

Chapter 2

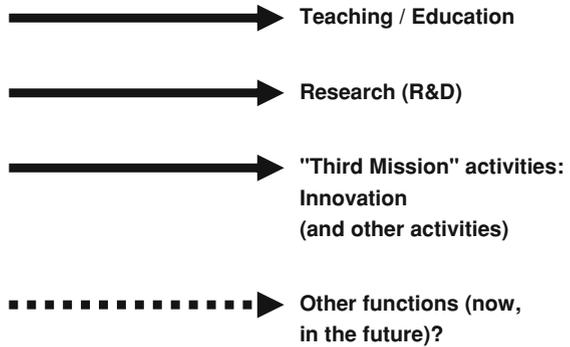
Conceptual Definition of Two Key Terms: Governance and Higher Education

2.1 Governance

In etymological terms, the origin of the word “governance” comes from the ancient Greek verb *kybernein* (κυβερνεῖν, infinitive) or *kybernao* (κυβερνάω, first person) that meant *steering*, guiding, or maneuvering a ship or a land-based vehicle, and was used the first time metaphorically by Plato for depicting the governing of men or people (people would be here the modern application). This etymological component of “steering” also is being reflected in the prefix of “cyber” (for example, in words such as “cybernetics”). In the modern English language, “governance” is related to “government” and to “govern” (European Commission 2001a, b).¹ Cybernetics deals with feedback and regulatory systems (Wiener 1948; Umpleby 1990). If this close link between government and governance be continued conceptually, then a definition of governance may be: *governance describes how a government governs*. One may also say, alternatively: *governance addresses how government governs based on feedback*. “Cybernetic governance” may be paraphrased as a *Governance of Governance*. There is some conceptual overlap between governance, steering, and also control (see Fig. 2.1 for an illustration). In context of society or the analysis of society, it can be proposed that governance is more comprehensive than steering, and steering is more comprehensive than control. Governance can apply, use, or pursue goals of a steering, but may not be restricted to steering. Steering may have an interest in control. However, it could be questioned whether a “control” of society or advanced society (and an advanced economy) is possible or even desirable. With the spreading of market economies and the collapse of Eastern European Soviet-style regimes, skepticism about the control capabilities increased. Control may be

¹ Compare also with the Wikipedia entries in English and German (retrieved January 1, 2011):
<http://en.wikipedia.org/wiki/Governance>
<http://de.wikipedia.org/wiki/Governance>

Fig. 2.2 Functional profile of HE (universities, HEIs)



Source: Authors' own conceptualization.

comprehensive term, referring to universities and non-universities. What is the functional profile, what are the goals (objectives) of universities and the other HEIs of the HE sector (see Fig. 2.2)? Traditionally, HE addresses teaching (education) and research. The concept of the Humboldtian “unity of research and teaching” (*Humboldtsches Bildungsideal, Einheit von Forschung und Lehre*)³ underscores the mutual cross-references between research and teaching that are so essential for many universities. Universities engage in teaching and in research. Concerning research (R&D), the HE sector (here again the universities) focuses first of all on basic research (see, for example, on the U.S HE sector the National Science Board 2010, p 15 [Chap. 4]). In recent years there have been discussions, to which extent these two core functions (core dimensions) of teaching (education) and research still describe sufficiently the HE sector, or whether it would be additionally necessary also to think of so-called “third-mission” activities. “Can academia encompass a third mission of economic development in addition to research and teaching? ... A ‘second academic revolution’ seems under way since World War II, but more visibly since the end of the Cold War” (Etzkowitz and Leydesdorff 2000, p 110). Here, it is being considered that universities and the HE sector should create a knowledge that contributes to the development of society (and democracy) and that is also economically feasible. In this understanding, the universities and HE sector are crucial for the advancement of knowledge-based societies, economies, and democracies, with the more recent preference to speak directly of knowledge societies, knowledge economies, and knowledge democracies (Carayannis and Campbell 2011, 2012, p 55). Lundvall (1992, p 1) stresses that

³ Pasternack (2008, p 20) asserts that Wilhelm von Humboldt himself did not use the phrase of a “unity of research and teaching” in a literal sense, but that this wording was created later in the process of interpreting the work and scholarship of Humboldt. According to Pasternack, Humboldt emphasized two aspects in reference to the understanding of that phrase: first, to define the sciences as an ongoing research process; second, to distinguish between teaching (and education) at schools and at universities.

...it is assumed that the most fundamental resource in the modern economy is knowledge and, accordingly, that the most important process is learning. The fact that knowledge differs in crucial respects from other resources in the economy makes standard economics less relevant.

The processes of linking knowledge creation and knowledge production of the HE sector to knowledge application, knowledge use and knowledge diffusion are also being reflected in the concept of innovation (Carayannis and Campbell 2010, p 45). Innovation, therefore, represents an important example for those new third-mission activities of universities and other HEIs. The concept of the “Entrepreneurial University” (Etzkowitz 2003) addresses such issues. Etzkowitz and Leydesdorff (2000, p 111) define the Triple Helix model of knowledge and innovation on the basis of “University–Industry–Government Relations”, the Quadruple Helix adds here the perspectives of a “media-based and culture-based public” and of “civil society” (Carayannis and Campbell 2009, p 207, 2011, 2012, pp 13–14), and the Quintuple Helix contextualizes the Quadruple Helix in context of the “natural environments” of society (Carayannis and Campbell 2010, p 62). Other examples for third-mission activities of HEIs would be the “civic mission” of “civic education”.⁴ We can only speculate, whether during the further course of the twenty-first century an additional fourth function (dimension) might arise for HE systems, which does not exist on our conceptual maps so far. In intellectual terms, it appears always necessary to think about the “future of the university” (Mittelstrass 2010).

The two periodical key publications and key data bases (sets of indicators) of the OECD, which refer to HE, are: “Education at a Glance” (e.g., OECD 2010, 2011b)⁵ and the “OECD Science, Technology and R&D Statistics” (OECD 2011a, 2012). The later combines and integrates the data bases “Research and Development Statistics” and “Main Science and Technology Indicators”.⁶ While addressing HE, these data bases, however, are also broader than only HE. “Education at a Glance” covers the whole education spectrum, but includes also the tertiary education that is being delivered by the HE sector. The same is true for the “OECD Science, Technology and R&D Statistics” that refer to the whole research and experimental development (R&D) spectrum, including the R&D of the HE sector. This implies that the OECD approaches here HE from two different functional sides, from education (teaching and education) and research (R&D), but, so far and for the moment, there exists no OECD data base (periodical publication) of equivalent format that focuses on HE comprehensively in the sense of addressing the whole functional profile and spectrum of HE (see again Fig. 2.2). Of course, the higher-education-oriented data of “Education at a Glance” and the

⁴ See here also the research work of Professor Jasminka Ledić and of her Croatia research team.

⁵ See on the OECD website: http://www.oecd.org/document/2/0,3746,en_2649_39263238_48634114_1_1_1_1,00.html.

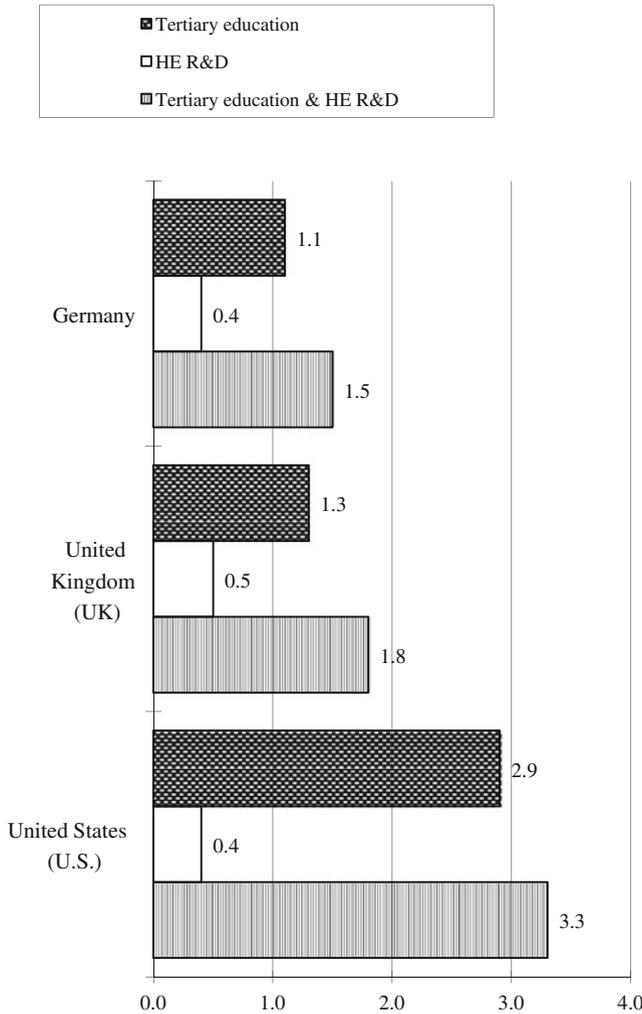
⁶ See also on the OECD website: http://www.oecdbookshop.org/oecd/adv_search.asp?CID=&LANG=EN.

higher-education-oriented data of the “OECD Science, Technology and R&D Statistics” can be aggregated together jointly, and there is good reason to believe that this will produce a good and comparable assessment of the performance of the HE sector. However, we then still face potential problems in detail: first, what is with the coverage of functions of HE other than education (teaching and education) and research (R&D); second, how sure can we be that there may not be some boundary problems between these two OECD data bases, complicating the simple adding-together of data? Such issues certainly challenge comparative analyses that are interested in carrying out in-depth analysis of the academic profession (academic faculty) and their careers in the HE sector.

Figure 2.3 displays for Germany, the UK (United Kingdom) and the US (United States) the empirical results when expenditure on tertiary education and on HE R&D is being added together for the year 2006, based on OECD data (OECD 2009, 2011a), and expressed as a percentage of the gross domestic product (GDP). We see that tertiary expenditure for education is clearly higher than tertiary expenditure for research (the ratio in favor of education is in the UK 2.6, in Germany 2.8, and in the US even 7.3). In Fig. 2.4, the tertiary expenditure for education and research is being differentiated according to public and private funding resources (again Germany, the UK and the US in comparison, for 2006, based on OECD 2009, 2011a).⁷ A first assessment of the empirical results leads to the following observations and propositions for the presented three-country sample: (1) In all three countries the public financing clearly dominates the HE research. (2) In Germany and the UK public financing dominates tertiary research as well as tertiary education. For those countries it appears plausible, at least to a certain degree, to see HE as a sector that still could be interpreted as belonging to the “public sphere” of society. If so, then the application of a public management perspective for the analysis or governance of HE makes particularly sense.⁸ We can speculate whether the examples of Germany and the UK allow us to conclude or postulate here a general picture or a general evidence for HE in Western Europe. (3) In the US, the public financing dominates the research that is being carried out in the HE sector. However, tertiary education, on the contrary, is clearly dominated by private financing. In fact, the private financing for tertiary education alone (even without the private financing of HE research) already outpaces the combined public financing for tertiary education and tertiary research.

⁷ As a systematic estimator for public financing of R&D in HE we only refer to “government” (the category government combines “direct government” and the “general university funds, (GUF)”). This probably underestimates the public funding share, because in the funding category of “funds from abroad” there are also public components: for example, other national governments, the European Commission and international organizations (see OECD 2011a, 2012). Only in the case of the UK, we corrected our calculations for this bias of an underestimation of the public in the funding resources from abroad (see again the Figs. 2.4 and 2.6).

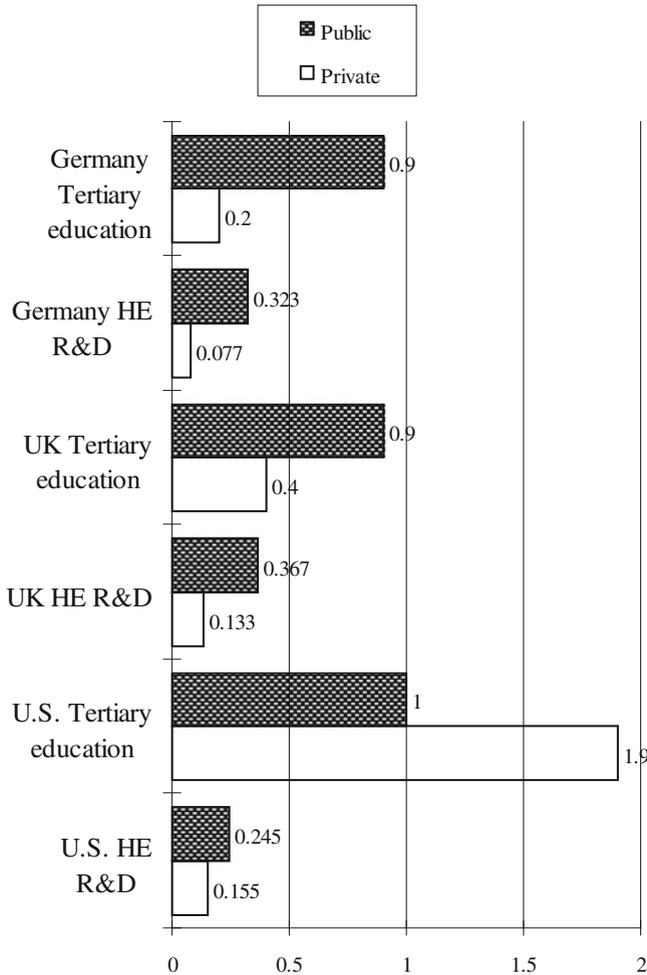
⁸ See later in Sect. 3.2.3 our discussion on the “public management perspective” in context of the “new public management narrative” (Ferlie et al. 2009).



Source: Authors' own calculations based on OECD (2009 and 2011a).

Fig. 2.3 Expenditure on tertiary education and HE R&D as a percentage of GDP (2006)

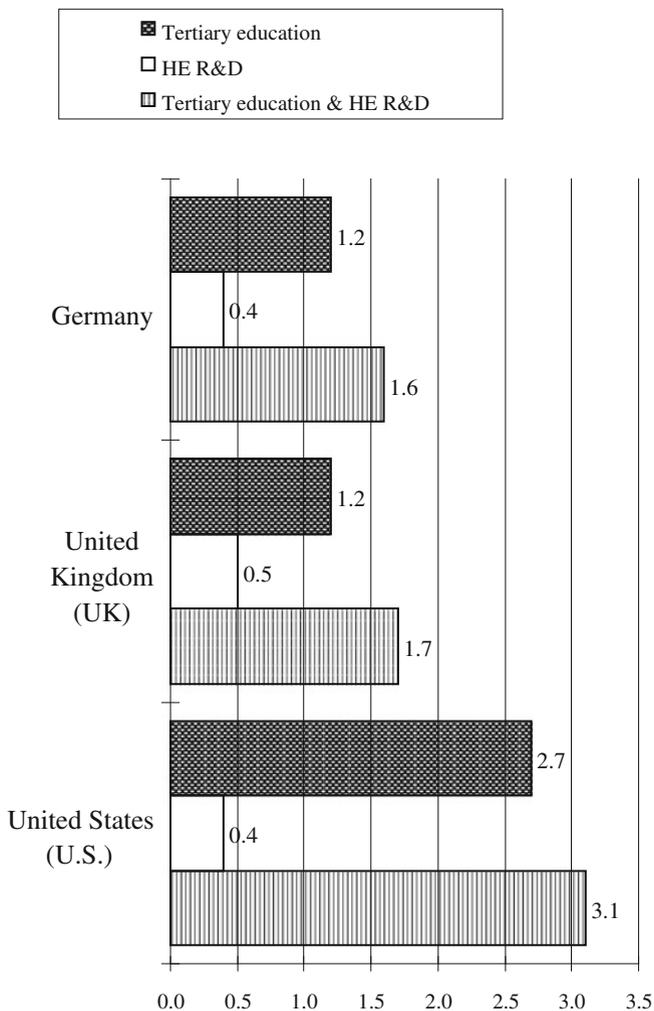
This leads to conceptual ambiguities (at least from a European perspective): Does HE in the US fall into the “public sphere”, the “private sphere”, or a “hybrid sphere” of American society? The possible application of a public management perspective to HE implies for the US context additional ramifications that differ from Western Europe. Taking into account the sheer volume or size, it becomes evident that the US-HE system is comparable to the comprehensive HE in Western



Source: Authors' own calculations based on OECD (2009 and 2011a).

Fig. 2.4 Public and private financing of expenditure on tertiary education and HE R&D as a percentage of GDP (2006)

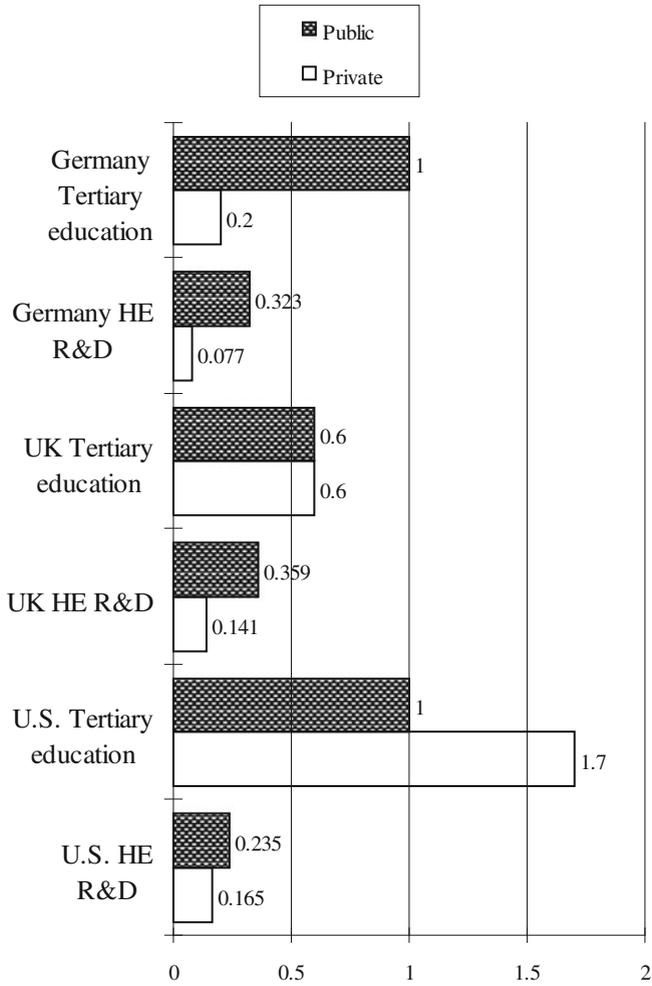
Europe. Therefore, a particular challenge for Western Europe appears to be, whether or not a trendsetter role could or should be assigned to HE in the US, in terms of analysis and in terms of governance. Does the present situation in American HE tell us something about the European future? It is just as legitimate, of course, to ask what the US can or could learn from HE in Western Europe generally, and the different national HE systems across Western Europe more particularly?



Source: Authors' own calculations based on OECD (2011b and 2012).

Fig. 2.5 Expenditure on tertiary education and HE R&D as a percentage of GDP (2008)

In the Figs. 2.5 and 2.6, our calculations for the expenditure and the public and private financing of tertiary education and HE R&D in Germany, the UK and the US are being updated in reference to the year 2008 (see also OECD 2011b, 2012). For the UK, we see that now the private funding of tertiary education is at balance



Source: Authors' own calculations based on OECD (2011b and 2012).

Fig. 2.6 Public and private financing of expenditure on tertiary education and HE R&D as a percentage of GDP (2008)

with the public funding. When we compare the situation in 2008 with earlier in 2006, does this allow us to suggest a proposition on whether or not there operates a certain trend or momentum favoring a faster growth of private financial resources for tertiary education and R&D in HE?



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