Role of the universities in contemporary higher education – the German experience

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Abstract. The article analyses the issues related to the changes taking place in the sphere of University education in Germany. This is an issue of a high importance with the dominant role for the state and a relatively poorly developed institutional management of classical universities. The situation began to change in recent years through increasing funding and improving government. The collaboration between higher education and science is strengthening. This is facilitated by number of governmental support programs, such as "Excellence initiative", which promotes the formation of elite group of German universities. Many high schools with dual education programs (Fachhochschule) now are referred to as Universities of Applied Sciences. The classical understanding of the University is eroded; competition between institutions within the country is increasing targeting to increase the international competitiveness of the German University system. New challenges, including the Bologna reform, compounded management problems, for both universities administration and students. The continuing reform process and increasing the number of places for students is of high necessity. Generally, the prestige of German universities and some research institutions is increasing and attracting more foreign students and scientists from all around the world.

1 Introduction

Over the past 15 years, Germany has made a significant leap and is now placed among the world leaders in the quality of University education and research landscape. Today in Germany there are both public and officially recognized private universities. All universities are the members of the Rectors of the higher schools Conference (Hochschulrektorenkonferenz). According to the Federal statistics, in the winter semester of the 2015/2016 academic year in Germany functioned 427 higher education institutions, among them 107 traditional ("classic") universities, 6 pedagogical, 16 theological, 216 universities of applied Sciences.

The higher education system of Germany, primarily universities, is defined by the following factors:

- social justice, accessibility, lack of tuition fees;
- high quality social, technical and natural sciences;
- harmonious combination of old university traditions and innovative methods of management;
- fundamental and theoretical approach to education and research activities;
- connection between academic and professional education with the adaptation to the labor market.

The effectiveness of German higher education system is determined not only by the Federal government, but also by the land authorities responsible for solving of major educational problems. 90% of the

funding of universities is provided by state funds; of which 80% are allocated by Federal lands (Bundeslaender). The Federation is mainly involved in the financing of selected development projects within the framework of special programs ("Excellence Initiative", "The Covenant of the higher schools 2020", "Pact for research and innovation", "Quality Pact teaching", "Support Program for young women professors"). They account for about 10% of all funds; the same amount of financial support the universities receive from private sources (contract research, the patrons and sponsors) [1].

One of the decisive factors for varying degrees of financial responsibility is the interest of the Federation or land in a particular project. In addition to the Federal and land ministries, organizations play an important role. Their rights and obligations are spelled out in the basic law, as, for example, the Joint science conference (Gemeinsame Wissenschaftskonferenz) and Scientific Council (Wissenschaftsrat). The volume of Federal budget for universities has been increased significantly over the last decade. The Federation shall finance one-half of the expenditure per student in old and new lands. While there is a shortage of University places in Western Germany. At the same time, the East of the country is struggling with youth outflow to the West. Many East German universities today are much more comfortable to study at: students have more time for individual

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interaction with the professors and less congestion in classrooms and libraries.

A future of German universities is the dominant issue of the state and a relatively poorly developed institutional management of classical higher education. In comparison with foreign universities, the level of its autonomy is quite low. With a good quality of education, Germany doesn't have own "Oxford" or "Cambridge". The obstacles for this are low level of self-government and underfunding. The lag is also caused by the fact that the state is obliged to provide the primary place for everyone who wishes to enter the University if the certificate with graduation exams obtained (now only in Baccalaureate). Screening is possible only in cases where the number of applications exceeds the number of places for students. There are also no universities that have a disproportionate number of elite professionals supplied in the economy, politics and science in Germany. It should be noted that the leading scientific organizations of Germany – the Max Planck Society, the Leibniz Society, Fraunhofer – are in constant interaction with universities (through cooperation with scientific and pedagogical staff in teaching and course development, joint participation in the work of the Ph-D colleges, etc.).

2 Analysis and discussion

German universities have undergone in recent years significant changes. The formerly dominant academic approach of universities as independent centers of research and education is in the past. Today they were competing scientific and educational organization that uses a professional approach in planning and management. Actual economic and political conditions present universities increasingly strict criteria that determine their competitiveness. However, the indicators used do not always reflect the complexity of the research and teaching process. Based on predominantly quantitative indicators are formulated incentives that do not meet the academic objectives of the universities.

Since 2005 in the framework of the "Excellence Initiative" (under the auspices of the Federal Ministry of education and science and the German Research Society (Deutsche Forschungsgesellschaft), many universities began to form "clusters best" and Ph-D colleges. The initiative aims to encourage the development of "elitist" universities in certain areas of science. In the period 2006-2007 in the framework of the "Excellence Initiative" 9 German universities received funding for 5 years. The universities in Karlsruhe, Freiburg and Göttingen title lost the position in 2012. The universities in Bremen, Cologne, Tübingen, Dresden (Technical University) and Berlin (Humboldt University) replaced them. Since 2017, they will receive additional funding. The further development of the "Excellence Initiative" must first and foremost be designed to further improve top-level research at universities and thus enhance the capabilities of the research system as a whole.

Just since 2012 in the number of "elitist" universities of Germany consists of 11 universities. In the period from 2012 to 2017 the government in the framework of

this initiative, has allocated 2.7 billion euros for increasing the competitiveness of German universities in the international scientific and educational environment [2]. In the past, the autonomy of universities was limited to the academic sphere, for example, the schedule of classes and examinations, the co-optation of members of faculty. Administration and financial management were mainly the tasks of the state. The result was that University institution in the 80-90 was regulated. Cautious reforms only marginally improved the situation. The bureaucracy of the state and a lack of willingness to change by the management of universities have led to a lack of interest in the development of self-directed learning process and a focus on results, maintaining long periods of training and numerous dropout students [3].

In 1998, the update of the Framework act for higher education. From the scope of its regulation were excluded organization and management of higher education. This gave more freedom to universities in shaping their own profile and self-management. Regulation occurred in such important areas as legal form, interaction with government, fiscal management, personnel policy, management structure and competence in the field of decision-making, increase flexibility of enrollment in higher education, educational process and teaching, the development of quality, certification and research.

The University administration tasks were significantly complicated. It had to create optimal conditions for research and training, suit their internationalization, pay increased attention to the needs of family workers, create conditions for the transfer of knowledge in the economy and control the patents. The demand for specially crafted patterns and effective managers who have the support among the scientific community dramatically increased. The universities felt the need for even greater autonomy to perform their tasks.

In 2011, the universities encouraged the land authorities to conduct the legal control of compliance with the framework conditions of their autonomy, to provide funds from the land budget in the form of a global budget for subsequent redistribution and accumulation of resources. Demands were made to consolidate the institutions of the law of hiring and appointing staff to new positions of responsibility for teaching and research, and quality control. The agreements reached should be supported by multi-year target agreements and university contracts. The universities must have sufficient funding to perform its tasks [4].

In the autumn 2013 there was highlighted the importance of developing the autonomy of universities on the example of the Federal state of North Rhine-Westphalia. It was particularly noted that the universities perform a Central function inside the German scientific educational system as links between independent research funded by a third party, on the one hand, and the learning process, on the other hand.

Universities focused powerful scientific potential, which relies on public support for science and integrated

in the German research system. In many ways they guarantee the success of the functioning of the entire science and research system of Germany. Their range of research covers basic science, applied research and development. The universities are independent in the sense of scientific institutes, which are located in their premises and connected with them through organizational and staffing issues, but are not integrated in the structure of universities. The objectives of the research include development of application-oriented needs of the market, research and applied projects. Multilateral cooperation is developing within the University, between universities and affiliated research institutes, and independent research institutions in the framework of various projects.

Science in Germany is mainly conducted in universities of both types – classical and applied Sciences. The difference is that in classical universities, basic science represents one of the independent directions. The scope of universities' activities is wide: from teaching and research to knowledge transfer and further to production. That is why they play a key role in the scientific system. First of all, in applied research the universities of dual education are engaged. These distinctions are not always observed clearly.

Today, many universities of dual education (Fachhochschule) are renamed to University of Applied Sciences. This is because of the fact that increasing number of the higher education institutions are collectively called "University" (Hochschule). Many applicants choose to study at University of Applied Sciences, because they are more focused on practice. Here offers over 4,000 items on various subjects. Not only engineering Sciences but also the objects in the area of economics, social and natural Sciences are studied. However, the teaching of the Humanities at the traditional classical universities is not included in the training program. The statutes also provide defense of a thesis, for which the students should enroll at the classic University [1].

The higher education system in Germany has been changing significantly in recent years. The classical understanding of the University, which presents all fundamental science, has become increasingly blurred in the process of adapting to the needs of the labor market and the need to train narrow specialists in the industry. There is a danger of erasing the boundaries between the classical University and University of Applied Sciences, including those engaged in research and development. Their number is constantly growing. In Germany, there is a difficult debate about the advisability of remaking the classic system. The classic universities and University of Applied Sciences are not in a hierarchical relation, but it is different in essence and purpose. Discussion is the process of evaluating the efficiency of scientific activities of universities. This situation has been exacerbated on the background of the discussion of the possibilities of doctoral Degree at the University of Applied Sciences. The teaching staff is responsibility for this process, also at the faculties where it is possible to defend the thesis.

According to the "Covenant high schools 2020" in terms of the lack of qualified personnel of the government of the Federation, and Bundeslaender make efforts to expand the number of University places. At the same time the demographic situation (decrease in fertility) suggests reduction in seats, but the reform of the Ministry of Defense and the abolition of obligatory service in the army created an additional burden on the education budget (about 50 thousand persons). Germany seeks to realize the goal of "Pan-European strategy for the modernization of higher education" to bring by 2020 the share of young people (30-34) with tertiary education to 40% of the total population of the country.

Concerning the Bologna reform, it should be mentioned that the universities were forced to restructure the curriculum, to restructure the organizational and management structure [5]. According to the results of its 15 years, implementation there is still enough criticism of respective transformations. Mostly it is associated with the content of new educational standards, immaturity of many programs in terms of reducing the time of training, and the lack of places in graduate programs, disabilities, and mobility in the framework of the six-month training at the bachelor and difficulties with the recognition of new qualifications in the labor market. High bureaucratization of the process of accreditation in higher education is also criticized. Still there are significant differences in access to education for different population groups. The period between the studies in bachelor and master phase remains professional and financial instability for students.

3 Conclusion

Key conclusions include:

- in the past decade, Germany has significantly improved its University system;
- the prestige of the German universities and some research institutions is growing and attracting more scientists from around the world and foreign students.
- universities manage the important task of using existing and new resources to achieve a high level of research in advanced fields of knowledge and training of a new generation of highly qualified human resources;
- the universities' autonomy and independence has also significantly increased;
- at the Federal level there is also the recognition that human capital investment, equality of chances in education for all segments of the population and reducing barriers in the labor market for workers from third countries is the guarantee of preserving the competitiveness of the German market economy;
- there is a need to continue following reforms:
 - refining the strategy of long-term universities funding;
 - consolidating institutionally the basis of the cooperation and the division of competences between different levels of government;
 - creating in parallel an opportunity for funding and organizational support of the University system without changing the legislation;

• well established joint initiative of the Federation and the landers – such as "Covenant of the higher schools 2020", "Pact for research and innovation", ""Excellence Initiative" to be also continued.

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