Germany

Introduction

According to the analysis in St Aubyn et al. (2009), Germany is located below the efficiency frontier, on middle ground. This is mainly due to a small number of graduations compared to the average. The results of the Stochastic Frontier Analysis also suggest that Germany is below the efficiency frontier, with rather stable scores during the period 1998 to 2005. According to St Aubyn (2009), Germany's tertiary education system is more efficient in research than teaching. The German tertiary education system produces above average publications per academic staff and the number of graduates per academic staff is low.

There is a large number of higher education institutions in Germany (391 for 1.9 million students). The higher education system consists overwhelmingly of State institutions for which the *Länder* are responsible. The German university system is characterised by the unity of teaching and research.

Table - Summary of indicators in St Aubyn et al. (2009)

	Average ISI citation		Recruiter review		Peer review	
	Score	Rank	Score	Rank	Score	Rank
DE	4,86	8	1,20	9	1,38	9
best performer	NL - 5,51	1	IE - 2	1	FI - 2	1
worst performer	RO - 1,63	26	CZ -1.06	16	GR - 1.02	16

	Funding rules		Staff policy		Evaluation	
	Score	Rank	Score	Rank	Score	Rank
DE	5.20	9	7,5	11	6,9	4
best performer	PT - 7,8	1	CZ, DK, NL, AT, SK, SE,	1	HU - 8,3	1
worst performer	SK - 2,9	18	FR - 1,8	18	GR - 2,3	18

	Academic staff	Students	Graduates *per capita*	Publications	Students *per academic staff*	Graduates *per academic staff*	Graduates *per student*
DE	2,0	25,2	4,1	0,6	12,9	2,1	16,3
EU27	1,9	33,7	7,1	0,6	17,8	3,7	19,8

	PISA	
	Score 2000*	Rank
DE	487	12
best performer	FI - 540	1
worst performer	RO - 410	18

Indicators

The ratio of students per academic staff is small (12.9 relative to the average of 18.6). It is important to note, however, that a significant share of the academic staff carries out research financed by third-party and has no teaching obligations.[1] The number of graduates is below average (both per student and per capita).

Germany has a "dual system" in place whereby vocational training, which is not taught at universities, is very attractive to students. This generally tends to reduce the number of students in tertiary education.

Tertiary attainment rates of younger age cohorts (aged 25 to 39) in Germany are similar to those of older cohorts (aged 40 to 64), in contrast to other Member States where younger age cohorts typically have larger attainment rates.

Students in Germany tend to be older than in other Member States, they start relatively later and they require an average of one or two years longer than the standard duration of courses

[1] About 20 to 30% of the academic staff (source: Peer review of Germany's tertiary education system, April 2010).

as set out in examination regulations. Germany, as many other Member States, has recently introduced the Bachelor-Master scheme, implementing the Bologna Declaration and the actual time taken to complete courses can be expected to fall in the future. Before the reform, graduation in Germany typically took about 5 years. However the "*Diplom*" is equivalent to a master's degree and requires even a wider base of knowledge compared to the MA.[2] The clearing and allocation of study places is decentralised.

The average PISA 2000 scores are slightly below average. Improvements in subsequent PISA 2003 and 2006 surveys were recorded in Germany. The quality of teaching as measured by St Aubyn (2009) is slightly below average and the German country fiche also suggests certain weaknesses in teaching.

There appears to be a rationing of demand for study places and application and attribution of study places seems to lead to uncertainty for potential students and waiting time for possible admission (for a number of semesters).

The number of publications per capita is above average, mainly due to a relatively large academic staff, while the productivity of academic staff is slightly above average, as measured by the number of articles per academic staff. The quality of research is high, as measured by the citation index. The large number of doctoral students in Germany also illustrates one of the strengths of the system (around 20,000 complete their doctorate every year).

As regards the efficiency indicators (which cover institutional arrangements in place during the period 1998 to 2005), the scores of the funding rules and staff policy indicators are below average and the score of the evaluation indicator is high.

Since the reform of the federal system in 2006, the main provisions on higher education teaching staff's salaries and pensions are found in the Länder Acts on civil servants' remuneration and benefits. Professors receive a basic salary and are also paid on a performance-related basis. Higher education institutions have the autonomy to decide on course structure and to choose methods of teaching course content.

As regards evaluation, the court of audit of the Länder carries out an economic efficiency check, which seems a relatively thorough evaluation compared to the typical evaluation by peers of most accreditation institutions. Moreover, the Länder pay attention to the results of evaluation in the calculation of budgets.

Germany has well developed system to support the mobility of German and foreign students. In 2006, a total of 83,000 German students spent time abroad (against 34,000 in 1991). Around 80% of them went to other countries in the European Higher Education Area. There is a policy target for 50% of Germany's students to go abroad in connection with their studies and 20% of them to spend at least one semester at a foreign higher education institution at some point during their degree courses. Around 10.6% of students in Germany in 2007 were international students - 3.5% from EU countries and 7.1% from non-EU countries (UOE statistics).

Policy developments

Since the early 1990s, the Länder and the Federal State are in a process of deregulation, increasing institutions' autonomy and creating incentives for achievement. Education institutions increasingly take responsibility for organisational and staff decisions. The reform process involves the introduction of new mechanisms into traditional institutional

[2] This is particularly evident in the case of the Diplom-Ingenieur.

arrangements (such as a traditional civil servant status of staff with introduction of a variable component in the salary or increased use of performance criteria in allocation of funding).

Migration policy requirements were amended for foreign students in order to facilitate their mobility within the EU, their admission to Germany as well as their stay after completion of studies in order to seek employment.

The key elements in the reform agenda are as follows:

- a qualification initiative (to devote 10% of GDP in 2015 to education and research, with a high commitment by the Federal government for education),
- increased permeability between vocational and tertiary education, for a wider access to tertiary education, and
- successful higher education starts in "kindergarden".

The main reform measures are:

- the excellence initiative (2005) to promote science and research at Universities on a competitive basis,
- the Higher Education Pact (2007) to enable institutions to admit additional students (91,000 by 2010 and 275,000 by 2015, compared to 2005),
- wider access to and increase of student support (grants and loans) since 1971 and
- a national scholarship programme (2010).