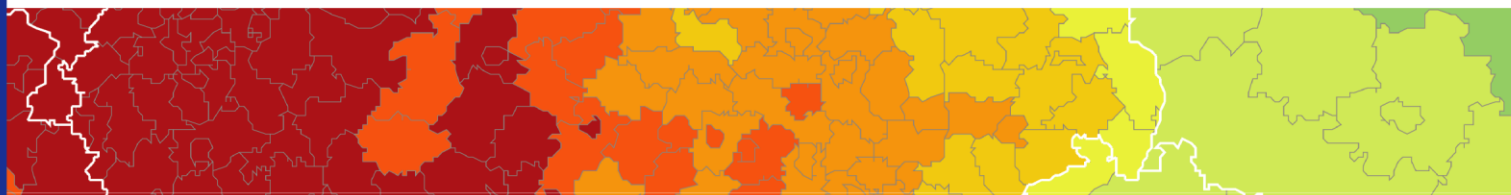


**Inspire policy making by territorial evidence**



# The Geography of New Employment Dynamics in Europe

Applied Research

**Annex to Chapter 6**

**Case Study –  
MECKLENBURG – VORPOMMERN (DE)  
Final Version**

9.3.2018

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# The Geography of New Employment Dynamics in Europe

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## Executive summary

**Mecklenburg-Vorpommern or Mecklenburg-Western Pomerania (MV)** is a good example of a well working knowledge-based economy in a rural, peripheral region. However, the first economic activities that come to mind when thinking of MV are agriculture, fishing, shipyards and tourism. But beside these fields of activity there exists also a vibrant health economy. Its existence follows a long tradition: The MV-based universities of Rostock (founded 1419) and Greifswald (founded 1433) are the oldest in the Scandinavian/Baltic Sea region, and among the oldest in Europe as a whole. Since they were founded, health sciences have been among the most prominent fields of activity in these institutions, and in MV as a whole. The tradition has lasted till today and is the base for MVs most rapidly expanding sector.

- MV is on the way to becoming Germany's number one federal state (Land) in health economy, life sciences and biotechnology. A development that is encouraged by the local government and slowly entering public perception.
- The sector was not remarkably affected by the global financial crisis or the euro crisis. It has grown consistently since the year 2000.
- The most positive dynamic development takes place in sectors where highly qualified personnel provide the fuel for stable and sustainable growth.
- The region makes a lot of effort to support the sector and gain international attention by implementing a well organised public relations concept.
- The share of MV employees working in the health economy sector and of the gross value added is significantly higher than the German average. In MV, this economic sector is responsible for every fifth job, a share that increased over the years.
- Most of the employees in the region are highly educated. Universities offer a wide range of health and biotechnology related fields of education and research.
- The majority of the students are not from Mecklenburg-Vorpommern, but from other parts of Germany or foreign countries.



# 1 Motivation for the selection of this case

**Mecklenburg-Vorpommern (MV)** is a good example for a well working knowledge-based economy in a rural and peripheral region, and shows how cooperation of a group of well-organised actors can lead to a prosperous and successful situation. While the first economic activities that come to mind when thinking about MV might be agriculture, fishing and maybe tourism; the region actually has a very well developed and vibrant health-economy:

- MV is on the way to become Germany's Nr.1 federal state in health economy, life sciences and biotechnology. At least, this is the goal of the local government. A goal which is meant in the way of public perception<sup>1</sup>.
- The share of employees in the health economy sector and of the gross value added is significantly higher than in German average. This economic sector is responsible for every fifth job in MV. A share that increased over the years.<sup>2</sup>
- The health economy, life sciences and biotechnology sectors were not remarkably affected by the global financial crisis or the euro crisis. It has been constantly growing since the year 2000.
- Most of the employees were educated within the region. The universities and universities of applied science offer a wide range of health and biotechnology related fields of education and research.
- The region does a lot of efforts to support the branch and gain international attention by implementing a well organised public relations concept.<sup>3</sup>

After the reunification of Germany, MV faced a decline in population and economic activity. A vicious cycle: declining prosperity meant fewer people wanted to stay. To stop this positive feedback loop, the government of MV implemented a 'masterplan for the health economy'. They chose this branch due to its long tradition in MV: The universities of Greifswald and Rostock – both have existed for more than 400 years – initially started with a medical faculty and expanded their research activities in this field over the years. In addition, research institutes dealing with bacteria and epidemiology were founded, as well as other institutes.

Also, tourism has had a long-lasting history in MV; staying at the shore of the Baltic Sea for a relaxing time has become is a typical recreational activity connected with the health sector. The upper class (e.g. from Berlin) traditionally left the polluted air of the newly industrialised cities for some weeks for a holiday during the Wilhelminian period. It became popular among high-society types to stay at the Kaiser-spa-cities like Heringsdorf or Bansin on the islands of

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<sup>1</sup> Gajewski 1/25/2017

<sup>2</sup> Schneider et al. 2015; Ostwald et al. 2015

<sup>3</sup> Kranz-Glatigny 2013



Usedom and Rügen, which were easily accessed by train from Berlin. Health and wellness clinics settled along the coast over time and, with the support of health insurance funds, over time, it became more affordable to go on holidays there.

Meanwhile, for the hinterland of MV's coastline agriculture was the dominant branch. There, after several research institutes were founded, this sector further developed and formed the basis for today's high level of competence in biotechnology, nourishment and life sciences. That competence has since been capitalised upon by the local government's 'masterplan', which has sought to accelerate the region's economic development by investing in its already-advanced sectors.

## **2 The hypothesis under analysis**

The case study analysed whether specializing on specific KE sectors – mainly the policy of focusing on health research, health economy, biotechnology and life sciences – has been a successful one. One thing was clear: *a priori* it is a reasonable policy, given MV's economic endowment.



## 3 The profile of the area

### 3.1 Territory

Mecklenburg-Western Pomerania (in German: Mecklenburg-Vorpommern; abbreviation: MV) is located in the most north-eastern part of Germany. The coast borders the north of MV. It borders Poland in the east, Brandenburg in the south, Niedersachsen (Lower Saxony) in the southwest and Schleswig-Holstein in the northwest. It is a rural-peripheral region with only few cities, most of them on the shore of the Baltic Sea. The most populated one is Rostock with approximately 200,000 inhabitants. Yet, there are four metropolitan areas that are not direct neighbours, but that are close to MV and important for its international connection. In particular these four are Copenhagen/Malmö/Oresund in the north, Szczecin in the east, Berlin in the south and Hamburg in the west.

*Figure 3.1: Location of MV within Germany*



Hamburg is easy to reach from the western part of MV. It takes less than an hour to get there by car or train. As a result, MV developed into a suburb of Hamburg. A similar development took place in the East: Due to low housing prices in the easternmost part of MV, this area gained attractiveness for people working in nearby Szczecin, as it is usually cheaper to buy a house in MV than to buy a flat in Szczecin.

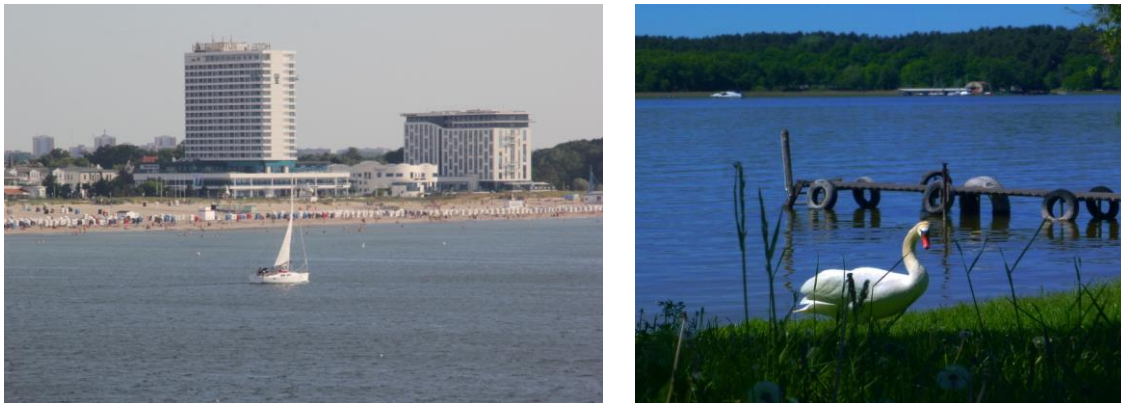
The connections to the north and the south are not that dense, yet equally important. MV is right in the middle of the corridor between the German and Danish capitals, as well as to and the rest of. The ports of MV offer several daily ferry connections to Scandinavia and Baltic countries.

Mecklenburg-Vorpommern has 1.612 Million inhabitants, living on an area of 23,313 km<sup>2</sup>. The population density is by far the lowest in Germany, with only ~69 people per km<sup>2</sup>. This low density causes problems in regional organisation and administration; especially in connection with the decline in population and the rising share of old people, particularly in rural areas. These problems have led to the number of regional administrations being reduced from 12 to six. These are now: Mecklenburgische Seenplatte (the largest county in Germany), county Rostock, Vorpommern-Rügen, Nordwestmecklenburg, Vorpommern-Greifswald and Ludwigslust-Parchim. In addition, the capital Schwerin and the largest city Rostock are independent, and do not belong to any county.

On the other hand, a low population density means that there is more available space for nature and agriculture. The latter claims 62% of the total area while 22% are covered by forests and

6% consists of lakes and rivers. The federal state of MV therefore houses three out of 14 German national parks: Jasmund National Park (30 km<sup>2</sup>), famous for its chalk cliffs and also a UNESCO World Heritage site; Müritz National Park (315 km<sup>2</sup>), a park consisting of the largest lake entirely on German territory (Müritz), other lakes, canals and rivers, as well as swamp land and forests; Western Pomerania Lagoon Area National Park (805 km<sup>2</sup>), characterised by shallow waters, lagoons and islands, as well as birds which rest on their way from Scandinavia to the south and back again.

Figure 3.2: Seaside Resort Warnemünde and Mecklenburg Lake Plateau



In addition to the aforementioned universities, today, the KE of MV is also represented by 22 renowned research institutes of Germany's major research communities (e.g. one Helmholtz, two Max-Planck and Fraunhofer and five Leibniz Institutes).

### 3.2 Population and migration

As already mentioned, MV is a federal state with a very low population density, compared to other parts of Germany and the EU. The largest city is Rostock with slightly more than 200,000 inhabitants.

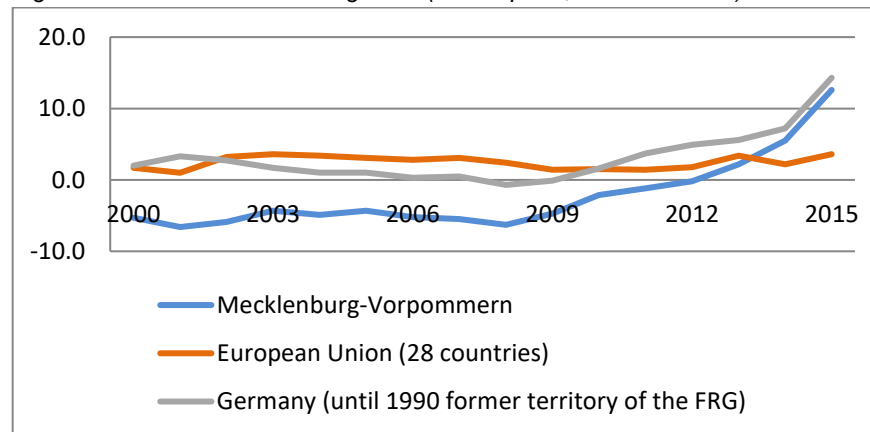
Table 3.1: Population of Mecklenburg-Vorpommern

	2012	2016
<b>Population in Cities</b>		
Schwerin	91.264	96.800
Rostock	202.887	206.011
<b>Population in Counties/Regions</b>		
Mecklenburgische Seenplatte	264.261	262.517
Landkreis Rostock	210.732	213.473
Vorpommern-Rügen	223.718	224.820
Nordwestmecklenburg	155.801	156.270
Vorpommern-Greifswald	239.291	238.358
Ludwigslust-Parchim	212.373	214.113
<b>Mecklenburg-Vorpommern (total)</b>	<b>1.600.327</b>	<b>1.612.362</b>

Source: Statistisches Amt MV

The crude rate of net migration in Figure 3.3 represents the ratio of net migration during the year compared to the average population in that year. It shows that MV managed to reverse the trend of a declining population: the growth rate went from less than -5% (before 2012) to more than +10% (in 2015).

Figure 3.3: Crude rate of net migration (values per 1,000 inhabitants)



Source: Eurostat

Migration has predominantly consisted of inflows from three major groups: The largest group is German nationals from neighbouring regions and the two close-by metropolises, Berlin and Hamburg. Immigrants from Hamburg are mostly commuters who settle in the western parts of MV, close to the train and motorway network, where villages and small cities serve as suburbs for expensive Hamburg, which has a lack of affordable places in which to live. The second significant group of immigrants is people from the rest of Germany, who migrate either for a new job or who grew up in Mecklenburg-Vorpommern but left temporarily to earn a living elsewhere, as well as people who want to enjoy their retirement at the seaside and in spa-resorts. The third notable group of immigrants comes from the only country with which MV shares a border – Poland. There are two types of Polish immigrant. The first kind comes to MV to work, mostly in the tourism and agriculture sectors. The second group moves to MV for similar reasons; however, they come from the city of Szczecin, having spotted the most eastern part of MV as a good suburb, after taking into consideration the high prices in Szczecin. This second scheme is considered a win-win-situation: there is plenty of empty housing units in MV, due to the former owners having left to find jobs in other parts of Germany. These regions have to deal with demographic change, and therefore benefit from the entry of young (polish) families, who reduce the average age and boost the municipalities' tax receipts. The total number of foreign citizens living in Mecklenburg-Vorpommern has more than doubled in the last decade (cf. table 3.3).

Apart from the rising share of migrants and foreigners in the population, there is also an increasing proportion of people aged 65 and over compared to those aged between 15 and 64 (cf. tab. 3.4). The proportion of 34.9% is higher than the German (32.0%), and EU averages (28.8%). A reason for this development is the high influx of people aged 55 and over. The

numbers for these age groups has risen, while the influx of people between 30 and 55 has declined. The older people often come back to MV, the region where they spent their youths, to retire with good medical support in the maritime and natural surroundings. The population pyramid is morphing into a tree shape. There are more and more old people, compared with the number of young people in MV – leading to an increase in the old-age dependency ratio.

Table 3.2: Migration to and from Mecklenburg-Vorpommern in 2015

Territory of origin	Territory of destination						
	MV	Germany	Thereof Neighbouring Regions (incl. Berlin, Hamburg)	Europe	Thereof EU	Thereof Poland	Other Countries
Germany	26,836						
Thereof Neighbouring Regions (incl. Berlin and Hamburg)	15,808						
Europe	13,451						
Thereof EU	8,172						
Thereof Poland	3,594						
Other countries	17,935						
MV		27,314	16,945	8,650	5,517	2,295	2,285
➔ Migration Balance: 58,222-38,249 = +19,973							

Source: Statistisches Amt Mecklenburg-Vorpommern

Table 3.3: Foreign citizens in Mecklenburg-Vorpommern

	2002	2015
	Foreign citizens	Foreign citizens
<b>POPULATION OF THE CITIES</b>		
Schwerin	4,234	5,458
Rostock	5,833	10,410
<b>POPULATION OF THE COUNTIES</b>		
Mecklenburgische Seenplatte	3,944	7,379
Landkreis Rostock	2,922	6,829
Vorpommern-Rügen	3,678	8,222
Nordwestmecklenburg	2,922	5,056
Vorpommern-Greifswald	4,436	10,747
Ludwigslust-Parchim	2,815	10,903
<b>MECKLENBURG-VORPOMMERN (TOTAL)</b>	<b>30,784</b>	<b>65,004</b>

Source: Statistisches Amt MV

Table 3.4: Old-age dependency ratio\*

	2001	2015
Mecklenburg-Vorpommern	21.5%	34.9%
Germany	24.5%	32.0%
EU 28	23.5%	28.8%

\*Ratio between the number of people aged 65 and over (then age when they are generally economically inactive) and the number of people aged between 15 and 64. The value is expressed per 100 persons of working age (15-64).

Source: Eurostat

### 3.3 Economy and labour market

Mecklenburg-Vorpommern is well-known for agriculture, forestry, fishing, for heavy industries – i.e. for its shipyards – and last but not least for tourism and health economy. The density of industrial production is the second lowest in Germany – after Berlin. More than a third (35.6%) of the industrial production is based on the primary sector. GDP growth was in line with the general rate in the EU and Germany. But the purchasing power standard (PPS) is still lower than the European average and more than €11,000 below the German average (cf. table 3.5). The same applies to research and development expenditures, which are below the German and the EU-average. But Mecklenburg-Vorpommern does not only have low numbers to offer. Between 2002 and 2015 there was a mostly positive development for people employed in science and technology. A third (33,2%) of the economically active population in MV works in this field. This is less than the 37.8% for Germany but more than the 31.5% European average. (cf. fig 3.5).

Table 3.5: Gross domestic product and total intramural R&D expenditure (GERD)

	GDP at current market prices (PPS per inhabitant)		Total intramural R&D expenditure (GERD) as % of GDP	
	2000	2014	2000	2014
Mecklenburg-Vorpommern	15,300	23,000	-	1.82%
Germany	24,100	34,500	2.39%	2.89%
EU 28	19,600	27,500	1.77%	2.04%

Source: Eurostat; “-“ = no data available

The employment rate increased from 58.9% to 71.7% between 2002 and 2015. In the same time, the unemployment rate doubled (5.8% to 12.6%), but not for all age groups. In 2015 only 10.7% of people aged between 15 and 24 were unemployed, four percentage points less than in 2002. But that does not mean the remainder are in employment: 29.8% of them are registered as NEETS, while only 40.2% have jobs. This is a trend that is at odds with that in Germany and the EU (cf. table 3.6).

This high rate is, among other reasons, caused by the high rate of pupils leaving school without graduating (cf. Chapter 4.4). This leaves individuals without easy access to the labour market – in a region where jobs are rare. Another reason is the high share of young single parents (30%), of which a third is unemployed.<sup>4</sup> Since 2012, the share of people employed in science and technology in MV increased and overtook the EU-average. A third of the economically active population works in this sector. And the majority of them are employed in health and biotechnology research and development. MV development in this sector is even faster than in Germany as a whole, where the progress is more gradual. As a consequence, MV is in need of well-educated and highly qualified employees.<sup>5</sup>

<sup>4</sup> Statistisches Amt Mecklenburg-Vorpommern 2015

<sup>5</sup> Kotte, Stöckmann 2012



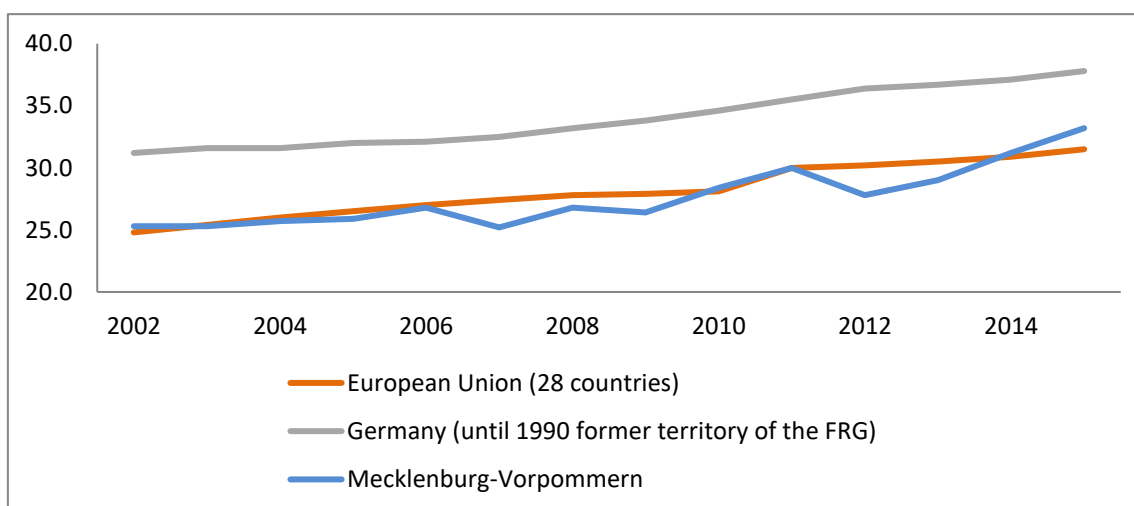
Table 3.6: Employment and unemployment rates

	Employment rates 15-64		Unemployment rate (overall)		Employment rates 15-24		Unemployment rate 15-24		Neets* 18-24	
	2002	2015	2002	2015	2002	2015	2002	2015	2002	2015
MV	58.9%	71.7%	5.8%	12.6%	48.5%	40.2%	14.7%	10.7%	13.9 %	29.8%
DE	65.4%	74.0%	8.5%	4.6%	45.4%	45.3%	9.3%	7.2%	13.5 %	11.4%
EU 28	62.3%	65.6%	9.0%	9.4%	36.5%	33.0%	18.2%	20.4%	16.8 %	15.8%

\* Neets = young people not in education, employment or training

Source: Eurostat

Figure 3.4: People employed in science and technology (% of active population)



Source: Eurostat

### 3.4 Education

As the home of two of the oldest universities of the Baltic and Scandinavian Region, MV looks back on a long tradition in higher education. That tradition continues today, even as the data shows the total number of students to be slightly decreasing. The universities put their exploratory focus mainly on topics that are related to health economy, health research, biotechnology and life sciences. That shows the high importance these branches have for the future development of MV. These topics fit to the master plan health economy in MV 2020 and shall build up the base for a pool of well-educated personnel that can be employed in the enterprises of these branches.

Table 3.7 shows that MV has more early leavers from school than the average. In contrast to the European and German averages, in MV this percentage decreased over the last 13 years. This negative development continues as the percentage of the population aged 30 to 34 years with a tertiary education also declines, while the same indicator improves in Germany and the EU.

Figure 3.5: University library of Rostock



Source: Gajewski 2017

The main reason for the high drop-out rate is accredited to a deficit in the school system. There are many pupils in special schools who could also apply to a regular school if the assessment procedure were changed. These pupils often do not graduate from school, and are a major share within the group of all pupils without education.

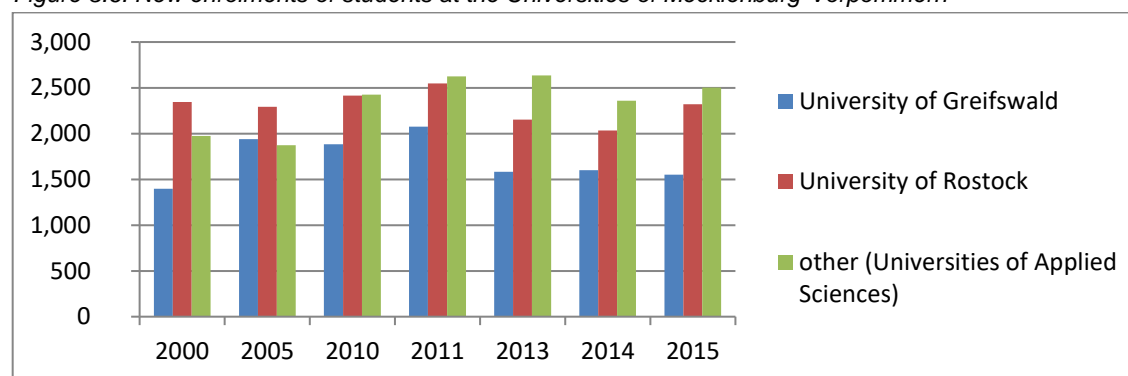
Table 3.7: Drop-out and tertiary education

	<b>Early leavers from education and training (% on the population 18-24)</b>		<b>% of population aged 30-34 with a tertiary education</b>	
	<b>2002</b>	<b>2015</b>	<b>2002</b>	<b>2015</b>
Mecklen- burg-Vor- pommern	9.2%	11.1%	24.6%	21.2%
Germany	12.5%	10.1%	24.2%	32.3%
EU 28	17.0%	11.0%	23.6%	38.7%

Source: Eurostat

But more important to the development of MV into a knowledge economy are the processes concerning the academic landscape. Over the past 15 years, the universities of MV have experienced fluctuations in the number of enrolments. The only trend that became more evident is that the five universities of applied sciences attracted more students than the University of Rostock – the largest one of MV. That happened the first time in 2010 and since then in every year. After a peak in 2011 the number of new students declined till 2014. Since then the number has risen slightly.

Figure 3.6: New enrolments of students at the Universities of Mecklenburg-Vorpommern

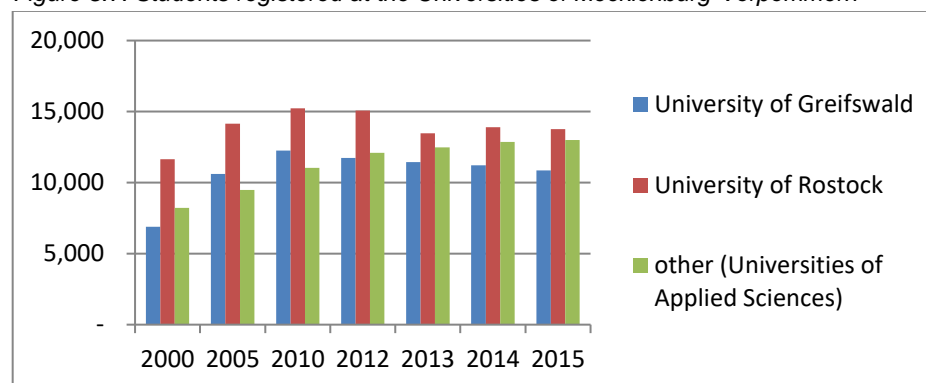


Source: Statistisches Amt MV

The number of students enrolled in the universities of Rostock and Greifswald reached its climax in 2010 with 15,236 (Rostock) and 12,256 (Greifswald) students, while the universities of applied sciences have shown continual growth. Since then, the number of students in the two major education institutions has fluctuated between 13,000 and 14,000 students in Rostock – a value like ten years ago. In Greifswald a steady decline is notable – from 12,256 in 2010 to 10,857 in 2015.

The only exceptions are the universities of applied sciences in Stralsund, Wismar, Neubrandenburg, Güstrow and Rostock.

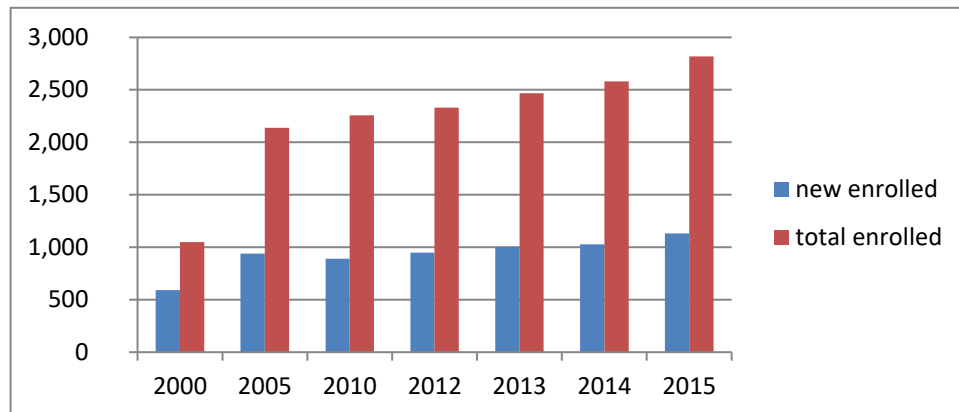
Figure 3.7: Students registered at the Universities of Mecklenburg-Vorpommern



Source: Statistisches Amt MV

However, the number of foreign students has been nearly constantly increasing - the total number as well as the number of newly enrolled students. Figure 7 reveals that the number of newly enrolled, foreign students doubled from 593 to 1,132 in the past 15 years. The number of all foreign students in all universities of MV tripled during this period from 1,050 to 2,820.

Figure 3.8: New foreign students and total foreign students enrolled at the Universities of Mecklenburg-Vorpommern



Source: Statistisches Amt MV

### 3.5 Institutional characteristics of the area in relation to the KE and skilled migration

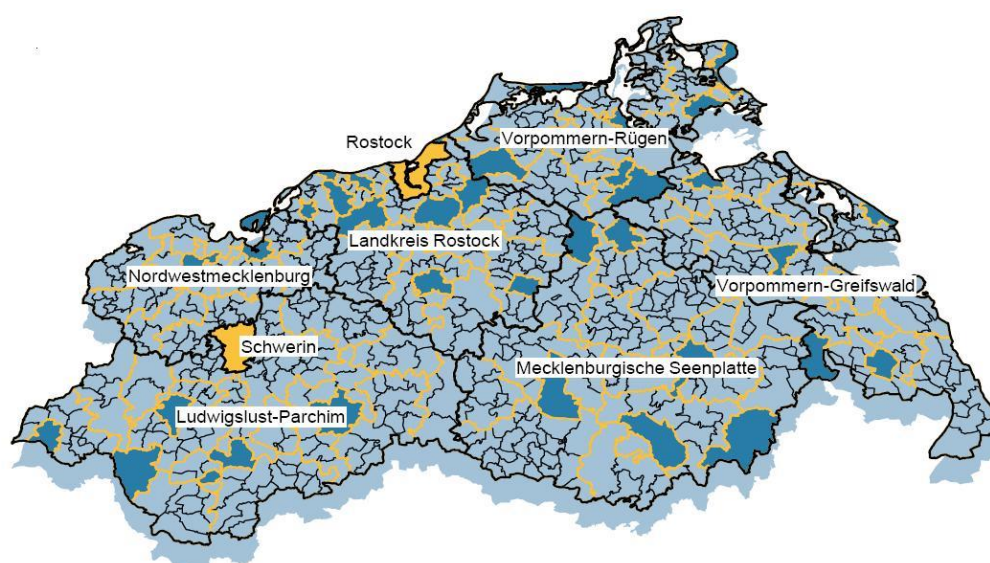
As mentioned before, Mecklenburg-Vorpommern consists of six counties and two self-contained cities (Rostock and Schwerin) (cf. fig. 3.9). These consist of 757 municipalities (cf. fig. 3.10). The most populated areas are along the coastline, while most economic activity occurs in tourism in the spa towns. These cities, villages and communities profit from their location in one of the sunniest regions of Germany. They offer sandy beaches and treatments at health resorts. The surrounding nature, forests and swamps beside the Baltic Sea, offer good conditions for recreation. In addition, there is shipbuilding (mainly in Wismar, Rostock and Stralsund) and furthermore trade and transport businesses to the Baltic Sea region at the ferry port cities. The inland is characterised by agriculture and very low population density.

Figure 3.9: Counties (Landkreise) of Mecklenburg-Vorpommern



Source: Landesportal Mecklenburg-Vorpommern

Figure 3.10: Municipalities of Mecklenburg-Vorpommern



Source: Statistisches Amt Mecklenburg-Vorpommern

Table 3.8 illustrates the difference between the two types of regions within MV. Vorpommern-Rügen, a part that consists of islands, holiday resorts and the city of Stralsund – a location for a university of applied sciences as well as shipyards, life sciences and biotechnology – has a population density of 73 inhabitants per km<sup>2</sup>. Adjacent is Ludwigslust-Parchim – a county situated in a rural area, without any major city or educational facility and without a noteworthy industrial structure, except agriculture – with a population density of only 45 inhabitants/km<sup>2</sup>.

Table 3.8: Municipalities, area and population density in 2016

	no. of municipalities	Inhabitants	Area (sq km)	Population density
<b>Cities</b>				
Schwerin	1	96.800	131	706
Rostock	1	206.011	181	1 126
<b>Counties</b>				
Mecklenburgische Seenplatte	158	262.517	5 470	48
Landkreis Rostock	117	213.473	3 423	62
Vorpommern-Rügen	105	224.820	3 207	70
Nordwestmecklenburg	86	156.270	2 119	73
Vorpommern-Greifswald	140	238.358	3 930	60
Ludwigslust-Parchim	149	214.113	4 752	45
<b>Mecklenburg-Vorpommern</b>	<b>757</b>	<b>1.612.362</b>	<b>23 213</b>	<b>69</b>

Source: Statistisches Amt MV

## 4 Policy features affecting the KE and high-skilled migration

To reach the goal of becoming Germany's No. 1 federal state in health economy, biotechnology and life sciences, the government of MV and its subsidiary authorities for economy, health, education research and infrastructure (in cooperation with other important and topic-related organisations of MV) developed the 'Master Plan Health Economy 2010' back in 2006. It was replaced in 2011 by the 'Master Plan Health Economy 2020'.<sup>6</sup> The main objectives of these 'master plans' are the improvement of infrastructures and public provisions to encourage the settlement and expansion of new and existing companies, research institutes, along with the educational facilities of these branches. In detail, the plan consists of five segments, outlined in table 4.1 below. These segments stand alone, but also have some contact points with each other. All of them are based on already existing structures that have the potential of getting more important and economically successful in the next years or decades.

In addition to the standard methods of financing projects and investments, the 'master plan' also proposes a new way of funding start-up companies belonging to relevant sectors. Stakeholders from different institutions invest together in promising new firms and projects, and support them e.g. in finding partners, organising networks and getting them market access. The stakeholders and advisors are all from within the health-care-sector and range from research institutes, universities, and authorities, to small and middle-sized companies, venture capital investors and banks. The aim of this system is to retain and expand competencies in the region by building up new ideas that fill existing gaps on the market or in research.<sup>7</sup>

Table 4.1: Master plan Health economy MV

SEGMENT	FIELD(S) OF ACTION
<b>Life Science</b>	<ul style="list-style-type: none"> <li>• 'Light house projects' in several fields of biotechnology and medical technology</li> <li>• Offering support to companies to improve their global competitiveness</li> <li>• Development of branch-specific service offers.</li> </ul>
<b>Health services</b>	<ul style="list-style-type: none"> <li>• Health promotion and disease prevention</li> <li>• Rehabilitation</li> <li>• High performance medicine</li> <li>• Marketing for / internationalisation of the regional health economy</li> </ul>
<b>Healthy Ageing</b>	<ul style="list-style-type: none"> <li>• Strengthening and bundling of the regional R&amp;D activities</li> <li>• Marketing for the place on national and international level</li> <li>• Development of products and services for generations</li> <li>• Making use of the economic potentials within the care sector</li> </ul>
<b>Health Tourism</b>	<ul style="list-style-type: none"> <li>• Identification of MV as health touristic destination</li> <li>• Diversification of the range of services and activities</li> <li>• Preservation of the potential of well-equipped and educated personnel</li> <li>• International medical tourism</li> </ul>
<b>Nourishment for Health</b>	<ul style="list-style-type: none"> <li>• Expertise in nourishment and health</li> <li>• Products with health-related additional benefit</li> <li>• Networks</li> </ul>

Source: Heinze, Hilbert 2006; Ministerium für Wirtschaft,

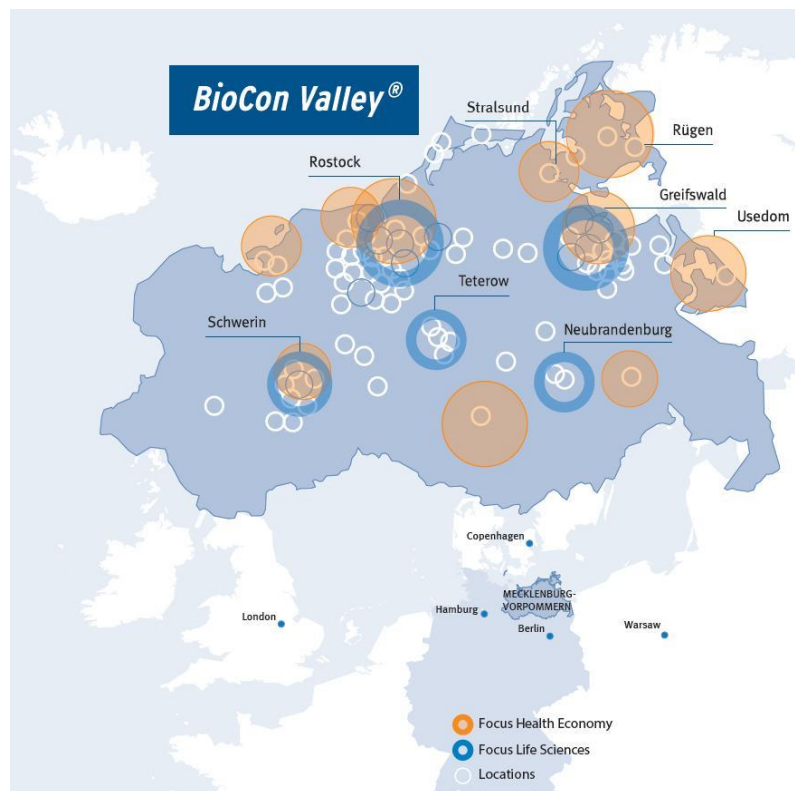
<sup>6</sup> Heinze, Hilbert 2006; Ministerium für Wirtschaft, Tourismus und Arbeit 2011

<sup>7</sup> Ministerium für Wirtschaft, Tourismus und Arbeit Mecklenburg-Vorpommern 2011

To bring this master plans to fruition, the BioCon Valley GmbH (BCV) was founded in 2002 by the state Mecklenburg-Vorpommern, two banks, the BioCon Valley association and other founders. BioCon Valley is a cluster and network management company that started with 69 members, and has nearly doubled to 130 since its founding. Members are companies of the health industries, health research and health trading such as hospitals, universities and research institutes. Moreover, there are members from the biotechnology and life science branches. Its main topics are health economies, life sciences and – as an overlapping section of both – biotechnology. The BCV is based in the university cities of Rostock and Greifswald. These cities are, according to the statistics and figure 4.1, the most important and significant regions for the growth in knowledge economies within MV.

There are four spheres of action which form the basis of BCV's activities: network management and branch monitoring, project initiation and project steering, internationalisation, public relations and organisation of events. In addition to their tasks in MV, they are also a leading member of the meta-network ScanBalt. This is a network that consists of several clusters in the countries around the Baltic Sea and in Scandinavia. They have in common that they are specialised in comparable topics, but their organisation and forms of funding differ.<sup>8</sup>

Figure 4.1: Map of BioCon Valley focus locations



Source: BioCon Valley

<sup>8</sup> ScanBalt Health Region 2010

The structure of the health economy is determined by small- and medium-sized enterprises. They provide more than 100,000 jobs and are responsible for €3.4 billion of gross value added. These enterprise sizes make it advisable for companies to cooperate with other actors within the sector, as it would be too much effort for some firms to do everything on their own. That is one of the reasons why the work of BCV is so important for the regional economy. The cooperation can take place between companies, between companies and research institutes, between universities and between universities and research institutes.

The small size of the enterprises is not synonymous with a significance that is just local or regional. Some of the companies founded and based in MV are global players in their special field of knowledge and production. Such 'hidden champions' are not present in public consciousness, but they are well known and eminently respectable in their specific branch – like the DOT GmbH, which also has a production site in the USA.

Table 4.2: Enterprise sizes in health economy in MV

Enterprise size by number of employees	Employees		Gross value added	
	Total	Share of the whole branch	Total	Share of the whole branch
<b>Little (1-9)</b>	36,000	26.4 %	1.2 bn. €	23.0 %
<b>Medium (10-249)</b>	70,200	51.4 %	2.3 bn. €	46.1 %
<b>Large (from 250)</b>	30,400	22.2 %	1.6 bn. €	30.9 %

Source: Ostwald et. al. 2015

Alongside the 'master plan', the local government uses other strategies to develop the health sector in MV:

- Cluster strategy: This strategy is the main driver for the progress of MV in becoming an important region for these fields of economic activity. The BioCon Valley GmbH is the managing organisation for the biotechnology, life sciences and health economy cluster in MV.

In addition to their tasks in MV, they are also a leading member of the meta-network ScanBalt. This is a network that consists of several clusters in the countries around the Baltic Sea and in Scandinavia. The constituent members have in common that they are each specialised in comparable topics, but their organisation and forms of funding differ.<sup>9</sup>

- Oasis strategy<sup>10</sup>: This is the opposite of the desert concept. That means that only the successful, vibrant, developing parts of a region are supported with additional subsidies while the 'desert' around these areas gets no special support.

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<sup>9</sup> ScanBalt Health Region 2010

<sup>10</sup> Braun 2004



The aim of this strategy is to grow the oases, and hope that this will generate positive effects for the surrounding region.

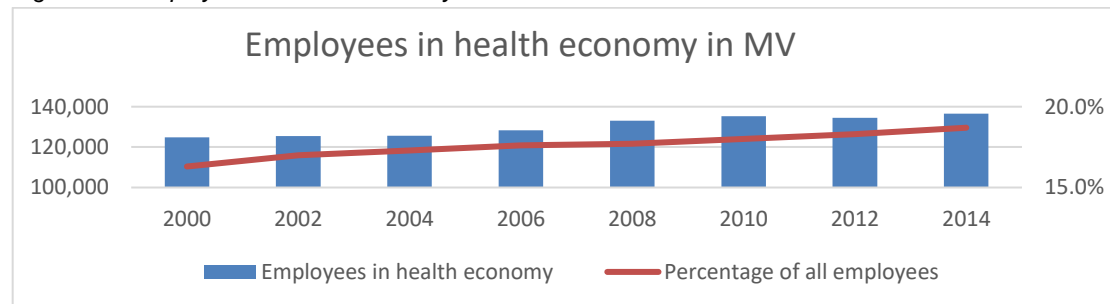
This strategy has been chosen by the MV authorities. Greifswald and Rostock are the main oases. There are the universities with their high-level education, their spin-offs and other companies as well as research institutes. All these regions – at the shore of the Baltic Sea – register an increase in health economy, biotechnology, life sciences and health economy.

On a secondary level there are cities that are home of a university of applied sciences, like Stralsund, Wismar and Neubrandenburg. They are also attractive for this economic sector and also develop – though on a smaller scale.

## 5 Testing the evidence: main results and shortcomings

Figures 5.1 and 5.2 show how the health economy grew in the last 14 years. With some small exceptions there is a steady, remarkable growth. Even in years where the total number of employees declined, the percentage of all employees raised – up to nearly 20% in 2014.

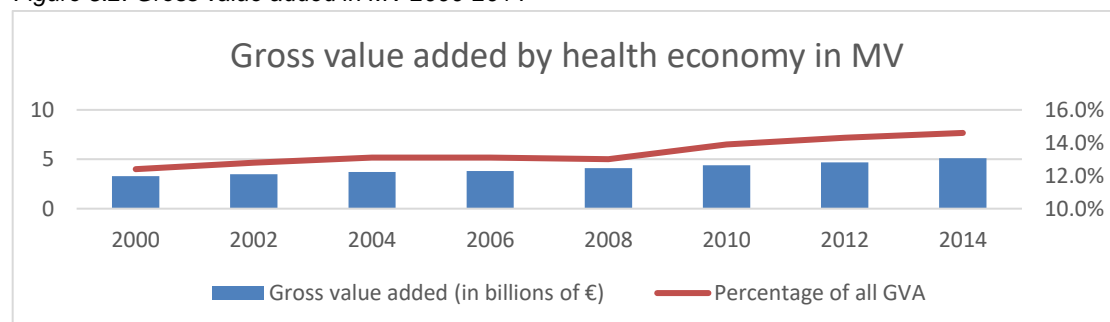
Figure 5.1: Employees in health economy in MV 2000-2014



Source: Ostwald et al. (2015)

The gross value added (GVA) by the health economy increased continuously, with only a small blip in 2008. Post-2008, its growth continued parallel to the previous trend. Due to the steadily growing health, life sciences and biotechnology market and the rising share MV has in it, jobs are secure and the attractiveness to work in the sector high. Graduated students can easily find a job in one of the growing companies of MVs health economy, life sciences and biotechnology sector. These jobs are characterised by competitive wages, a positive work-life balance, as well as by a natural and beautiful surrounding that attracts millions of tourists every year. Social standards are high and social infrastructures (e.g. childcare, schools) are in a good condition – just to mention a few advantages MV can offer its citizens.

Figure 5.2: Gross value added in MV 2000-2014



Source: Ostwald et al. (2015)

Both figures show the positive economic effects of the focus on the health economy as one of the main drivers of growth in MV. In other sources<sup>11</sup> not shown in this text, there is additional

<sup>11</sup> Kotte, Stöckmann 2012

evidence of the growth in biotechnology and life sciences. However, these branches do not yet command as high a share of MV's economy as the health economy.

## 6 Conclusions and lessons learnt for Cohesion Policy

The case study on Mecklenburg-Vorpommern identified 11 conditions that can lead to a growing network within an innovative KE branch or sector – even in regions that are far off metropolitan areas. These are:

1. **Experience**            The region should have a history in the KE field being targeted, in order to be development into a cluster. Building up a cluster on a green field will not work successfully.
2. **Comprehension of the regional needs and challenges**    A regional cluster should be supported by the region and its actors. Therefore, it should fit into the regional economy and help local people by finding solutions to their problems.
3. **Innovation and patience**    An innovative region does not appear overnight. It takes years for the stakeholders to begin interacting, the structures to consolidate, the companies to expand, etc.
4. **Organisation**            Well-organised networks assures good handling of problems.
5. **Specialisation**            A cluster should focus on what is existing (e.g. a traditional sector) and expand its activities steadily; making sure to collect the knowledge and experience necessary to compete on the world market, and not dealing with too many sectors at a time—without enough capacity to handle all the different fields appropriately.
6. **Compatibility**            A cluster should be compatible with the regional economy. Interaction with companies outside the cluster will allow the whole region to profit from its existence.
7. **Political measures**            Political measures should be aimed at easing laws and restrictions to make it easier for the existing and probably new and additional actors to start or expand their activities.
8. **Establishment of funding models**            Beside the existing models of European, national or regional subsidies it can be helpful to set up local funds for start-ups and other creative and innovative actors.
9. **Provision of fitting infrastructures**            It is important to secure proper infrastructure that caters to the demands of the actors in the cluster.
10. **Creation of good working and living conditions**            Due to the global market of KE and the battle for the smartest employees it is necessary to offer good contracts, high social standards and a liveable environment.
11. **Marketing of the regional strengths**            In order to convince business partners, potential employees and new firms to invest and settle in a region, the positive aspects, potentials, strengths and possibilities of the location need to be shown. Good marketing on the national and international levels is therefore essential.



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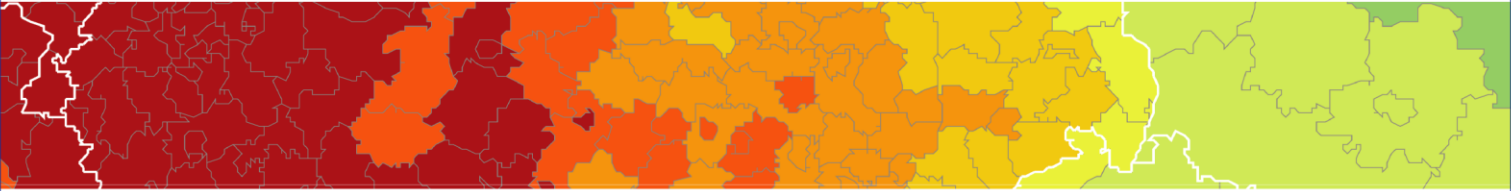
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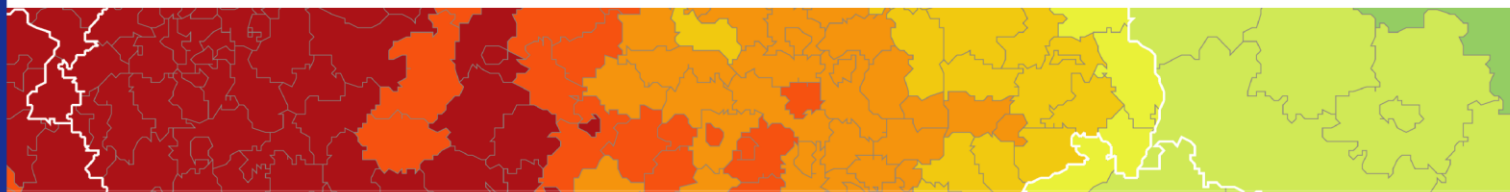
### List of people interviewed

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Robert Singleton, Projectmanager PR – BioCon Valley GmbH, 25<sup>th</sup> of January 2017

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