



REGIONAL ACTORS MAP

Dresden - Saxony

Emission Date:	15.04.2005	Responsible:	Martin Landgraf	Version:	1.0
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REGIONAL ACTORS MAP

1. Geography and Governance

The Federal Republic of Germany is located in the heart of Europe, linking the west with the east, the north with the south. The most densely-populated country in Europe, Germany has been flanked by nine neighboring states since the unification of the two German states in 1990.

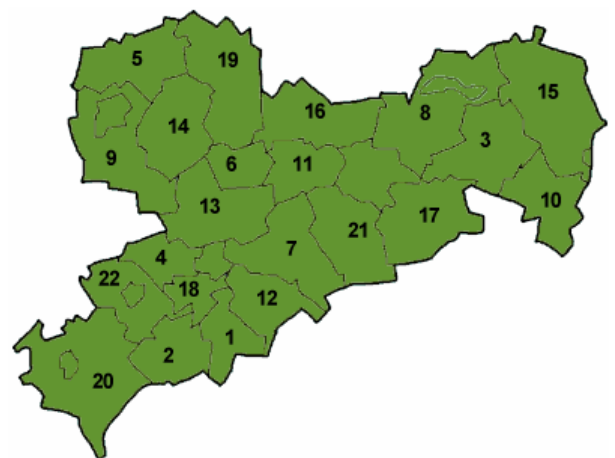
The Federal Republic of Germany is a democratic and socially responsible federal country. It is divided into 16 federal states (Länder), each responsible for the government of its own state, some of which look back over a long tradition. The nationwide constitutional order of the Basic Law is expressed in the country's constitutional bodies, in the country's federalism, in the legal order and in the electoral system. These determine not only everyday political routine, but also the lives of the people in Germany.

With an area of 18,400 sq. km. and a population of 4.6 million, the Free State of Saxony (German: Freistaat Sachsen) is the tenth-largest in area but sixth in population among Germany's sixteen federal states. Saxony is divided into 3 principal boroughs (Regierungsbezirke) - Chemnitz, Dresden, Leipzig - which are subdivided into 22 districts. Its capital is Dresden.

Position of Saxony within Germany



The 22 districts of Saxony



1. Annaberg (ANA)
2. Aue-Schwarzenberg (ASZ)
3. Bautzen (BZ)
4. Chemnitzer Land (GC)
5. Delitzsch (DZ)
6. Döbeln (DL)
7. Freiberg (FG)
8. Kamenz (KM)
9. Leipziger Land (L)
10. Löbau-Zittau (ZI)
11. Meißen (MEI)

12. Mittlerer Erzgebirgskreis (MEK)
13. Mittweida (MW)
14. Muldentalkreis (MTL)
15. Niederschlesischer Oberlausitzkreis (NOL)
16. Riesa-Großenhain (RG)
17. Sächsische Schweiz (PIR)
18. Stollberg (STL)
19. Torgau-Oschatz (TO)
20. Vogtlandkreis (V)
21. Weißeritzkreis (DW)
22. Zwickauer Land (Z)

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2. Characterising the Region

The change to a market economy which was brought about by German reunification in 1990 initially led to the widespread collapse of traditional economic structures. Companies failed en masse, and widespread unemployment resulted especially in the early 1990s. Business had to undergo a process of fundamental structural transformation. Of course, reunification also brought economic opportunity.



Saxony's coat of arms

Today, the success brought about by this restructuring process is hard to miss. Since 1991, Saxony has experienced real growth at an annual rate of 3.9 percent, with the state's contribution to gross domestic product reaching €75.8 billion in 2002. The per capita GDP of €17,358 places Saxony in the pole position among eastern German states, a position it holds across economic categories.

Saxony is the state with the highest investment rate in all of Germany. Saxony's self-employment rate of 9.5% is more than double the 1991 figure. The state also leads eastern Germany in exports, turnover growth, industrial production, patent applications and research and development activity, and has second-lowest per capita public debt among ALL German states.

Dresden is also an important centre of the sciences and is home to many researchers. The city is often called the "Silicon Valley of Germany" because numerous computer hardware and hi-tech development firms have opened offices and research facilities in the region. The Dresden University of Technology is one of the world's oldest technical universities.

The Structure of the Economic Sector:

a) Basic Economic Sector Structure

- Share of per capita GDP, by economic sector, 2003 (in constant 1995 amounts)

Economic Sector	Saxony	Germany
Agriculture, Forestry, Fishing	1.5	1.2
Industry (except Construction)	21.5	23.2
of that: Production	17.9	20.8
Construction	7.5	4.5
Commerce, Transportation, Catering	18.4	19.4
Finance, Rental and Business Services	26.1	31.2
Services	25.1	20.5
Totals	100.0	100.0

- Employment structure, 2003

- 28.8 % in industry (energy- and water supply, mining, production and construction)
- 68.7% employed in service sector

b) Mining and production (companies with 20 or more employees)

- Industry especially affected by restructuring process; decrease in employment from 1991 to 2003 of 62%
- Employment decrease in 2003 of -0.6% (2002: +0.3%, 2001: +2.6%, 2000: +2.5%, 1999: +1.1%)
- Production growing again since 1993: Turnover in 2003 was 159% higher than 1991
- Export rate 2003: 28.8% (2002: 31.1%, 2001: 28.1%)
- Main industries: automotive assembly, food processing, metals extraction and processing, machine building, and electronics
- Industrial wage conformation process: 2003, 73.5% of western German productivity attained, 2002: 71.1%; 2001: 70.3%; 2000: 67.3; large variation in productivity across sectors

c) Construction (companies with 20 or more employees)

- Main growth sector during the first five years of post-reunification reconstruction. In 1996, contribution to total value added to economy was, at 18%, three times higher than in the western German states. Since 1997 construction has slowed considerably.
- 2003: 1,271 companies (53% more than in 1991) and 58,603 employees (about 37% fewer than in 1991). Turnover in 2003 (about €6.4 billion) was about 60% higher than in 1991.
- Of insolvencies in 2003, about 30% were construction companies.

d) Tourism

- Within the service industry, tourism is especially important to the economy of Saxony. There were significant losses in 2002, with extreme effects from August's historic flooding.
- In 2003 there were 5.1 million arrivals and 14.2 million overnight stays in Saxony, an increase of 7% in arrivals and 5% in overnight stays compared to 2002.
- The occupation of hotel bed capacity was 36.5% (2002: 34.8%, 2001: 36.1%).
- There were 423,932 guests from foreign countries, reflecting an increase of 15% over 2002.

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3. Mapping the actors

3.1 Universities & R&D institutes in Saxony

The Free State of Saxony has four universities, five universities of applied sciences, and five colleges of fine arts. The International University Institute in Zittau, the smallest university institution in the country, is unique in Germany. What is more, 24 institutions within the universities and universities of applied sciences are also being supported. At the end of 2001, a total of 9,440 in-house positions (not including medicine) were at the disposal of the universities and research institutions. 2,030 employees work in both medical faculties in Leipzig and Dresden. 835 million Euro were used from the state funds to finance the universities in the year 2001. A further 130 million came from the Federal Government and the European Union.

3.1.1 Universities

TU Dresden (www.tu-dresden.de)

The restructured TU Dresden is among the strongest research universities in Germany. Each individual student benefits from the highly practical nature of the teaching. The university puts great emphasis on the creation of international and interdisciplinary degrees. The TU Dresden is a participant of the European Credit Transfer System (ECTS), which acknowledges students' academic achievements at foreign universities.

Universität Leipzig (www.uni-leipzig.de)

The Universität Leipzig is, together with the TU Dresden, one of the two big universities in the Free State of Saxony. Founded in 1409, it is the second oldest among those universities in Germany that have provided education for students without interruption over the centuries. Committed to the model of the universitas litterarum from the very beginning, the university has - to a greater degree than most that were founded later - brought together a broad range of subjects under its roof.

TU Chemnitz (www.tu-chemnitz.de)

TU Chemnitz has interdisciplinary links. As far as research goes, this fact is underlined by the four special research projects of the Deutsche Forschungsgesellschaft (German Research Foundation), in which the following issues are examined: process chains in bulk metal forming with respect to productivity and environmental compatibility, numerical simulation on massive parallel computers, arrays of micro mechanical sensors and actuators, and non-hierarchical regional production networks.

TU Bergakademie Freiberg (www.tu-freiberg.de)

Studying in Freiberg is, and always has been, something special for more than 235 years. In a unique manner, teaching and research in Freiberg cover the entire path from prospecting and mining of raw materials to the use of materials and to recycling, environmentally friendly disposal, and energy research, via the transformation of material through process engineering. Today, with 4,000 students including 500 young people from over 60 countries of the world, Freiberg has the advantages of a small university: short distances, personal contact with teaching staff, no waiting for placements, no overcrowded lecture halls.

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Internationales Hochschulinstitut Zittau (www.ihz-zittau.de)

The IHI Zittau is attended by students from ten countries, predominantly from the Czech Republic, Poland and Germany. In a challenging advanced level programme students are introduced to current international tasks and are involved in finding international and interdisciplinary solutions at an early stage.

Places of Higher education institutions in Saxony



3.1.2 Research Institutions

Hermann von Helmholtz Community German Research Center

By reason of the inheritance of the Industrial Age, Saxony has to bear the heavy burden of the anthropogenic destruction of nature, as for example, through mining. Large areas were devastated by overburdened slag heaps and open cast mining. Precipitation washed minerals or radioactive particles out of the earlier uranium mines into the rivers. On top of that are innumerable industrial plants from the German Democratic Republic, which were shut down after 1990. They have to eliminate the discontinued chemical dumps, which is a very time consuming and expensive task. To master this challenge, the Federal Government has decided to establish a major research center for environmental research in Saxony.

The Environmental Research Center Leipzig-Halle (UFZ) has contributed to the solution of the pressing problems in environmental and health research. The results that have arisen from the research of regional environmental damage have national significance. The research spectrum of the UFZ has been widened by the integration of the former Institute for Water Research in Magdeburg. At present, the close research contacts that the UFZ has to the University of Leipzig as well as to many other universities, research institutions, and private companies demonstrate that it is a highly sought-after partner. Ninety percent of the support for the UFZ comes from the Federal Government. Currently, the Free State of Saxony and the State of Saxony-Anhalt each contribute five percent of the budget. What is more, the environmental researchers accrued about 5.6 million Euro through research jobs in the year 2001.

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Seven Leibniz Institutes combine basic research with application-related development

The seven Institutes of the Scientific Society "Gottfried Wilhelm Leibniz", formerly the Blue List, are of outstanding importance for Saxony because of their size, structure and orientation of content. They decisively shape the research landscape in the area of Dresden as well as Leipzig through their potential in materials and environmental research. Through the combination of basic research and applied research, they are equally as important as partners of the universities as well as innovative private companies. The Research Center Rossendorf e.V. is, moreover, the largest Leibniz-Institute in the entire Federal Republic of Germany. In Dresden, the Leibniz Scientific Society erected a "Leibniz Center for Biomaterials", that attends to the research of proteins and biologically tolerable materials for all ranges of application. Different institutes of the Technical University and the Institute for Polymer Research (IPF) form the core of this new center of competence. Currently, the Federal Government and the Free State of Saxony provide for half of the support of the seven Leibniz-Institutes. In the year 2001, they spent about 26.2 million Euro on research for third parties.

Ten Fraunhofer Institutions research the economy

Ten Saxon research institutions belong to the Fraunhofer Society for Applied Research. They form the most fruitful element of the scientific-technological infrastructure in Saxony. The Fraunhofer Institutes influence the economical milieu and are the center of technological transfer. For both small and middle corporative enterprises as well as for the establishment of large enterprises for high technology, they are a decisive component. This becomes clear in the connection between the chip manufacturer Infineon and AMD in Dresden. The microelectronically oriented Fraunhofer Institute of the Elbe Valley represents for them an indispensable milieu. Short paths pay off: in 1995 four Fraunhofer Institutes were concentrated into a Fraunhofer Center. A new form of cooperation among the universities, Fraunhofer Society and the economy was established with the foundation of a Fraunhofer Application Center for Processing Machines and Packing Technology at the Technical University of Dresden in July 1995. Altogether the institutions of the Fraunhofer Society attracted about 53.8 million Euro through research projects.

Six institutes of the Max Planck Society

Next to the universities, the Institutes of the Max Planck Society, first and foremost, form a strong framework for long-term fundamental research. From 1992 to 1997, three Max Planck study groups existed at Saxon universities with a branch institute in Freiberg. In recent years, attention has been given to the establishment of new Max Planck Institutes (MPI). The Max Planck Institute for Physics of Complex Systems was created in 1993. A Max Planck Institute for Neuropsychological Research, which works closely together with a neuropsychological day clinic of the medical faculty of the University of Leipzig, followed in 1994. In 1995 the Senate of the Max Planck Society decided to set up a new Max Planck Institute for Mathematics in the Natural Sciences in Leipzig and the Max Planck Institute for Chemical Physics of Solid-State Matter. Furthermore, the Max Planck Institute for Molecular Cell Biology and Genetics was established in Dresden in the year 1997. After the completion of a new building in the year 2001, its work began in the immediate vicinity of the Medical Faculty of the Technical University "Carl Gustav Carus". The research potential of the Max

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Planck Society in Saxony has been extended with the foundation of the Max Planck Institute for Evolutionary Anthropology in Leipzig in the year 1997. In the year 2001, the Saxon institutes attracted third-party-funds of about three million Euro.

3.1.3 Technological Centres

The economic infrastructure of Saxony includes 33 External Industrial Research facilities which act as important links between the fields of basic research and industrial application. With the support of the Saxony State Ministry for Economic Affairs and Labor these facilities have developed into competence centers, R&D service suppliers and innovative companies, overlapping different sectors of industry.

3.2 Market Actors – Productive System

3.2.1 Big Companies

Following a few examples:

AMD Saxony LLC & Co. KG

AMD provides microprocessors, Flash memory devices, and silicon-based solutions for customers in the communications and computer industries worldwide.

Infineon Technologies GmbH & Co. OHG

Infineon Technologies AG offers semiconductor and system solutions for the automotive industry and industrial electronics, for applications in the wired communications markets, secure mobile solutions as well as memory products.

BIOP Biopolymer GmbH

Biop Biopolymer Technologies AG succeeded to make a plastic product, on which it is hard to see that it was not a conventional plastic made from common polyolefin's.

3.2.2 SMEs

BioMeT Dresden (www.biomet.de)

The network BioMeT Dresden was founded 2000. This platform of co-operation between the Dresden University of Technology, non-university research facilities, and companies provides a basis for biotechnology and life sciences in Dresden. It will build an interdisciplinary profile by combining biosciences, engineering, technology, and medicine. The three main tasks are: founding new companies, modernizing existing companies and attract (inter)national companies to relocate at the Dresden location. It has now more than 250 members.

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Materials Research Network Dresden (www.mfd-dresden.de)

In the capital of Saxony expertise and top-ranking technology are coming together: Nearly all kinds of materials - metals, polymers, ceramics, and finally composites and laminates - are examined, modified, combined and developed further. To enhance this potential major institutes of Dresden involved in materials science and technology have formed a network to promote their internal and external relations. Founded in 1993, now the MFD is a registered non-profit association of 10 institutes from Dresden University, and 10 extra-university and industrial research institutions. The aims of MFD are promotion of collaborative and interdisciplinary research, development of the scientific infrastructure, joint efforts in technology transfer and PR.

Silicon Saxony e.V. (www.silicon-saxony.net)

Silicon Saxony e.V. is Germany's largest trade association for the microelectronic industry. It was founded in 2000 as a network for the semi-conductor, electronic and micro system industry. The association connects manufacturers, suppliers, service providers, colleges, research institutes and public institutions in the economic location of Saxony. The current number of members has risen to 176. The vision is to develop in the Saxon region a leading and globally successful microelectronics location to the advantage of its members.

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