOT-style overview tables which are the main outcome of the analytical assessment. These profiles will summarize the potentials, needs and challenges for each DR country and for the DR as a whole. They will include a set of prelimi-
inaria recommendations to enhance the competitiveness, the innovative strength, the attractiveness, and the prosperity of the entire region through better cooperation and deeper networks. The recommendations will also identify funding resources, e.g. by national or international funding agencies.

**Figure 3: The implementation and outcomes of Part I**

- **Database**
  - Quantitative and qualitative indicators
  - Per year, country and region

- **Scoreboards**
  - Benchmarking per time, country and region
  - Per topic (institutions, entrepreneurship, etc.)

- **Region and Country Profiles**
  - Potentials
  - Challenges
  - Needs
  - Recommendations
2 Progress on Competitiveness of the Danube Region: Potentials, Needs and Challenges

2.1 Prosperity and Competitiveness

2.1.1 Introduction

The Danube Region is largely a European Union (EU) territory, especially after the EU enlargements from 2004 and 2007, hence, the need of a European Union Strategy for the Danube Region whose main objective is to reinforce the integration of the Region in the EU.5

Since the end of the Cold War (1989), most countries sharing a border with the EU have gone through change on an unprecedented scale. In many ways the European Union has been an important factor behind this change: successive waves of EU enlargement have extended its external borders outwards from the borders of the founding Member States, turning former neighbours into current Member States while creating new neighbours along its new external borders.

Since the foundation of the EU, the number of Member States has more than quadrupled, the EU population has risen to half a billion citizens, and many of the 15 countries that surrounded the European Economic Community (EEC) in 1970 have become Member States. In terms of output, however, the combined GDP of countries surrounding the EU today is just a fraction of the latter’s GDP. This is a reflection not only of the economic success of the EU, but mainly the fact that many of the countries surrounding it today are relatively poor and still in a developing stage (whereas many of the countries surrounding it in 1970 were at an economic level comparable to that of the founding Member States).6

The Danube Region

The EUSDR deals primarily, but not exclusively, with: Germany (Baden-Wurttemberg and Bavaria), Austria, the Slovak Republic, the Czech Republic, Hungary, Slovenia, Romania, Bulgaria and (since July 2013) Croatia within the

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5 EUSDR: Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions.
6 European Competitiveness Report 2012: Reaping the benefits of globalization.
EU, and Serbia, Bosnia and Herzegovina, Montenegro, the Republic of Moldova and Ukraine.  

The region exhibits very wide disparities. It has some of the most successful but also some of the poorest regions in the EU.  

The current level of integration and comprehensive interdependency of the region as a whole is quite unprecedented. This opens up prospects for sustainable development and faster convergence based on a closer cooperation and well-designed regional policies.

An important feature of the region is its relatively high (yet varying) degree of trade integration. In most Danube Region countries, the share of German exports is overwhelming. For instance, more than 20% of total Austrian, Czech, Slovakian, Slovenian and Hungarian exports go to Germany. On the other hand, Bulgaria, Romania, Serbia, Bosnia and Herzegovina, Montenegro as well as Ukraine and Moldova display divergent trade specialization patterns.  

The Danube Region also has many opportunities. It has many areas of outstanding natural beauty, as well as a rich history, heritage and culture. There is immense development potential, especially in the countries most affected by the transitions since 1989. There are creative ideas, and a quality labour force.  

In the following we compare the Danube Region with other regional aggregates, namely OECD and EU-27, to be able to better judge the Danube Region’s competitiveness and position in the world.

In order to take the differences within the regions into account we further divide the Danube Strategy Region into five subgroups. The Member State Area 1 consists of Bavaria, Baden-Wurttemberg and Austria. Whereas Bavaria and Baden-Wurttemberg are two of the most important economic regions of

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7 EUSDR: Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions.
8 And European Competitiveness Report 2012: Reaping the benefits of globalization.
9 European Competitiveness Report 2012: Reaping the benefits of globalization.
10 EUSDR: Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions.
Germany which form part of the European Union since its foundation, Austria joined in 1995.

The Member State Area 2 is made up of Hungary, the Czech Republic, Slovak Republic and Slovenia. All these countries became members in the, so far biggest (in terms of number of states), enlargement of the European Union in 2004.

Member State Area 3 contains Romania, Bulgaria and Croatia. Whereas Romania and Bulgaria joined in 2007, Croatia is the most recent and newest member of the Union, since it joined in July of 2013.

The Accession Countries are Serbia, Bosnia and Herzegovina, as well as Montenegro. The status of a candidate for accession has been given to Montenegro in 2010 and to Serbia in 2012, while Bosnia and Herzegovina remains a potential candidate for accession.

The Neighbouring Countries are Ukraine and Moldova.

A brief characterization of the subgroups of the Danube Region

Member State Area 1: (Austria, Bavaria, Baden-Wurttemberg)

Bavaria and Baden-Wurttemberg are two of the most economically important and strongest regions in Germany; therefore Bavaria and Baden-Wurttemberg, as well as Austria are among the wealthiest members in the European Union. While Germany has been a part of the EU since the Union’s foundation, Austria joined in 1995. Both countries have also been part of the euro area (Euro Zone) since the creation of the monetary union. They all have low unemployment rates, solid competitive economies and a good investment climate.

Bavaria and Baden-Wurttemberg both have great rates of innovation especially in the high-tech industry, research and development. In Baden-Wurttemberg the industry is orientated towards the production of cars, mechanical engineering, electrical engineering and the chemical industry. Bavaria’s industry is turned towards the IT sector, as well as the car industry, media and the defense industry. In 2009 the real GDP growth turned negative for all three members, Baden-Wurttemberg recorded negative growth rates of about -9.15 percentage points (highest value in the Danube Region, except for Ukraine),
but recovered rapidly in the consecutive years. In GDP per capita a gradual growth (except during the economic crisis) is notable for all three members. In terms of productivity the Member State Area 1 also scored the highest level in comparison with the other subgroups. All in all, Member State Area 1 can be denominated as the wealthiest and most developed subgroup within the Danube Region.11

**Member State Area 2: (Hungary, Czech Republic, Slovakia, Slovenia)**

In 2004 the biggest enlargement of the European Union to date took place and the four countries that form the Member State Area 2 were all part of it. They were also hit hard by the economic crisis and still suffer from the consequences and economic contractions. GDP growth in 2012 was negative for all except the Slovak Republic. Also, the expected growth rates for the coming years are rather small or still negative (Czech Republic and Slovenia).

Hungary currently has two main aims: the creation of one million new jobs and reforms concerning competitiveness. In the meantime the Czech Republic, which is strongly orientated towards industry, especially the car industry, suffers from a high financial deficit.

Slovakia and Slovenia have joined not just the European Union, but also the euro area in 2009 and 2007, respectively. Whereas Slovakia suffers from high unemployment, especially among the youth and falling real wages, Slovenia is facing a severe banking crisis. Up to 2008 the economy took pride in its strong long term economic growth, thanks to investments and strong exports. However, during the crisis these components contracted and the country still fights against the consequences of the crisis. In spite of these setbacks it joined the OECD in 2010.12

**Member State Area 3: (Bulgaria, Romania and Croatia)**

This group contains three of the poorest countries within the European Union (comparing GDP per capita, PPP).

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12 Federal Foreign Offices (Deutsches Auswärtiges Amt).
While Bulgaria and Romania already joined the EU in 2007, Croatia with its accession in 2013 is the newest member of the Union. They share the same problems concerning corruption; therefore the EU started a monitoring program for Bulgaria and Romania after their accession, which was meant to increase the pressure for reforms. Corruption, together with judicial systems that leave much to be desired, hampers the business environment and investment climate.

Thanks to a strict austerity policy in recent years the Member State Area 3 exhibits solid public finances.

All three countries have a functioning market economy and are able to cope with the competitive pressure within the Union due to structural reforms in recent years. Yet further reforms are needed with respect to public administration, employment (Croatia and Bulgaria), infrastructure and education (Bulgaria).

In Bulgaria an increasing absorption of EU funds can be observed in comparison with previous years, still the responsible actor for applications (public administration) leaves much room for improvements, concerning efficiency. The need for investments is great and the country has to fight against demographic changes, with younger people leaving the country to look for jobs elsewhere and a decreasing birth rate.

Romania faces a weak domestic demand since the crisis and a rather elevated inflation. Its dependence on the euro area is relatively high.

Meanwhile in Croatia, reforms are still needed with respect to employment.  

Accession Countries: (Serbia, Bosnia and Herzegovina, Montenegro)  

The accession countries Serbia and Montenegro already have reached the “candidate for accession” status, while Bosnia and Herzegovina is considered a “potential candidate”. They all still have deficits regarding the fulfillment of the Copenhagen Criteria in several areas. For economic development, the

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13 Deutsches Auswärtiges Amt.
14 EU-Commission: Conclusion Report 2012 (Serbia, Bosnia and Herzegovina, Montenegro).
hampered and partly poor business environment, which is also affected by a high level of corruption, defected rule of law and partly meager infrastructure, represents a major obstacle. Some reforms and progress have been noted in the recent past, but further improvements are needed in order to provide a safe and trustworthy business environment. The labour market conditions are far from optimal and the unemployment rate is rather high.

In recent years some progress has been made towards a functioning market economy but there is still a long way to go in order for the countries to be able to cope with the competitive pressure and market forces within the European Union.

Neighbouring Countries (Ukraine, Moldova):

The Neighbouring countries are former Soviet republics and share the corresponding post-communist legacy. More than 20 years after gaining independence, they are still politically unstable and suffer from democratic deficits (to varying degrees).

They belong to the low-income to medium-income economies with a strong adverse legacy in their economic structures. Despite their relatively low per capita income level, they are highly industrialized and have an educated population and a relatively well-qualified labour force. They also have close ties with the EU in terms of culture, history and values.\(^\text{15}\)

The banking system in both countries is generally stable and well capitalized. On the contrary, both countries still present notable deficits in their judicial systems. Moldova’s growth is supported by private consumption, which is financed through the remittances of Moldavians working in other countries. Ukraine needs to improve its image as a destination for FDI.

2.1.2 Gross Domestic Product (GDP)

Table 1 includes information about GDP of the subgroups and their respective total growth rates in the Danube Region for selected points in time or periods.

\(^\text{15}\) European Competitiveness Report 2012: Reaping the benefits of globalization.
Table 1: GDP and GDP growth rates for OECD, EU-27, the Danube Region and its subgroups

<table>
<thead>
<tr>
<th></th>
<th>2003</th>
<th>2011</th>
<th>Growth 2003-2012 (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU-27</td>
<td>10,586</td>
<td>11,768</td>
<td>11.2</td>
</tr>
<tr>
<td>OECD</td>
<td>27,234</td>
<td>30,697</td>
<td>12.7</td>
</tr>
<tr>
<td>DANUBE</td>
<td>1,370</td>
<td>1,626</td>
<td>18.7</td>
</tr>
<tr>
<td>Member Area 1</td>
<td>921</td>
<td>1,062</td>
<td>15.3</td>
</tr>
<tr>
<td>Member Area 2</td>
<td>236</td>
<td>293</td>
<td>24.0</td>
</tr>
<tr>
<td>Member Area 3</td>
<td>124</td>
<td>157</td>
<td>26.0</td>
</tr>
<tr>
<td>Accession Countries</td>
<td>27</td>
<td>35</td>
<td>31.6</td>
</tr>
<tr>
<td>Neighbouring Countries</td>
<td>62</td>
<td>79</td>
<td>28.0</td>
</tr>
</tbody>
</table>

Source: Eurostat, UNdata, Worldbank, Statistische Ämter des Bundes und der Länder. Calculation and illustration: IAW.

Figure 4: Real GDP (constant 2005€) in 2011

Figure 4 shows the percentage shares of real GDP with which the five subgroups within the Danube Region contribute to the GDP of the whole region in 2011.

INFO BOX: Methodological explanation
We make use of real data, i.e. constant 2005€ in order to facilitate comparability among the subgroups of the Danube Region, since we are interested in the current state and the development of production/income and not in the development of the prices in each of these subgroups.

Total GDP of the Danube Region amounts to 1,626 billion euros in 2011 in comparison to 1,370 billion euros in 2003 (See Table 1).

In 2011 the group formed by Austria, Baden-Wurttemberg and Bayern accounts for 65% of the GDP of the whole Danube Region compared to 67% in 2003 (Annex Figure 37). Hungary, the Czech Republic, Slovenia and the Slovak Republic together amount to 18% of the Danube Region’s GDP in 2011, which implies an increase by one percentage point in comparison with 2003.

The third group formed by Croatia, Bulgaria and Romania exhibits a share of 10% of total Danube Region GDP in 2011, which also exceeds the group’s share in 2003 by one percentage point.

By contrast, the shares of Accession Countries and Neighbouring Countries in total Danube Region GDP amount to 2% and 5% respectively, both in 2011 and 2003.

Table 1 shows the total real GDP growth experienced by the Danube Region, OECD and EU-27 from 2003 to 2011. The Danube Region’s growth rate during the observed period is substantially higher than the ones for OECD and EU-27. Table 1 also shows the total real GDP growth experienced by the subgroups within the Danube Region from 2003 to 2011. The area 1 formed by Bavaria, Baden-Wurttemberg and Austria grew by 15% from 2003 to 2011, the area 2 formed by Hungary, the Czech Republic, the Slovak Republic and Slovenia by 24%, the area 3 composed by Croatia, Bulgaria and Romania by 26%, Accession Countries by 31,6% and Neighbouring Countries by 28%. 
Figure 5 shows real GDP growth calculated as percentage change on the previous year from 2004 until 2011 for the whole Danube Region, OECD and EU-27. Real GDP growth evolution for OECD and EU-27 stays approximately constant from 2004 until 2007 at 3%. From 2007 until 2009, coinciding with the financial crisis, the series shows a sharp decrease reaching its lowest value in 2009 with a growth rate of -4%. In 2010 real GDP growth shows signs of an incipient recovery with a rate of approximately 2%. In 2011 the series again exhibits a slight decrease, however not comparable with the sharp drop experienced in 2009. On the contrary, the Danube Region presents higher real GDP growth rates than OECD and EU-27 over the period 2004 to 2008 as well as during the period after the financial crisis. More specifically, growth rates amount to 7% for the Danube Region and 4% for the OECD and EU-27 in the years preceding the financial crises. During the financial crisis, i.e. the period from 2007 to 2009, the drop suffered by real GDP growth in the Danube Re-
The Danube Region is bigger than the one experienced by the EU-27 and OECD countries. In 2009 the Danube Region experienced a real GDP growth rate of -8%.

Given this information, one could conclude that real GDP growth is more volatile in the Danube Region than in the OECD and EU-27 during the observation period, implying that growth is higher in times of an economic boom and lower in times of an economic crisis. One could also say the Danube Region’s recovery from the crisis seems to be faster than in the countries of the OECD and EU-27.

Regarding the development of real GDP growth from 2004 until 2011 in the different subgroups of the Danube Region, the Member States have experienced a negative real GDP growth rate of approx. -6% in 2009, while Accession Countries exhibit a negative growth rate of “only” approx. -3.5%. The Neighbouring Countries have suffered more intensively from the consequences of the financial crisis, resulting in a negative growth rate of -14% in 2009. (Annex Figure 38).

2.1.3 Prosperity Indicator

Figure 6 shows real GDP per capita, PPP adjusted for the Danube Region compared with OECD and EU-27. For all three aggregates, GDP per capita shows a gradual raise, although it’s also clearly visible that there exist sharp changes for the years around 2008/2009. The slightly higher slope of the Danube Region series could be interpreted as a modest convergence.

OECD level is well above the other two and swings around an average of about 30,000 US $ (2005, PPP) per capita. This is closely followed by the EU-27 for which GDP per capita moves in a range between 26,000 US$ and 28,000US$ (2005, PPP). The Danube Region follows at an overall level between 15,000US$ and 18,000US$ (2005, PPP).

As there is no data available yet for Bavaria and Baden-Wurttemberg, we could infer its development by taking a closer look at the data for entire Germany. This reveals that for 2010 there exists a positive growth rate of 5.3 percentage points and for 2011 a positive growth rate of 2.7 percentage points, so we can see a recovery taking place. With a high degree of certainty we can assume that Baden-Wurttemberg and Bavaria as two of the most import economic areas in Germany do not act anti-cyclical. With a majority of positive
growth rates from the other countries for 2010 and 2011 we can presume that the entire Danube Region will have undergone a recovery in 2010 and 2011.

**Figure 6: GDP per capita, PPP adjusted**

![GDP per capita, PPP adjusted](image)

Source: OECD, Penn World Tables, Worldbank, GENESIS online Datenbank. Calculation and illustration: IAW. Data for years 2010 and 2009 were not available for BW and BY, thus preventing the creation of a Benchmark for the whole Danube Region for the above mentioned years.

Regarding the GDP per capita levels of the subgroups within the Danube Region, the countries forming the group Member States 1 enjoy the highest prosperity level with a GDP per capita level around 37,000 US$. A wide margin separates them from the Member States 2, which have a GDP per capita of around 20,000 US$, followed by Member States 3 with approximately 14,000 US$, Accession Countries with 9,000 US$ and Neighbouring countries with ca. 7,000 US$ per inhabitant. The tendency for GDP per capita for all subgroups is a rising one (Annex Figure 39).
2.1.4 GDP components and sectors

There are three different approaches to measure Gross Domestic Product: the income approach, the expenditure approach and the output approach. Here we focus on the last two methods, i.e. the expenditure and the output approach.

INFO BOX: Methodological explanation

The expenditure approach is based on the fact that the aim for most goods and services produced in an economy is to be sold. Therefore, Gross Domestic Product can be calculated as the sum of the following components: private consumption, public consumption, investment and net exports.

The output approach, also called Value Added method, consists of calculating GDP as the sum of “Total gross value added“ and “Taxes less subsidies on products”. Gross value added is the net result of output valued at basic prices less intermediate consumption valued at purchaser’s prices. Gross value added is calculated before the consumption of fixed capital.

Gross value added can be broken down by economic activities, being the most common classification of the division into Agriculture and Fishery, Industry and Services sector.

GDP main aggregates (Expenditure side)

Figure 7 shows the GDP share of the GDP components (private and public consumption, investment and net exports) in the Danube Region, OECD and EU-27 in 2010. In 2010, private consumption share of GDP in the Danube Region is 56.7%, public consumption share is 18.5%, investment share is 20.2% and net exports share is 3%. In 2010, private and public consumption shares are slightly lower in the Danube Region than in the EU-27 and OECD. On the contrary, investment and net exports shares of GDP are higher in the Danube Region than in the OECD or EU-27.

Comparing component shares of GDP in the Danube Region between 2004 and 2010, it can be pointed out that the shares of net exports and public consumption have increased by 0.4 and 0.7 percentage points respectively, while
the shares of investment and private consumption have decreased by 1.4 and 0.5 percentage points respectively (Annex Figure 11).

**Figure 7: GDP components in 2010**

![GDP components in 2010](image)

Source: Eurostat, UNdata, Worldbank, Bayerisches Landesamt für Statistik, Landesamt für Statistik Baden-Württemberg, Statistische Ämter des Bundes und der Länder. Calculation and illustration: IAW. Danube Region does not hit the 100 %mark because proxies have been used for net exports for Bavaria and Baden-Württemberg.

Figure 8 shows the GDP share of the GDP components (private and public consumption, investment and net exports) in the subgroups within Danube Region in 2010. It can be pointed out that in 2010 in the first two groups from the left, private consumption has a share of GDP of approximately 50%, public consumption and investment 20% each and Net exports share is positive and lies over 3%.

Furthermore, in 2010 the third group and the Neighbouring Countries have a private consumption share of GDP that lies at approximately 60% and a negative net exports GDP share that lies around -4%. Group 3 exhibits an investment share of GDP of 24% while for the Neighbouring countries it is at approx-
imately 19%. Public consumption presents GDP shares of 17% and 20% respectively.

**Figure 8: GDP components in 2010**

The Accession Countries, in contrast, present values that deviate significantly from the common pattern. While public consumption and investment exhibit GDP shares similar to those of the other areas, that is, shares that lie around 20% in each case; the private consumption share of GDP in 2010 is 83% and net exports exhibit a GDP share of -19%.

Comparing the GDP shares of the GDP components in 2010 with the values of 2004, we can observe the following facts (Annex Figure 47): In the group formed by Hungary, the Czech Republic, the Slovak Republic and Slovenia, the

Source: Eurostat, UNdata, Worldbank, Bayerisches Landesamt für Statistik, Landesamt für Statistik Baden-Württemberg, Statistische Ämter des Bundes und der Länder. Calculation and illustration: IAW. 2010: The most recent year with complete data coverage. For Member State Area 1, 100 %mark is not reached because for Bavaria and Baden-Württemberg proxies have been used for net exports.
investment share of GDP has decreased; furthermore, this group has corrected its current account imbalances by turning from a negative net export GDP share to a positive one. The Neighbouring countries have increased their private consumption share of GDP mainly at the expense of deteriorating their current account, since net exports share of GDP has turned negative.

In contrast to this, the group formed by Croatia, Bulgaria and Romania has improved its current account balance, even if net export share of GDP remains negative, mainly at the expense of reducing the private consumption share of GDP. Accession countries have carried out a big effort to improve their current account imbalances mainly at the expense of reducing investment share of GDP. In spite of this effort, net exports share is still negative. The expenditure structure in the group formed by Bayern, Baden-Wurttemberg and Austria has not changed much between 2004 and 2010.

Figure 9 shows the total growth rate of GDP components, i.e. private and public consumption, investment, exports and imports, between 2003 and 2010 in the Danube Region, OECD and EU-27. The Danube Region imports exhibit the highest growth rate between 2003 and 2010 with an approximate rate of 50%. Exports are in second place with an approximate total growth rate of 43%. The third position is occupied by private consumption with a growth rate of approximately 18%, followed by public consumption. Investment exhibits a growth rate of approximately 5% over the period 2003 to 2010.

Comparing these results with GDP component growth rates over the analyzed period for the OECD and EU-27, we need to point out that with the exception of public consumption, which exhibits similar growth rates in all three regions all components show a stronger growth in the Danube Region than in the OECD or EU-27. Furthermore, in contrast with the EU-27 and OECD, imports have grown more than exports in the Danube Region.
Figure 9: Growth rates of real GDP components from 2003 to 2010

![GDP Components Growth Rates](image)


Figure 10 shows the total growth rates of GDP components, i.e. private and public consumption, investment, exports and imports, between 2003 and 2010 in the subgroups within Danube Region. There are substantial differences between these subgroups. Private consumption and investment exhibit low growth between 2003 and 2010 in the group formed by Baden-Württemberg, Bavaria and Austria. Export and import growth rates, by contrast, amount to around 40%, with import growth slightly exceeding export growth.

In the Member State Area 2 private consumption and investment also have low growth rates. Especially noteworthy is the fact that imports have grown around 55% over this period while exports have grown around 75%.
Progress on Competitiveness of the Danube Region: Potentials, Needs and Challenges

The group formed by Croatia, Bulgaria and Romania exhibit, with the exception of public consumption, which stayed almost constant over the analyzed period, growth rates of its GDP components that lie over 40%. Import growth rates between 2003 and 2010 lie over 75%, thus, clearly exceeding export growth which exhibits a rate of approximately 50%.

Investment and import growth between 2003 and 2010 in the Accession Countries lies around 60%, while export growth is around 80%. Private and public consumption exhibit growth rates of approximately 30% and 20%, respectively.

Imports and private consumption in the Neighbouring Countries exhibit growth rates of over 80% between 2003 and 2010. Public consumption has grown by approximately 10% over this period while exports and investment present a negative growth rate of approximately 10% over the analyzed period.

Several observations can be made with respect to the yearly growth rates, i.e. percentage change from the previous year, of the different GDP components (private and public consumption, investment, exports and imports) in the Danube Region, OECD and EU-27. (Annex Figure 42 to Figure 46).

The analyzed period is from 2004 to 2011. Investment, exports and imports are the most volatile GDP components, since one-period growth rates range from +15% to -15%. Growth rates of -15% are reached in 2009, coinciding with the burst of the financial crisis.

One striking fact is that with the exception of public consumption, the remaining GDP components grow more strongly in the Danube Region than in the EU-27 and OECD in times of an economic boom, while they exhibit weaker growth rates in times of an economic crisis. Summarizing, we could say that the development of GDP components in the Danube Region shows a stronger link to the economic cycle than in the EU-27 and the OECD.
Figure 10: Growth rates of real GDP components from 2003 to 2010

All GDP components, with the exception of public consumption, exhibit positive growth rates before and after the burst of the financial crises, which points to a rapid recovery. On the contrary, in 2009 all mentioned GDP components show negative growth rates.

Public consumption, in contrast, increases during the financial crisis (2009). This is probably due to the expansionary fiscal policies carried out in most of the economies of the world at the burst of the financial crisis.

**Sectoral structure (Output approach)**

Figure 11 demonstrates the composition of GDP between the regional aggregates for the year 2010. It is quite obvious that the sectorial component for services has the highest share in the composition of all three regional aggre-
gates. While the OECD and EU-27 services share of GDP lies over 70% and has increased by approximately 2 percentage points from 2003 (Annex Figure 49) to 2010, the Danube Region remains below 70%, at around 64%. This share also does not change significantly between 2003 and 2010. The already relatively small share that agriculture holds (at around 2% for OECD and EU-27 and 3% for Danube) decreases over the depicted period for all three regional aggregates. For OECD and EU-27 the share of the secondary sector also decreases over time (by about 2 percentage points), while it increases for the Danube Region (by a little above 1 percentage point).

**Figure 11: GDP sectors in 2010**

![GDP sectors in 2010](image-url)

Source: Eurostat, Worldbank, Statistische Ämter der Länder. Calculation and illustration: IAW. Anomalies are caused by rounding up or down.
Figure 12: GDP sectors in 2010

Source: Eurostat, Worldbank, Statistische Ämter der Länder. Calculation and illustration: IAW. Anomalies are caused by rounding up or down.

Figure 12 shows the GDP share of the main economic activities (Services, Industry and Agriculture) in the subgroups within the Danube Region in 2010.

In 2010 the Member States 1 group exhibits GDP shares of the services, industry and agriculture sectors of 65.6%, 33.4% and 0.9% respectively. In comparison with 2003 (Annex Figure 50), the share of the service and agriculture sector has decreased while the share of the industry sector has increased.

The Member States 2 group presents a similar economic structure to that of the Member States 1. The main difference is a bigger agricultural sector (2.9% of GDP) and a smaller services sector. In comparison with 2003, this group shows an increase in the GDP share of the service and industry sector and a decrease in the agricultural sector.

The Accession Countries and the Neighbouring Countries, on the contrary, present agriculture shares of GDP of approximately 9%. In the case of the Acc-
cession Countries this translates into a smaller industry sector while for the Neighbouring Countries it translates into a smaller service sector.

In comparison with 2003, both country groups have succeeded in reducing the size of their agricultural sector, and especially noteworthy is the change that the Neighbouring Countries have experienced.

The Member States 3 group exhibits GDP shares of the diverse economic activities, i.e. services, industry and agriculture of 58.9%, 34.6% and 6.2%. It clearly lies between the more advanced economies of the Danube Region (Member States 1 and Member States 2) and those who are still catching up (Accession Countries and Neighbouring Countries). In comparison with 2003, the agricultural sector has strongly diminished in size, while the industry sector has gained importance.

In the last century there has been a shift in the composition of GDP in industrialized countries from the primary and secondary sector towards the tertiary sector, which meanwhile has become the most important sector in advanced economies. The annual growth rates for the Danube Region range between those of the OECD and EU-27. In the pre-crisis era the growth rates have been positive or at least constant for all three regional aggregates. During the economic crisis the growth rates turned negative and declined steeply. OECD suffered the least dramatic drop and recovered rapidly, while the Danube Region and EU-27 suffered a deeper decline with the lowest point reaching a negative annual growth rate of -5% and -6%, respectively. After 2009 the growth rate for EU-27 turns positive again.

Industry, also known under the term secondary sector, is generally placed second in the composition of GDP from the production side. Here the parallel movements of the growth rates are obvious. The Danube Region has the highest growth rates, followed by EU-27 and then OECD. During the economic crisis the growth rates turned negative and suffered a steep decline. Whereas, OECD underwent a relatively moderate decline, the EU-27 and the Danube Region reached a negative growth rate of nearly -20%. The recovery for OECD and EU-27 follows closely and they got back or even overtook pre-crisis level growth rates.
Figure 13: Services (value added) growth


Figure 14: Industry (value added) growth

Agriculture, also known as the primary sector, contributes only a small part to GDP in the industrialized world. The Danube Region has the highest fluctuations in this sector and the steepest growth rates. While OECD and EU-27 swing between +/- 5% growth rates over the depicted time series, the Danube Region reaches high points around nearly 25% of the previous year and low points around -5%.

### 2.1.5 Labour productivity

Figure 16 shows labour productivity calculated as real GDP, PPP adjusted per person engaged in the Danube Region compared with OECD and EU-27. The Danube Region lies well below the OECD and the EU-27 level. For OECD and EU-27 the labor productivity shows a parallel co-movement with an approximate difference in overall level of 5,000 US$ (PPP). Before the economic crisis
the productivity for the Danube Region displays a slightly steeper slope than the other two aggregates.

**Figure 16: Labor productivity (GDP per person employed)**

Within the Danube Region, Member State Area 1 has unambiguously the highest level of GDP per person employed, at around 70,000 US$ (PPP), although the level declined during the economic crisis. The labour productivity of Member State Area 2 also has a rising tendency, which might be connected with the countries’ accession to the EU in 2004. It moved from around 40,000 US$ (2005, PPP) in 2003 to nearly 50,000 US$ (2005, PPP) in 2011 (Annex Figure 51).

Member State Area 3 and Accession Countries have nearly identical levels and movements, while we can see that the Member State Area 3 has overtaken the Accession countries by some small degree in 2007 (year of EU Accession). Neighbouring Countries have the lowest labour productivity, but it has also
been rising significantly over an eight year period, from around 10,000 US$(2005, PPP) to nearly 20,000 US$(2005, PPP), which indicates that the Neighboring Countries have nearly doubled their labour productivity between 2003 and 2011.

2.1.6 Labour market and migration

Population by age groups

Population ageing has become a common feature that started several decades ago in the EU countries, the Danube Region and the OECD countries as well. Ageing is reflected in the development of the age structure of the population and visible in a rising proportion of older persons and a declining proportion of both the young and in most countries - in the working age population in the total population. Ageing of the population is expected to accelerate in the coming decades in the EU-27 and probably so in the OECD area and the Danube Region, as a greater proportion of the post-war baby-boom generation reaches retirement. This will, in turn, pose a serious risk on the welfare system of these countries.

Figure 17: Population 15-64 years (share of total population)

As illustrated in Figure 17 the prime-age population (15-64 years) remained almost unchanged over recent years in the Danube Region and was higher than in the EU-27 and in the OECD countries. By contrast, in the two latter
regions the working age population shrank continuously in the 2004-2012 period.

The share of young people between 0 and 14 years has been steadily on the decline both in the EU-27 and in the Danube Region in the period 2004-2012 and represented only 15.6% and 14.2% of the total population (Annex Figure 56). There are, however, huge variations among regions and individual countries.

The EU-27, the Danube Region and probably so the OECD countries are facing ageing populations. Population ageing has been slightly more advanced in the Danube Region than in the EU-27 up to the year 2010 when this trend reversed (Annex Figure 57). However in both groups of countries the share of the population above 65 years increased by 1.3 percentage points between 2004 and 2012.

Activity rates

*Note: average activity rates for the regions are simple averages. For the next report we shall prepare weighted figures.*

**Figure 18: Activity rates total**

As illustrated in Figure 18 overall activity rates in the Danube Region have been traditionally lower than in the OECD and EU-27 countries; the two latter
regions reported similar developments over the 2004-2011 period with activity rates exceeding the 70% mark. In general, participation rates were more resilient than expected on the basis of historical regularities in the aftermath of the recession. The gap between activity rates of the Danube Region and the two groups of benchmark countries widened steadily from 2005 onwards due to an ongoing deterioration in the Danube countries and reached 7 percentage points in 2011 (versus 4 pp in 2005).

With respect to gender activity rates differed across all regions. Male rates have been highest (around 80%) in the OECD countries during the 2004-2011 period while those in the EU-27 reached 78% at best (boom years). At the same time male activity rates in the Danube Region have only slightly surpassed the 70% mark (Annex Figure 59). As regards females, the highest and most growing female activity rates were reported in the EU-27 among the three regions under consideration. Similarly in the OECD activity of females was on the increase but remained below the EU-27 level during the whole 2004-2011. By contrast, in the Danube Region the participation of females on the labour market has been below the 60% mark (Annex Figure 60).

**Unemployment**

As illustrated in Figure 19 unemployment in the OECD countries has been at a lower level than in the EU-27 during the whole 2004-2012 period with the gap narrowing during the crisis, but widening again afterwards. Unemployment in the Danube Region was originally higher than in the OECD and EU-27, fell substantially during the boom years before the crisis and followed a similar pattern like the OECD countries from 2009 onwards.

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A more detailed picture of the Danube sub-regions (Annex Figure 62) shows extremely high unemployment rates for the accession countries, particularly in Bosnia and Herzegovina (close to 30%). Having declined significantly prior to the crisis to 16%, unemployment in this region accelerated from 2009 onwards to roughly 25% in 2012. On the other hand, unemployment in the EU member states and in the neighbouring countries remained below the 10% mark even during the crisis period. This is mainly due to low unemployment in the two German Länder Baden Wuerttemberg and Bavaria and in Austria (all of them belong to those EU countries least affected by unemployment). In addition, unemployment rates both in Ukraine and Moldova (in the latter mainly due to a substantial outflow of labour from the country) are comparably modest.

### 2.1.7 Transportation, Energy and Environment

#### Data

The main sources for data we used are Eurostat, the World Bank database and the CIA World Fact Book 2000-2012. The CIA World Fact Book though has raised some concerns, because the data was somewhat different than the data from Eurostat or the World Bank database. So the priority lies upon Euro-
then the World Bank database and if nothing else is available we use the CIA World Fact Book. For more regional data, especially for Baden-Württemberg and Bavaria we used some data from the Bavarian State Ministry of Economic Affairs, Infrastructure, Transport and Technology and the Ministry of Finance and Economics of Baden-Württemberg. Furthermore we used data from the World Economic Forum and the Federal Statistical Office of Germany.

**Transportation**

In the transportation section we concentrated on the four main transportation systems road, railroad, waterway and air. The first step was to analyse the extension and quality of these networks in each country. The second step will be to analyse the amount of goods transported inside a country, cross border to a country and transit via a country. We think this will show us the use of the infrastructure on the one hand and the specific destination of the use on the other hand. In an upcoming third step we will concentrate on how good different types of infrastructure are linked to each other and most important how good the same type of infrastructure is linked between countries. This means if motorways are connected across borders, if railways use the same gauge and are connected across borders, etc.

**Railroads**

In a quantitative analysis we concentrated on indicators like “railroad in meter per area” or “railroad in meter per inhabitant” to show the different level of extend between countries.
As quality measures we calculated the “share of multi-track railroads”, the “share of electrified railroads” and the “share of electrified multi-track railroads”. In our opinion multi-track railroads show a higher usage and therefore a better development of this track. The share of electrified railroad tracks show a higher development of the railroad system and can be used in a later analysis in the environmental section on how environmental friendly this sort of transportation is in each country.
Furthermore we analyze the amount of goods transported in each network and the different shares of goods that are transported inside a country, cross

17 No data was available for Moldova.
18 No data was available for the electrified multi-track share of Baden-Wurttemberg and Bavaria
border or even just used the country as a transit way. This should show us the usage of each railroad network and the purpose of that usage.

Upcoming issues will be to analyse how good the maintenance level is and if the existing network can be used in full range or if there are any problems. A first step to engage that problem is to use the Global Competitiveness Report of the World Economic Forum. This report contains a survey where local businessmen can vote how good they think their railroad system is. We think this data and our analysis combined could give a clearer picture of where investments in the infrastructure itself are necessary and where the maintenance has to be improved.

**Figure 24: Ranking of the WEF Global Competitiveness Report (2011) on Railroad System**

![Figure 24: Ranking of the WEF Global Competitiveness Report (2011) on Railroad System](image)

Another issue will be the cross border connections. We have no data so far that shows us how many cross border connections has been built yet. A topic concerning that issue is the kind of gauge each country’s system uses. For most parts of the Danube Region they use a normal gauge system, but some

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19 No data was available for Baden-Wurttemberg and Bavaria
east European countries built their network with broad gauge tracks, which makes linking the systems even harder.

**Roads**

First we looked at the extension of the network by calculating the indicators “road in km per area” and “road in km per population”.

**Figure 25: Road (meter) per area (sq km) (2010)**

**Figure 26: Road (meter) per inhabitant (2010)**
The second step was to look at qualitative indicators like the “share of paved roads” and the “share of motorways” to analyse the quality of the network. Also, the share and extent of roads declared as European roads is an important indicator in our opinion, because it shows on the one hand the integration in the European market and on the other hand the link between large roads across borders.

Figure 27: Share of paved roads (2010)²⁰

²⁰ No data was available for Baden-Wurttemberg and Bavaria
Figure 28: Share of motorways/ European roads to all roads (2010)$^{21}$

The amounts and shares of transported goods are being used again to show the importance of country inside, cross border and transit trade and therefore show the usage of the infrastructure as well as the main user.

One upcoming issue will be, as with the railroads, the maintenance level of the roads in each country. Therefore we use again the Global Competitiveness Report to get an understanding how good local businessmen think the road infrastructure is and compare these results to our findings. Also the cross border connections will be of concern in the on-going process.

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$^{21}$ No data was available for the European roads of Baden-Wurttemberg and Bavaria
Another problem we face especially with the road section is that the indicators road.area and road.population seem to decline with the increase of population density. Hence we need to take a closer look at different sizes of roads to not compare a single lane road with an eight lane motorway.

Airports

The airport section is in progress at the moment, but we do not have any results yet. Our attention lies on the analysis of available transport capacity, but we face the problem of non-homogenous infrastructure facilities, which are therefore not so easily to sum up. Another thing we are concentrating on, are the connections to other infrastructure systems every airport has in order to show how far integrated the infrastructure is.

Ports and waterways

We have not analyzed the waterways section in detail so far. The main water road, the Danube River, can be shipped from Bavaria all down to the Black Sea. So further questions will concentrate on the degree of navigability, the

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22 No data was available for Baden-Wurttemberg and Bavaria
number and extension of ports and the linking of the ports to other infrastructure.

Energy

In the energy section we will look at the following measures. The import dependency of brown coal, hard coal, oil, gas, electricity and overall, the market structure and the market share of the largest competitor, the production of electricity regarding the energy source and the share of renewable energy and the extension of the power grid and registered blackouts per year.

So far we have analyzed the import dependencies of all energy sources mentioned above. Therefore we calculated the trade balance and the country consumption of each energy source to show the import dependency of each.

Figure 30: Oil import dependency (2011)\textsuperscript{23}

\textsuperscript{23} For Baden-Wurttemberg and Bavaria is no regional data regarding oil import dependency available.
Figure 31: Hard Coal import dependency (2010)\textsuperscript{24}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure31}
\caption{Hard Coal import dependency (2010)\textsuperscript{24}}
\end{figure}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure32}
\caption{Gas import dependency (2010)\textsuperscript{25}}
\end{figure}

\textsuperscript{24} For Baden-Württemberg and Bavaria is no regional data regarding hard coal import dependency available.

\textsuperscript{25} For Baden-Württemberg and Bavaria is no regional data regarding gas import dependency available.
Figure 33: Brown Coal import dependency (2010)\textsuperscript{26}

Figure 34: Electricity import dependency (2010)\textsuperscript{27}

\textsuperscript{26} For Baden-Württemberg and Bavaria is no regional data regarding brown coal import dependency available.

\textsuperscript{27} For Baden-Württemberg and Bavaria is no regional data regarding electricity import dependency available.
Our main findings so far are that the Danube Region is in total very dependent on energy imports. The Danube Region has no natural resources that provide energy with one exception. Brown coal is still available in most Danube countries. On the electricity market we have a divided landscape between importers and exporters in the Danube Region. But considering that the renewable energies are just on their rise, electricity production still depends on natural resources and therefore the electricity production depends on the import dependency of its respective resource. Hence electricity production in the Danube Region is also highly dependent on imports.

Data regarding the market share of the largest competitor has also been gathered, but the work on that topic is still in progress, so we have not found any conclusion yet.

The two topics “production of electricity” and the “extension of the power grid” are next in order and will be worked on as soon as possible.

Environment

So far we concentrated on the two topics “transportation” and “energy”. We think that the topic “environment” is best analyzed with the data and analysis of the two other topics in hand, because they often correlate.

2.1.8 Regional development, urbanization, and rural areas

(To be developed at a later stage)

2.1.9 Agricultural development

(To be developed at a later stage)

2.2 Entrepreneurship and SMEs

In this part of the report entrepreneurship and the situation of SMEs in the DR will be assessed. We will analyze growth dynamics, business creation, financing conditions, the regulatory and institutional environment under which they operate and to conduct a stock-taking on cluster development. The analysis will make use of various complementary data sets and fully draws on infor-
2.2.1 SME growth dynamics

Foundation activities, firm dynamics, firm growth and market exits are the relevant aspects in this task to assess the dynamics of the enterprise sector in the DR. Data for international comparisons of firm growth and market exit are more than insufficient. Therefore, the analyses will be limited to market entries. Besides entrepreneurship activity in terms of the numbers of start-ups, the regulatory framework for small firms and the attitudes of the population in the countries of the DR will also be analyzed with the aid of the Eurobarometer opinion poll. These aspects are important to assess the conditions under which entrepreneurship in the different countries take place.

The analyses here will rest on the Mannheim Firm Panel (MFP), which is an extensive micro database of enterprises in Germany compiled by the ZEW in cooperation with Creditreform, the Structural Business Statistics (SBS) by Eurostat, the Global Entrepreneurship Monitor (GEM) by the Babson College and the London Business School and the Entrepreneurship Indicators Programme (EIP), which is a database jointly maintained by Eurostat and the OECD. Table 6 gives an overview of the countries and years covered by the different data sets.

The analyses and results on SME growth dynamics will be included in the second progress report. Because of complex data preparation work the data will be ready for analyses only after the first progress report.

2.2.2 SME Financing

Small and Medium-sized firms (SMEs) in all countries around the world face a wide range of challenges often not faced by large firms. Among these challenges access to finance is critical. It can be an issue at all stages of the SME’s developmental cycle: at the seed, start-up, growth and expansion phase. According to the analysed studies, for SMEs in the Danube Region the financial aspect is seen as crucial as well. A missing or a difficult access to capital has become the main obstacle preventing the growth and development of the firms. A problem sharpened with the surge of the financial crisis. For many
Danube countries it has been mainly a demand crisis, with a drastic drop in demand, started by the end of 2008 and continued during 2009. Due to the decrease of sales and capacity utilization SMEs draw on the already limited internal funds to finance their working capital and increase the level of debt.  

When asked what the most pressing problem currently facing their firm was, 15% of SMEs’ managers in the EU and 19% of the SMEs’ managers in the Danube Region cite access to finance. Thus the financing problem is placed second alongside competition in the ranking of most important companies’ issues.

**Figure 35: Most pressing problem - access to finance**

A wide range of financial support institutions and instruments have been developed to support SMEs at the different stages of their development cycle. These include business angels, venture capital funds, bank loans and guarantees, public stock markets but also informal arrangements such as friends and family. Financial support for SMEs has been provided at European level, through the financial instruments of the Competitiveness and Innovation

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29 SMEs’ Access to Finance – Survey 2011 Analytical Report by the EC
Framework Programme, financial support available under the Structural Funds and the schemes supported by the European Investment Bank and the European Investment Fund. In the Danube Region, the EIB is the most active multilateral financing institution having lent a total of nearly EUR 50bn in the 14 countries of the Danube Region as a whole in the period 2007-2011. SMEs have received EIB funding through credit lines to local intermediaries that on-lend the money for small-scale capital investment and working capital requirements. The European Investment Fund, the risk financing arm of the EIB Group, supports small businesses in the Danube Region by means of equity instruments, SME guarantees and financial engineering products.30

In this part of the project we analyse the use of different sources of financing, the financial situation and financial needs of the SMEs in the region and compare it to the financial situation and needs of SMEs in the EU. We use information from studies such as the World Bank Enterprise Survey reports, the SMEs’ Access to Finance – Survey 2011 Analytical Report by the EC, the report on Financing SMEs and Entrepreneurs 2013: An OECD Scoreboard and to the report of the FIT4SMEs (2011) project on financial facilities for SMEs. Based on these studies we also evaluate the availability of external financing and the financing conditions for the SMEs in the region. Moreover, we analyse the EU programs for financial support of SMEs with their relevance for the Danube Region.

Generally speaking, loans are the main source of external SME finance and loan schemes, especially guarantees tend to have a much larger impact in terms of the number of firms affected. Venture capital and similar schemes are much more restricted. Other sources of finance such as private placements, listings on the regulated exchanges or issuing of bonds are not usually available for by far the majority of SMEs. However, there is some research evidence that there is a lack of awareness among medium-sized firms about opportunities in debt capital markets which could be a way to diversify funding sources for them.

To address the question on how firms finance their operations we use indicators similar to those presented in the Enterprise Surveys of the World Bank

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30 European Investment Bank
and the SMEs’ Access to Finance – Survey 2011 Analytical Report by the EC. The first set of indicators compares the relative use of various sources to finance investment – internal funds, bank loans, trade credit financing and equity financing. Excessive reliance on internal funds is a sign of potentially inefficient financial intermediation or a limited access of firms to capital.

The second set of indicators measures the use of external financing by individual firms. It presents the percentage of working capital that is financed by external sources to the firm, and a measure of the burden imposed by loan requirements measured by collateral levels relative to the value of the loans. The third set of indicators focuses on the access to external financing as the willingness of banks to provide loans, the terms and conditions of bank financing or the access to public financial support.31

Where possible we compare the indicators for the Danube Region to the EU indicators. A small set of indicators are presented below.

When looking at the recent sources of financing in the last six months, SMEs most often used external financing. Only 24% of the SMEs located in the EU27 and 22% of the SMEs in the Danube Region used internal funds. These shares of firms dropped dramatically since 2009 especially in the Danube Region. In 2009 51% of the SMEs located in the Danube Region used internal funds.

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31 World Bank Enterprise Survey reports, SMEs’ Access to Finance – Survey 2011 Analytical Report by the EC.
The studies show that there has been a significant increase in debt financing in almost all countries since 2009. This development was stronger in the Danube Region than in the EU27.

**Figure 37: Usage of debt financing**
In total, 70% of SMEs in the Danube Region used debt financing in the past six months. This was an increase on the level in 2009, when 56% had used debt financing for the same period. However, in 2011 in the EU27 a higher percentage (75%) of the SMEs used debt financing.

Less than one in ten SMEs (7%) in the EU27 and only 2% in the Danube Region used equity financing in the last six months. While the equity financing in the EU did not change significantly since 2009, in the Danube Region it increased from lower than 1%.

**Figure 38: Usage of equity financing**

The SMEs’ Access to Finance – Survey 2011 provides evidence that the banks willingness to provide loans for SMEs in the EU in 2009 had worsened. However, the bank willingness improved in 2011. The respective willingness of banks to provide a loan in the Danube Region is surprisingly better in 2009 and in 2011.
Figure 39: Willingness of banks to provide a loan

For the quantitative evaluation of the financing conditions of the SMEs we used further data of the above mentioned surveys. These surveys provide specific data on the sources and structure of financing of SMEs as well as their experiences with external financing and expectations on future financing. Additional data sources, referred to the concept and objectives of Part II in the tender for the project, are regional expert interviews covering questions regarding the financing needs of SMEs in the region and the perceived barriers to adequate finance.

In addition, we examined indicators measuring the SMEs’ access to sources of financing, loan volumes and financing costs. With the implementation of the European Small Business Act (SBA) respective annual country factsheets monitoring SMEs performance are published on the behalf of the DG Enterprise and Industry containing indicators on the SMEs’ access to finance. For companies located in Baden-Wurttemberg and Bavaria, we can use the KfW/ZEW Start-Up Panel, a database including firms’ financial figures, which is conducted by the KfW and ZEW.

In order to assess the financing condition for SMEs from a more macro-perspective viewpoint, a special questionnaire covering this topic will be implemented within the November issue of the CEE Financial Market Survey conducted by ZEW and Erste Group Bank AG Vienna.
2.2.3 Regulation and Institutions

*(To be developed at a later stage)*

2.2.4 Development of Clusters

For the assessment of cluster development in the DR we work in close cooperation with our local partner Dragoș Pîslaru from Gea Strategy & Consulting in Romania.

**Suggested Methodology**

The importance of cluster-based activity is growing in the Danube Region. While there are several sources of data indicating successful cluster experiences, there was no attempt so far to carry out a benchmarking exercise for the entire region. Including cluster/network-related data in a regional scoreboard would be a useful step in setting the right framework for fruitful cluster cooperation within the entire Danube area.

**Quantitative mapping of cluster potential**

The first activity of this task is to take stock of the existing clusters in the Danube Region. The most useful methodology and data set for the above purpose can be drawn from the European Cluster Observatory platform.

Data is available for the following countries in the Danube Region: Germany, Austria, Czech Republic, Slovakia, Hungary, Croatia, Slovenia, Serbia, Bosnia and Herzegovina, Bulgaria, Romania, Ukraine. Data allows a cross-country comparison at the level of year 2011 allowing a quantitative benchmarking of economic agglomerations based on the following structure:

- NACE 3 digit sectoral classification (42 sectors – see Annex1)
- NUTS 2 regional classification (subnational level)
- Size, Specialization and Focus of agglomerations (including the Cluster Observatory star rating derived from the 3 variables)
• Number of employees, number of enterprises and average wage (at sector level)

The quantitative data will be a first step towards cluster mapping. It will provide an overview of the sectoral agglomerations per each country, which reflects cluster potential. Moreover, it provides a relevant basis for assessing cross-country cooperation/networking potential between sectoral agglomerations with similar profile (e.g. automotive sector cooperation across all countries with relevant agglomerations in this sector).

Limitations:

L1. Data is not available for Montenegro and Moldova.

Solution 1 – ask local experts to provide similar quantitative data from their respective countries.

Solution 2 – ask local experts to provide a qualitative assessment on the clusters developed in their respective countries

Solution 3 – desk research for finding any existent information on clusters in the two countries.

Qualitative validation of existing cluster initiatives / cluster development status

The data gathered for the previous activity is not providing a list of clusters per se, but only indicating cluster potential. In some countries there might be several institutionalized clusters in the same sector/region, in others the clustering process may be just emergent or informal. Desk research will be conducted in order to broadly assess the status of cluster development in the target countries. Sources of information include European Commission, cluster collaboration platforms/portals, FP6/7 projects, research/articles etc.

The result expected from this activity is a list of cluster initiatives/organizations per sectors/regions with minimal details (e.g. year found-

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32 Other authors make the distinction between clusters (as economic agglomerations in which actors may or may not collaborate) and cluster organizations (institutionalized forms of cooperation within the respective agglomerations).
ed, type of organization, scope of activity, no of members, no of employees, turnover, amount of public funding received).

Limitations:

L2. The availability of information about cluster development status (including a validation of a list of cluster initiatives) is varying considerably across countries.

Solution 1 – ask local experts to help finding any existent information on clusters in their respective countries.

Assessment of regional/ trans-regional networking

This activity would be conducted in parallel with the preceding activity. The project will use the framework suggested by Prof. Christian Ketels, HBS, 33 by trying to classify networking initiatives in the region by four criteria:

- Geographic scope (regions within countries, national level, transnational)
- Industry scope (emerging pattern of relatedness across industries, broader set of industries, entire regional economy)
- Specific Issue (regional, national)
- EU-created/based networks (e.g. EEN, EBN etc.)

After an overall desk research aimed at documenting as many networks as possible relevant for the Danube Region, local experts will be asked to fill in a short survey in order to complete, validate and provide a qualitative assessment of the networking activity.

From the start, it is clear that a comprehensive mapping of all networking effort in the region is out of the scope of this project. The assessment will be highly qualitative and meant more to explore possible policy tools for the future than to provide a rigorous picture of the current situation.

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A first application of the concept to Romania and a presentation of trans-regional programmes and for competitiveness and clusters initiatives will be included in the second progress report. The complete cluster mapping will be presented in the draft of the final report of the territorial analysis.
Progress on Cooperation and Networks to Increase Competitiveness in the Danube Region

The DR represents an innovative mode of territorial cooperation of different regions and nations, with balanced and sustainable development as a shared goal. The DR is not a further institutional level within the European Union (like states, regions, municipalities, etc.) but rather a network, a joint initiative involving several European, national and regional stakeholders, policies and funding programmes. For this reason, it focuses on a number of challenges identified and shared by the partners who are part of it. The aim of this report is to provide an overview of the existing organizations and networks related to economic cooperation in the DR. At this first stock-taking phase the text below rely mainly on the information reported on the websites of organizations.

3.1 Networks and Initiatives in the Danube Region: International Cooperation of Administrative Bodies within the Region to Increase Competitiveness

- Visegrad Group

Established in 1991 the Visegrad Group (V4) comprises the Czech Republic, Hungary, Poland and Slovakia – three of which are in the DR. The backbone of this cooperation consists of mutual contacts at all levels, from the highest-level political summits to expert and diplomatic meetings, to activities of the non-governmental associations in the region, think-tanks and research bodies, cultural institutions or numerous networks of individuals. The V4 was a vehicle of EU and NATO accession and remains an important network to support joint interest of members in the European Union. The V4 may set an example what level of cooperation may be achieved in the DR in the various fields of activities. The Hungarian Presidency in the Visegrad Group (2013–2014) set various economic targets from energy security through transport connection to cluster cooperation. The related document states that “the regional cooperation of states in the framework of the EU macroregional strategies like the EUSDR are aiming mainly at the improvement of security, prosperity and the sustainability of the given macro region in a coherent way. These tools stretching across
the counties of the Visegrad Group could play an important role during the next budgetary period to achieve major development goals of the V4, in terms of North-South infrastructure connection as well as in boosting growth and rising employment, improvement of R&D capacities and acceleration of the technology transfer. Through a strategic V4 thinking, cooperation and new partnerships, based on shared interest the V4 should enhance the efficiency of these tools in our region, in practice these actions could serve as a bridge concerning the institutional cooperation between the Baltic and the Danube Regions.” http://www.visegradgroup.eu/about/cooperation

An activity of the V4 is the ClusterCOOP Project led by the Hungarian Ministry of National Economy in the framework of the EU’s Central Europe Programme. It was initiated on the basis of a Memorandum (signed on 26 November 2009) on cooperation of V4 countries in the field of clusters. It also incorporates Slovene, Italian and German partners. It will terminate by March 2014 after approval of its results by a ministerial conference planned for autumn 2013 in Bratislava. The results are expected to support the preparation for the next Multiannual Financial Framework (MFF) period 2014–2020.

- **Central European Initiative (CEI)**

The CEI is an intergovernmental forum promoting political, economic, cultural and scientific cooperation among its Member States. Its core mission is: Regional Cooperation for European Integration. Moreover, the CEI considers itself in a unique position to act as a bridge between macro-regions, such as the Baltic, Danube, Adriatic and Black Sea Regions. Member states include all DR countries minus Germany plus some neighbouring non-EU members. The CEI Cooperation Activities are projects of small scale and limited duration, which mainly take the form of seminars, workshops, short training courses or other kind of meetings. CEI participates in EU Projects, has a Know-how Exchange Programme, a University Network and a Science and Technology Network. http://www.cei.int

- **Regional Cooperation Council (RCC)**

The Regional Cooperation Council (RCC) was launched by the Ministers of Foreign Affairs of the South-East European Cooperation Process (SEECP) in 2008,
as the successor of the Stability Pact for South Eastern Europe. Through a regionally owned and led framework, the RCC focuses on promotion and enhancement of regional cooperation in South East Europe (SEE) and supports European and Euro-Atlantic integration of the aspiring countries. The RCC provides operational capacities to and works under the political guidance of the SEECP. The work of the RCC focuses on the priority areas of economic and social development, energy and infrastructure, justice and home affairs, security cooperation, building human capital, and parliamentary cooperation as an overarching theme. The organization develops and maintains close working relationships with all relevant actors and stakeholders in these areas, such as governments, international organizations, international financial institutions, regional organizations, civil society and the private sector. The RCC participants comprise 46 countries, organizations and international financial institutions includes all countries participating in the DR except Germany and Ukraine; further European countries as well as international organization like the EU and NATO also participate. The activity of the RCC is not directly linked to the EUSDR although most of its member states and policy goals are identical. www.rcc.int

Various activities of RCC cover different sets of countries but the West-Balkan countries comprise the core. In the Economic and Social Development priority area, the RCC is partnering with 10 regional initiatives – four promoting business and investment climate in the SEE as outlined below.

- South East Europe Investment Committee (SEEIC)

SEEIC is a high-level coordination body that supports the implementation of policies promoting foreign and domestic investment. http://www.seeic.rcc.int Members of SEEIC include Albania, Bosnia and Herzegovina, Bulgaria, Croatia, The Former Yugoslav Republic of Macedonia, Moldova, Montenegro, Romania, Serbia, with Kosovo* as an observer. SEEIC was empowered to engage in the SEE 2020 vision-building and placed into regional ownership. SEEIC currently has three main objectives:

- Development of the South East Europe 2020 Strategy (jointly with the SEE countries), based on 5 growth pillars: 1) integrated, 2)
smart, 3) sustainable and 4) inclusive growth underpinned by 5) governance for growth
- Increasing competitiveness and enhancing regional value chains
- Promoting the SEE region as an attractive investment destination

○ Central European Free Trade Agreement 2006 (CEFTA)

CEFTA, in its current form, came into existence through the Agreement to amend and enlarge the Central European Free Trade Area in 2006 and signed by Albania, Bosnia and Herzegovina, Croatia, Macedonia, Moldova, Montenegro, Serbia and UNMIK on behalf of Kosovo. The main objectives of the agreement are to expand trade in goods and services and foster investment by means of fair, stable and predictable rules, eliminate barriers to trade between the members, provide appropriate protection of intellectual property rights in accordance with international standards and harmonize provisions on modern trade policy issues such as competition rules and state aid.

www.cefta.org

○ The Regional Rural Development Standing Working Group of SEE (RRDSWG)

RRDSWG is an intergovernmental organisation for regional rural development in SEE, which aims to empower and promote sustainable agriculture and rural development through networking and permanent cooperation between stakeholders in the SEE region.

○ Association of Balkan Chambers (ABC)

The Association of Balkan Chambers of Commerce was established in 1994 with the aim of assisting business activities in the Balkans. Members include Chambers of Commerce and Industry of Albania, Bulgaria, Greece, The Former Yugoslav Republic of Macedonia, Montenegro, Romania, Turkey and Serbia. Its activity thus stretches beyond the SEE and DR. The main priorities of ABC are: development of cooperation among the business communities in the Balkan region, as well as with third parties; encouragement and support of activities aimed at structural changes in the economies of Balkan countries with the view to EU accession; initiation and implementation of global interest projects
for the Balkan region; representing, through the Association, interests of the member Chambers in front of international bodies; joint participation in EU programmes and other partnership programmes.

3.2 EU Development Policy towards Danube Region Countries at Various Stages of Alignment

(To be developed at a later stage)

3.3 Business Networks and Competitiveness Initiatives, Clusters and their International Networking

3.3.1 Transnational business networks

- Enterprise Europe Network

The Enterprise Europe Network is a key instrument in the EU’s strategy to boost growth and jobs. Bringing together close to 600 business support organisations from more than 50 countries, the Network helps small companies seize business opportunities in the EU Single Market. The Network member organisations include chambers of commerce and industry, technology centres, research institutes and development agencies. Most of them have been supporting local businesses for a long time. The members are linked up through powerful databases, sharing their knowledge and sourcing technologies and business partners across all Network countries. They are also closely linked with the European Commission, which enables them to keep abreast of EU policies and to feed small companies’ views on them back to Brussels. Services of the Network include:

- Technology transfer
- Access to finance
- Advice on EU law and standards
- Advice on Intellectual Property Rights (IPRs)
- Speak up on EU law
- Research funding – support to companies to find partners for FP7 projects
- Going international – brokerage services
All 14 countries of the Danube Region have Enterprise Europe Network points. There is no sub-network for the DR countries. A list of Network contacts is available on http://een.ec.europa.eu/about/branches.

- **European Association of Development Agencies (EURADA)**

  The EURADA has a membership of about 130 regional development agencies from across the European Union. It runs conferences and seminars and has an extensive publications programme. It keeps its members up-to-date with EU policy developments and provides briefing on critical issues such as state aid rules. It alerts members to funding and contract opportunities and helps with forming and running partnerships. EURADA lobbies and briefs the European Commission on behalf of members and maintains a communications network there. Countries from the Danube area involved are Austria, Bosnia and Herzegovina, Bulgaria, Czech Republic, Romania, Serbia and Slovakia.

- **Association of the European Chambers of Commerce and Industry (Eurochambers)**

  Eurochambers represents, serves and promotes member chambers through:
  - strengthening the voice and position of European chambers as significant, respected, valued influencers of EU affairs on all major economic issues;
  - developing the participation of European chambers in projects of value to business;
  - delivering services to the members, and developing a European network of services for enterprises.

  All countries from the DR participate in Eurochambers.

- **C.R.E.A.M. Europe PPP Alliance**

  C.R.E.A.M. Europe PPP Alliance is an European Public Private Partnership Association and the acronym stands for COMMUNITY, REALIZATION, EUROPEAN, AID, MASTERPLAN. C.R.E.A.M. is a Think Tank and Learning Organization to promote and initiate PPP projects in all infrastructure areas as a sustainable
regional development strategy. The knowledge network consists of 9 national own Public Private Partnership associations and over 200 PPP units worldwide. www.cream-europe.eu

- **Vienna Economic Forum (VEF)**

The aim of the VEF is popularising and promoting investment opportunities in the region from the Adriatic to the Black Sea. Providing impulses and pointing out – on the basis of research – the joint projects required in the region for short-term, medium-term and long-term realisation, and promoting their implementation. Becoming a place of definition, encounter, and of realising the public and private interests in connection with the various projects in the region as part of the United Europe. The members are companies and organizations from a wide region covering all DR countries. http://www.vienna-economic-forum.com

- **Business Advisory Council for Southeastern Europe and Eurasia (BACSEE)**

BACSEE is an advisory body composed of some 35 international investors and business representatives from more than 20 countries, whose experience and activities span across a wide range of sectors which are key to regional growth and development. The network calls for effective public-private partnerships and communication on cross-border cooperation, competitiveness, good governance, human capital, infrastructure, and regional trade and investment. BAC works in close cooperation with the European Commission, various IFIs (such as the World Bank and the EBRD) and development organizations(such as OSCE and OECD), as well as regional bodies and local business communities. As such, BAC is regularly invited to contribute to regional and international policy-making forums, and holds meetings and missions in various centers of the region. Annual activities are highlighted by a highly-profiled event, which brings together key policy makers from the sphere of business, finance, politics and academia.
3.3.2 Danube Region networks

- Danube Chambers of Commerce Association (DCCA)

Danube Chambers of Commerce Association wishes to be one of the new dimensions of DR cooperation, which due to the chamber system’s historically established traditional advocacy and representation structure, aims to enforce the common representation and advocacy of the enterprises and entrepreneurs along the Danube. The inspiration of founding the DCCA was the Danube Strategy thus its activity is directly linked to the EUSDR process. The Association’s philosophy is to create a single platform of economic opportunities enhancing economic co-operation and strengthening cohesion between the entrepreneurs and enterprises operating scattered all over the macro-region. By strengthening the cooperation between the chambers of commerce involved they contribute greatly to the development of the Danube Region. Members are chambers in cities along the Danube river or closed to it and not the national chambers of EUSDR members. http://www.danubechambers.eu/

- Danube Business Advisory Council (DBAC)

DBAC is an independent network organization whose members are promoting or providing high quality innovation support and technology transfer services to firms, with the ultimate aim to develop the knowledge economy and boost the wealth creation process. The network involves decision makers from all over the Danube Region and beyond to establish production networks of companies/research/universities to stay at the cutting-edge of technology, further interaction between different disciplines, sub-sectors, economic fields. A more intensive, systematic and wide-range collaboration between economy, academia and scientific institutions is promoted, as well as public-private initiatives to support the development of Danube Business and Technology platforms. Being in charge to develop and implement the European research and innovation policy, the EC Directorate-General for Research and Innovation ensures the policy coordination of the DBAC’s strategy with a view to achieving the goals of Europe 2020 and the Innovation Union. www.danubeinnovationunion.com
• Council of Danube Cities and Regions (CODCR)

Launched in Ulm by the "Deklaration der Donastädte" on 4 July 1998, the CODCR is a major inter-municipal and interregional network, to become an example of cross-border cooperation in the Danube Region. With its political Head Office in Ulm and operational Headquarters and General Secretariat in Bucharest, the Council of Danube Cities and Regions is a bridge that links European, regional and local institutions to the academic, business, financing networks and other representatives of the civil society. http://www.codcr.com

• Danube Competence Centre (DCC)

The Danube Competence Centre (DCC) is a regional network of public, private and non-government organizations involved in tourism sector development along the Danube. DCC was founded in early 2010 as the initiative of 22 organizations and is supported by the German Ministry of Economic Cooperation and Development through its agency GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit). It involves 60 members from 9 Danube countries, its mission being strengthening visibility of the Danube Region and enhancing and promoting cross-border cooperation and sustainable tourism development. Countries from the Danube area involved are: Germany, Austria, Slovakia, Hungary, Croatia, Serbia, Romania, Bulgaria, Moldova and Ukraine. http://www.danubecc.org/

• Danube Alliance

Danube Alliance is an informal, demand-driven and results-oriented forum for regional cooperation in the Danube macro region that identifies political goals, creates action plans, initiates projects and serves as a platform for the exchange of ideas concerning regional issues of common interest. It is an open and transparent network for cooperation with a multi-stakeholder. Members are various government ministries and agencies from the 14 countries involved in the EUSDR, the European Commission, numerous intergovernmental and non-governmental organisations, academic and financial institutions, as well as local, city and sector networks. It brings together people who are active in a variety of different sectors: transport, energy, tourism and culture,
environment, biodiversity, quality of waters, research, education and ICT, competitiveness, institutional capacity and cooperation, security. The Danube Alliance Strategy is currently under development and so is the Danube Alliance Portfolio of Actions and Flagship Projects. The latter are concrete projects that ensure a value-added contribution to regional sustainability and high visibility of the results and outcomes.
http://www.eudanube.com

- **Arge Donauländer**

Created in 1990, the Arge Donauländer aims at promoting co-operation among its members for the development of the Danube area to serve the interests of its inhabitants and to foster peaceful cooperation in Europe. Location of the Secretariat: St Pölten, Land Lower Austria, AT.

- **Steinbeis Danube Center**

Steinbeis Danube Center is a non-profit institution for fostering the implementation of Danube Strategy. It acts as the integrative link for all stakeholders of Danube Region. The Center is directly involved in activities of several Steering Groups (PA 7, 8, 9). Its work is based on 17 years of experience in economic promotion and regional development in Middle and Eastern Europe.

### 3.3.3 Cluster networks involving networks in the Danube Region

- **European Union initiatives**

Cluster development at the European Union is part of innovation policy helping companies to perform better and contributing to wider social objectives such as growth, jobs and sustainability. “Clusters are powerful engines of economic development and drivers of innovation in the European Union. They provide a fertile business environment for companies, especially SMEs, to collaborate with research institutions, suppliers, customers and competitors located in the same geographical area.”
Support for innovative clusters is provided through several channels as initiated in the document “Towards world-class clusters” /Com(2008) 652/. The related organizations include the Europe INNOVA Cluster Innovation Platform, the European Cluster Alliance for policy dialogue and the European Cluster Observatory for information service on clusters for enterprises. As part of a the policy aimed at promoting international cluster cooperation for the benefit of SMEs, DG Enterprise and Industry of the European Commission has launched a number of cluster/SME matchmaking events.

The **European Cluster Alliance (ECA)** is backed by the project TACTICS which brings together seven national and regional innovation agencies that are committed to developing new cluster policies to meet the current challenges facing European policy makers and to contributing to the future European Innovation Plan.

The **European Cluster Observatory** is an online platform that provides a single access point to information and analysis of clusters and cluster policy in Europe. Launched in 2007, the Observatory offers a range of services providing data and analysis on clusters and competitiveness, a cluster library, and a classroom for cluster education. The European Cluster Observatory also produces analysis and reports on regional competitiveness conditions, transnational cluster networks, clusters in emerging industries, and studies on better practices in cluster organisations.

Started in September 2009 the **European Cluster Excellence Initiative** (Cluster-Excellence.eu) constitutes a central pillar within this approach training the trainers and providing quality insurance.

- **CENTRAL EUROPE**

Central Europe is a European Union programme that encourages cooperation among the countries of central Europe to improve innovation, accessibility and the environment and to enhance the competitiveness and attractiveness of their cities and regions (www.central13.eu). The programme is financed by the European Regional Development Fund and runs from 2007 to 2013. **CENTRAL EUROPE** invests €231 million to provide funding to transnational cooperation projects involving public and private organisations from Austria, the Czech Republic, Germany, Hungary, Italy, Poland, the Slovak Republic, Slovenia and
Ukraine (seven countries are part of the DR). The programme has four priority areas supporting projects in these specific areas. Two of them are linked to improving competitiveness.

**Priority 1: Facilitating innovation across Central Europe**

Innovation is a key driver for strengthening Central Europe’s competitiveness and it is a top policy priority for the European Union. Projects under this priority aim at improving the climate for innovation in all regions and enabling them to make better use of their innovation potential. They create favourable framework conditions for innovation and build up capabilities for the effective transfer and application of innovation. They also foster knowledge development and help people to obtain the qualifications they need for the knowledge-based economy.

**Priority 4: Enhancing competitiveness and attractiveness of cities and regions**

“European cities and regions attract investment and employment by offering economic opportunities and a high quality of life. Cities and regions can do a lot to improve their attractiveness and competitiveness and, thus, to contribute to economic growth and more and better jobs. Projects under this priority aim at improving the quality of life in cities and regions and promote sustainable urban development. They support polycentric development to avoid disparities within urban areas that are due to social and spatial segregation, and they address demographic and social change, as well as the protection, preservation and exploitation of cultural resources.”

**Accelerating regional competitiveness (ACCESS)**

As an example for the activity of CENTRAL EUROPE is the project, ACCESS, a sector-based excellence through innovation management tools and techniques. It is implemented by 11 partner organizations from 8 Central European countries that have a common interest in improving their innovation policy. The projective focuses on two specific facets: Which are the tools and techniques of regional innovation management that might be useful to improve innovation capacities? Which potentials might be hidden in a sector-based focus for innovation management?

**Cluster and Network Cooperation for Business Success in Central Europe (CNCB)**
This CENTRAL EUROPE project focuses on the development of cluster initiatives. Its aim is to target specific challenges of the participating regions related to the cluster management qualification and working on elaboration of a standardized transferable module that is not available so far.

- **Upper Austrian Technology and Marketing Company (TMG Group)**

Together with Clusterland Oberösterreich, CATT Innovation Management and tech2b, the Upper Austria Technology and Marketing Company forms the TMG Group and hence the Upper Austrian's business agency. The aim of the TMG Group is to boost the competitiveness of Upper Austrian business and industry in the global location contest. It constitutes the region’s network for location development and marketing, company foundations and settlement, innovation and cooperation. TMG initiated **DanuClus** in April 2013 which will coordinate projects for a wide target audience of clusters in the Danube Region.

- **danubiz**

“local global GmbH” in Stuttgart has developed the concept of “danubiz” to promote active sustainable business development in the DR. It works towards fostering competitiveness in an effort to deliver improvement in the business performance of small and medium enterprises. They envision danubiz as an expanding entity that comes as a natural response to the current informational and economic impediments that are holding SMEs back from expanding outside their national environment towards international markets.

### 3.4 Networks and Initiatives of the Danube Region with Neighbouring Regions, International Cooperation of Administrative Bodies beyond the Danube Region

- **The Adriatic-Ionian Macrolregion**

The Adriatic-Ionian Macrolregion is not a geographical region with predefined boundaries; it is a functional area, composed of national, regional, and local bodies coming together to tackle a number of shared issues and it involves in territories in Albania, Bosnia-Herzegovina, Croatia, Greece, Italy, Montenegro,
Serbia and Slovenia. Together with other two European macro-regions, the Baltic Sea and the Danube, the Adriatic-Ionian Macroregion is the connection between Northern and Southern Europe because, since it also includes the central eastern Mediterranean area, it can relieve the congestion of the southeastern access to Europe.

The intergovernmental cooperation among the eight Participating Countries has been constantly upgraded in 2012-2013. Nine projects proposals will be co-financed during 2013. Projects are aimed at increasing cooperation in priority areas such as tourism, rural development, small and medium enterprises and the support to the establishment of the Adriatic and Ionian Macro Region. A further task is the presentation of a new EU Strategy for the Adriatic and Ionian Region before the end of 2014. http://www.aiips.org/index.php/adriatic-ionian-macroregion

- **BSEC - Organisation of the Black Sea Economic Cooperation**

The BSEC came into existence in 1992 as a multilateral political and economic initiative aimed at fostering interaction and harmony among the Member States (Albania, Armenia, Azerbaijan, Bulgaria, Georgia, Greece, Moldova, Romania, Russia, Serbia, Turkey and Ukraine), as well as to ensure peace, stability and prosperity, encouraging friendly and good-neighbourly relations in the Black Sea region. http://www.bsec-organization.org

EUROLINK-House of Europe is the co-ordinator of the Black Sea - Danube Regional Network for Social & Economic Innovation, which was launched in 2011. Within an institutional partnership with the National Coordinator of the EU Strategy for the Danube Region, the Regional Network plays the role of integrator of initiatives and partnerships from the Black Sea - Danube area.
4 Annex

Table 2: Population and population growth rates in the Danube Region and its subgroups

<table>
<thead>
<tr>
<th>Population</th>
<th>2003</th>
<th>2011</th>
<th>Growth 2003-2012 (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DANUBE</td>
<td>156,316,884</td>
<td>153,664,049</td>
<td>-1.7</td>
</tr>
<tr>
<td>Member Area 1</td>
<td>31,183,423</td>
<td>31,745,635</td>
<td>1.8</td>
</tr>
<tr>
<td>Member Area 2</td>
<td>27,712,254</td>
<td>27,919,042</td>
<td>0.8</td>
</tr>
<tr>
<td>Member Area 3</td>
<td>34,005,570</td>
<td>33,013,760</td>
<td>-2.9</td>
</tr>
<tr>
<td>Accession Countries</td>
<td>11,989,818</td>
<td>11,718,711</td>
<td>-2.3</td>
</tr>
<tr>
<td>Neighbouring Countries</td>
<td>51,425,819</td>
<td>49,266,901</td>
<td>-4.2</td>
</tr>
</tbody>
</table>

Source: Worldbank, Genesis Online Datenbank. Calculation and illustration: IAW.

Figure 40: Real GDP (constant 2005€) in 2003

Source: Eurostat, UNdata, Worldbank, Statistische Ämter des Bundes und der Länder. Calculation and illustration: IAW.
Figure 38 shows real GDP growth calculated as percentage change in the previous year from 2004 until 2011 for the subgroups within the Danube Region.

It is especially interesting to compare the consequences of the financial crisis on each of these areas. In the graph it can be observed how the Member States have experienced a negative real GDP growth rate of approx. -6% in 2009, while Accession countries exhibit a negative growth rate of “only” approx. -3.5%. The Neighbouring Countries have suffered the consequences of the financial crisis more intensively, presenting a negative growth rate of -14% in 2009.
Figure 39 shows real GDP per capita, PPP adjusted for the five main regions within the Danube area. GDP per capita (PPP adjusted) is a measure for prosperity within an economy. The order of GDP per capita (PPP adjusted) starting with the highest level is: Member State Area 1, Member State Area 2, Member State Area 3, Accession Countries and Neighbouring Countries. There is a tendency for GDP per capita for all subgroups to rise (except for Member State Area 1), which implies that the people enjoy higher welfare.

Figure 42: GDP per capita, PPP adjusted

Source: OECD, Penn World Tables, Worldbank, GENESIS online Datenbank. Calculation and illustration: IAW. Since data for the years 2010 and 2011 for BW and BY were not available, to develop a time series for the Member States_1 including these years is not possible.
Figure 43: GDP per capita growth, PPP adjusted

The graphic shows the growth rates of real GDP per capita, PPP adjusted for the Danube Region compared with EU-27 and OECD. The growth rate of the Danube Region is pretty high in the pre-crisis era and has suffered a deep decline during the economic crisis. OECD and EU-27 also underwent a notable decline during the economic crisis and reached the lowest point in 2009. After 2009 OECD recovered rapidly and moved back to its pre-crisis level.

Source: OECD, Penn World Tables, Worldbank, GENESIS online Datenbank. Calculation and illustration: IAW. Data for years 2010 and 2009 were not available for BW and BY, thus preventing the creation of a Benchmark for the whole Danube Region for the above mentioned years.
Figure 44: GDP per capita growth, PPP adjusted

The graphic shows the growth rates of real GDP per capita (PPP adjusted) of the five main subgroups within the Danube Region. GDP per capita is a good indicator for prosperity. For all subgroups of the Danube Region the growth rates turned negative from 2007 until 2009. After 2009 the growth rates recovered and turned positive again. The Neighbouring countries especially had a deep decline of GDP per capita growth, but also a fast and steep recovery.

The Member State Area 3 had a steep rise of the growth rate from 2004 to 2005, while all the other subgroups had a more or less parallel co-movement over time.

Source: OECD, Penn World Tables, Worldbank, GENESIS online Datenbank. Calculation and illustration: IAW. Data for years 2010 and 2009 were not available for BW and BY, thus preventing the creation of the corresponding Benchmarks for the above mentioned years.
The series for the Danube Region presents a higher volatility with respect to EU-27 and OECD, meaning that private consumption growth is higher in the Danube Region in times of an economic boom while it is lower in times of an economic crisis. Private consumption growth in the Danube Region reaches its peak in 2006 with a rate of ca. 4% and reaches its lowest value in 2009 with a negative growth rate of ca. -2.5%. Recovery from the financial crisis in the Danube Region with respect to the evolution of private consumption real growth rates seems to be faster than in the countries of the OECD and the EU-27. Moreover, real consumption growth in the Danube area exceeded the corresponding growth in the OECD and EU27 area in six out of eight years during the observation period.
The analysis of Figure 43 yields one striking observation: in contrast to the other GDP components (private consumption, investment, imports and exports), public consumption growth increases in 2008, coinciding with the burst of the financial crisis.

For the period from 2004 until 2007, public consumption growth in the Danube Region lies below public consumption growth in the countries of the OECD and EU-27. During the crisis, however, public consumption growth in the Danube Region is higher than in the EU-27 and even higher than in the OECD. The public consumption growth peak is reached in 2008 with approx. 3.5% and its lowest value dates back to 2004 with a growth rate of approximately 0%.
Investment, together with imports and exports, are generally the most volatile GDP components.

The Danube Region exhibits positive and increasing investment growth rates from 2005 until 2006. The peak is reached in 2006 with an investment growth rate of ca. 14%. After 2006 a sharp decrease in investment growth starts. In 2009 a negative growth rate of approximately -17% is reached and the fact that in 2010 growth rates lie again in the positive range points to an incipient recovery from the financial crisis.

Differences and similarities with respect to the development of investment growth rates in the OECD and the EU-27 need to be pointed out. Growth rates in the Danube Region in the years before the financial crisis are higher than in the OECD or EU-27. Furthermore, growth rates in the Danube Region start dropping already in 2007 while in the OECD and EU-27 the biggest drop does not occur before 2008.
However, the reaction of investment growth to the financial crisis and the posterior recovery show the same degree of intensity in all three regions (Danube, EU-27 and OECD).

**Figure 48: Real export growth**

In the years before the financial crisis the Danube Region exhibits export growth rates of ca. 10%, in 2007 export growth already starts dropping reaching its lowest value in 2009 with a negative growth rate of -15%. Export growth however, seems to have recovered fully from the financial crisis since in 2010 positive growth rates of ca. 15% are reached.

Differences with respect to the evolution of export growth in the EU-27 and OECD are minimal. In times of economic boom, export growth in the Danube Region is around 2 percentage points higher than in the OECD and EU-27, while it is around 2 percentage point lower during the financial crisis. All three series evolve in a parallel manner.
Figure 49: Real import growth

The development of import growth rates in the Danube Region, OECD and EU-27 occurs in a parallel manner, and growth rates differ only slightly, therefore we focus solely on the Danube Region.

In the years before the burst of the financial crisis, the Danube Region exhibits import growth rates that lie over 5% reaching their peak in 2007 with a rate of ca. 11%. From 2007 until 2009 a sharp drop in import growth rates takes place, the lowest value being -10%. Analogously to export growth, import growth seems to have recovered fully by 2010, despite a new slight drop that can be observed in 2011.
Comparing component shares of GDP in the Danube Region between 2004 and 2010, it can be pointed out that the shares of net exports and public consumption have increased by 0.4 and 0.7 percentage points respectively, while the shares of investment and private consumption have decreased by 1.4 and 0.5 percentage points respectively.
**Figure 51: GDP components in 2004**

Source: Eurostat, UNdata, Worldbank, Bayerisches Landesamt für Statistik, Landesamt für Statistik Baden-Württemberg, Statistische Ämter des Bundes und der Länder. Calculation and illustration: IAW. 2003: First year with complete data availability. For Member State Area 1, 100 % is not reached because for Bavaria and Baden-Württemberg proxies have been used for net exports.
Figure 52: GDP sectors in 2003

![GDP sectors in 2003 graph]

Source: Eurostat, Worldbank, Statistische Ämter der Länder. Calculation and illustration: IAW.

Figure 53: GDP sectors in 2003

![GDP sectors in 2003 graph]

Source: Eurostat, Worldbank, Statistische Ämter der Länder. Calculation and illustration: IAW.
Figure 54: Labor productivity (GDP per person employed)

Source: Penn World Tables, OECD, Arbeitskreis VGL. Calculation and illustration: IAW. Data for BW and BY for 2010 and 2011 is not yet available. Data for Montenegro for 2003 and 2004 is not available.
This figure depicts the labour productivity growth (% change from the previous year) for the Danube Region in comparison with EU-27 and OECD. Growth rates for the Danube Region in the pre-crisis era have been well above OECD and EU-27, which could be linked to a low base effect. During the economic crisis, especially for 2009, we can see a deep drop for all three regional aggregates towards more than -4%.

Source: Penn World Tables, OECD, Arbeitskreis VGL. Calculation and illustration: IAW.
Figure 56: Labor productivity (GDP per person employed)

The figure shows labour productivity calculated as real GDP, PPP adjusted per person engaged. More specifically, the percentage deviation of a selection of regions from the Danube average is represented. As we can see, Member State Area 1’s productivity is nearly double that of the Danube Region average, while Member State Area 2 also lies 20% above the regional average. Accession Countries and Neighbouring Countries lie closely together, but underneath the Danube average. As we can see, the “new” Member States are steeply rising. Especially since 2007 (year of EU accession of Romania and Bulgaria) their average labor productivity has overtaken the labor productivity of the Accession Countries. In the meantime, Neighbouring Countries swing around - 60% of the Danube average.

Source: Penn World Tables, OECD, Arbeitskreis VGL. Calculation and illustration: IAW. Data was not available for BW and BY for the years 2010 and 2011. Data was not available for Montenegro for the years 2003 and 2004. This facts prevented the creation of the Danube average for the mentioned years, and thus also the creation of the percentage deviation from this average.
This figure demonstrates the labour productivity, measured in € per hour worked. This is a reliable measure for productivity, due to the fact that it takes the volume of work into account. This data is available just for member states because the measurement and the reliability of the variable “hours worked per person engaged”, are dubious. We see the development of the single subgroups of the member state region over time (from 2003-2011). Member State Area 1 lies clearly above the Member States as a whole (at around 40€ per hour worked), while Member State Area 2 lies below the entire Member State average by approximately 5€ per hour worked at around 12€-13€ per hour worked. For Member State Area 3 (without Croatia) Euro per hour worked has the lowest level and takes values at around 5€ per hour worked.

For all member states we can see that labor productivity exhibits a tendency to increase gradually.
Figure 58: Population 0-14 years (share of total population)

Source: Eurostat, OECD.

Figure 59: Population 65 years and over (share of total population)

Source: Eurostat, OECD.
Figure 60: Activity rates - males

Source: Eurostat, OECD.

Figure 61: Activity rates - females

Source: Eurostat, OECD.
Figure 62: Unemployment by regions

Source: Eurostat, OECD.