

# HIGHER EDUCATION REFORM IN HUNGARY: A COMPARATIVE STUDY ON THE INSTITUTIONAL DESIGN OF THE NEW DUAL DEGREE PROGRAMS

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## Abstract

It is the explicit aim of the Hungarian government to make education better to match the needs of the labour market to improve the country's competitiveness. Between 2010 and 2014 the Hungarian system of higher education was completely restructured. One of the key aims was the closer cooperation between educational institutions and local companies. In the winter term 2015/2016 the first dual degree programs in higher education were introduced. Hungarian policy is guided by German ideals and refers explicitly to the model of the Baden-Wuerttemberg Cooperative State University. Our contribution provides a short overview of the institutional architecture of the Hungarian approach in a comparative manner.

By means of the framework of the German Science Council, which records different dimensions of "duality" (types of stakeholder involvement, shape of the programs, industrial partners, etc.) we assess if the first outcomes of the reform fulfilled the expectations of the government. We analyse, whether the adopted approach may lead to a better fit of education and the labour market or not. With regard to the traditional structures we identify both advantages and structural weaknesses and suggest amendments.

We conclude that the now implemented form of dual degrees provides no silver bullet to reach an appropriate match of industrial needs and higher education outcomes. Hungary has taken a first step in the right direction, but still does not apply a new institutional model: it is still a desideratum that has to be developed. It will be a sensitive task of educational policy to develop the now existing form further, namely in tune with the stakeholders of Hungarian industry. Hungary needs a smart education policy based on long-term considerations as well as wisely developed university strategies. Both a better involvement of the corporate partners and a closer cooperation with existing players of the higher education system would be advisable. In the long run, universities will face the necessity of a greater change.

**Keywords:** education policy, competitiveness, institutions, knowledge economy, knowledge dissemination

## 1. INTRODUCTION

Hungary looks back on more than two decades of dynamic transition. Since the nineties the economy has grown continuously, first of all due to a vast number of foreign investors founding new production sites. German investors are the most important group. The positive development is essentially driven by the automotive sector. There are currently four OEMs which are based on a strong and developing central European supplier network. Because of its highly skilled work force Hungary is a preferred location for technically demanding production. The national capacity and innovation rate is respectively high and the

national economy is more and more overcoming its status of an extended workbench of – first and foremost – German companies. Though this is for sure a positive development it means a new challenge for the Hungarian labour market: the more complex the produced goods and the more functional areas are built up, the higher the skills required by the employers. Moreover, because of the increasing complexity and interconnectivity of the global economy this process is accelerating. Various disciplines discuss this phenomenon under key words such as “knowledge society” or “knowledge economy. The increasing complexity, or “knowledge intensity” of the Hungarian economy hence is a positive symptom, but it induces simultaneously pressure for the relevance of established knowledge and demands new patterns of knowledge (Teichler 2004, 18). Employers are increasingly facing a skills shortage (see for Turkey Alpaydin 2015), not only because of the growth of companies and new employers, but because of the change of knowledge demanded. From the perspective of governmental responsibilities, this is a challenge for the education system.

After the change of government in 2010, the period to 2015 was a time of multiple reforms in Hungary. The two-thirds majority of the ruling party opened the opportunity to exceptionally wide ranging change processes. One of the key propositions was to strengthen the national competitiveness by emphasizing industrial production and by fostering knowledge-intense industries. With regard to the increasing importance of a highly skilled workforce and facing the actual problem of the scarcity of appropriately educated employees and junior staff the shape and content of the Hungarian education system came into focus. According to the typology of Halász (2010, 53) the reform concentrates on *strategic goals* and the *mission, curriculum and teaching methods* and the *relationship to the environment*. Besides other issues such as particularly promoting technical degrees as engineering or subjects such as mathematics and physics the Ministry of Human Capacities introduced a new degree form, the so-called *dual degree*, according to German ideals. *Dual degree* or *dual studies*, in general, means that an integrated part of the study program is passed at a company ensuring the relevant practical experience. Dual degree programs are a hybrid of vocational education and training (VET) and traditional higher education. The manner to design the interlinkage between “class room” and the “world of work” varies enormously.<sup>1</sup>

At first glance the decision of the Hungarian government seems feasible: the dephased development of economy and education systems is observable worldwide in developed economies. To connect education and the “world of work” is an often broached issue of education economics, studies concerning competitiveness and any aspect regarding economically relevant knowledge. VET is often regarded to be a silver bullet for solving the problem of both skill shortage and youth unemployment (see e.g. Eichhorst et al. 2015). The higher the knowledge intensity of the country, the more relevant higher education gets, which faces the same problem. In parallel with the increasing importance of concepts of “knowledge economy” the connection between world of work and higher education has come into focus (see e.g. Powell/Solga 2009; Teichler 2009). The German Dual System of VET has been very successful over the last decades. Eichhorst et al (2015, 320f.) mention the high degree of formalization, the strong involvement of social partners, the vocational colleges as providers of the school-based part and the must for firms meeting certain technical standards as key characteristics.

This contribution compares the institutional settings of the 2015 established dual studies in Hungary with its explicit ideal, the *dual degree* in the German federal state Baden-Württemberg and its *Baden-Wuerttemberg Cooperative State University* (DHBW). We take a first and in certain detail necessarily superficial snapshot of the situation to give a better understanding about the appropriateness of the actual higher education reform in Hungary. Methodologically we use the framework of the German Science Council, which records different dimensions of “duality”. Point of departure is a short description of the dual degree form in Germany with a main focus of the DHBW, which served as the most important ideal for the Hungarian Reforms. We describe the historical background to clear the original motives, depict the legal situation, the internal and cooperative structure and the involved institutions. Section three captures the actual situation in Hungary regarding the same aspects. Section four summarizes the findings and questions the appropriateness of the Hungarian reforms, giving some suggestions for improvements of the institutional setting.

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<sup>1</sup> See as general overview Teichler (2009)

## 2. DUAL DEGREES IN GERMANY

First of all we have to emphasize that there is a couple of varying dual degree forms in Germany (see BIBB 2014, 50). Partly this is due to a blurry notion of what “dual degree” exactly means. This is for a couple of reasons. Due to the constitutionally guaranteed federalism 16 German Federal states mean 16 different education policies.

Since the main difference to traditional education is the involvement of companies, the design of any dual degree may reflect not only political aims and interests of the academic stakeholders, but industrial structures and claims of influential partner companies. Structures and forms vary in respect to the design of curricula, study periods and the connection of the two scenes of the studies or training: the company or the educational institution. The most important characteristic for any kind of “duality” is, that the degree form combines both school-based learning and learning in practice at a corporate partner. Traditionally dual degree forms are offered by colleges, or, as in our following example of Baden-Württemberg, by universities of cooperative education. The German Science Council characterizes six different types of how institutions interlink practical or vocational and academic elements.

**Table 1: Types of dual education in Germany**

Individual Phase of Education		Local arrangement of academic- and workplace training	
		Interlinked	parallel
First Phase	With VET	VET-integrating degree programs (Bachelor)	Parallel with vocational training
	With a share of workplace training	Practice-integrating degree programs (Bachelor)	Bachelor at college or university, mandatory internship
Further education	With occupation	Occupation-integrating degree programs (Master/Bachelor) with designed framework	Parallel with occupation/occupation-integrating (Master/Bachelor) without designed framework
	With a share of workplace training	Practice-integrating degree programs (Master/Bachelor)	Parallel with practice, with mandatory internship or any other workplace training components, without designed framework

**Source: Wissenschaftsrat (2013, 9)**

Due to the blurry notion of dual degree programs, reliable data is hardly accessible and research concerning this topic is hence rare. Overall the ratio of students in dual degree programs in Germany was estimated 3.3% in 2013 (Wissenschaftsrat 2013, 6) and the German Science Council observes a dynamic growth over the last years referring to data of the Federal Statistical Office of Germany (Wissenschaftsrat 2013, 11). The success of the dual degree programmes in the last years surely depends on the decisions of the the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany in 1995, which declared degrees from universities of cooperative education and colleges as equal and the decision of 2004, which declared every accredited bachelor degree programme to be equal.

### 2.1. The DHBW: Background

The federal state of Baden-Württemberg started its first experiments with dual degree programs in 1974 as a

“university of cooperative education” (“Berufsakademie”) and as the first one in Germany. But according to the higher education act it was not equally ranked with regular universities at that time. One of the main motives of the founding was the increasing number of high-school graduates in the seventies. Big companies in the federal state of Baden-Württemberg feared for the reputation of the traditional vocational education programmes and thus a skill shortage occurring. The companies began to think about a closer link to institutions of higher education, because traditional higher education programmes neither matched well the industrial requirements nor did they ensure the possibility to tie young talents to the companies (WISSENSCHAFTSRAT 2013, 16). The first collaborations were developed with colleges (a new form of higher education institutions at that time). The bulk of the degrees offered were and are technical degrees or from the business sciences. From the German perspective this follows not only the employment structure, but the tradition of VET-programmes as well. In 2009 the University of Collaborative Education was declared a university of applied sciences (“Duale Hochschule”, officially in English “Baden-Wuerttemberg Cooperative State University”). This enabled the DHBW to confer degrees with academic status.

To anticipate an aspect of the third section: Besides the success of the model of duality practiced at the DHBW, the Hungarian government might have had in mind other reasons as well when taking it as point of departure for reforms: The federal estate of Baden-Württemberg has – quite similar to Hungary – approximately 10 million inhabitants.<sup>2</sup> Overall 62702 first semester students have been enrolled in the winter term 2014/2015.<sup>3</sup> 11644 of them were enrolled in dual study programs of the DHBW<sup>4</sup>; this means a share of 18.57%.

## 2.2. Institutional Design

By comparing the institutional design of the German ideal and the Hungarian model we describe the framework which is thought to ensure the core argument of all dual degree programmes: the interlinkage between higher education or school-based learning and training in “the world of work”. Starting from legal aspects we focus on four dimensions of duality in higher education of the six suggested by the German “Wissenschaftsrat” (2013) which depict, to what extent a dual degree program ensures really both high academic standard and practically relevant training in an interconnected manner. These dimensions concern a) the arrangement of the places of study, b) the assurance of scientific standards, c) the design of the practical or vocational elements and d) the commitment of the corporate partners taking part in the programme, i.e. the dual partners.

### 2.2.1. Legal framework

The federal state of Baden-Württemberg started its first experiments of dual degree programs in 1974. Six years later the federal state introduced the act concerning “the university of cooperative education”, which was the ancestor of the actual legal basis. The legal basis today is the federal state act concerning higher education of 2005. According to this, the federal higher education act defines any company to be appropriate insofar as it has the capacity to foster the aims of the degree program in the broadest sense. The now well-known “Baden-Wuerttemberg Cooperative State University” was introduced by a special act in 2008 (DH-ErrichtG 2008) and is now based on the federal higher education-law.

### 2.2.2. Local arrangement of academic- and workplace training

The DHWB has a definite advantage of location, because it is founded on one principle, but split into several units: one headquarter, ten main locations, three campuses and one Centre for Advanced Studies ensure that the academic part of the studies is always located always in the near of “the world of work”. A smooth interlinkage between both elements regarding the providers is locally guaranteed. This is reflected in the curricular arrangement as well: phases of academic studies and workplace training alternate in three-month-intervals. This is a difference to regular studies at German Universities, where semesters last almost six months and do generally not allow training in parallel due to the workload during the lecture period. The

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<sup>2</sup> According to the latest reliable data of the statistical authority: [http://www.statistik.baden-wuerttemberg.de/BevoelkGebiet/Landesdaten/bev\\_altersjahre.asp](http://www.statistik.baden-wuerttemberg.de/BevoelkGebiet/Landesdaten/bev_altersjahre.asp) (accessed October 8, 2015).

<sup>3</sup> According to the latest reliable data of the statistical authority: [http://www.statistik.baden-wuerttemberg.de/BildungKultur/Landesdaten/HS\\_StudentenAkt.asp](http://www.statistik.baden-wuerttemberg.de/BildungKultur/Landesdaten/HS_StudentenAkt.asp) (accessed October 8, 2015).

<sup>4</sup> Geilsdörfer (2015, 20); according to the statistical authority of Baden-Württemberg 10.660 were enrolled – this would make a share of 17%.

alternating three-month-intervals hence balance both elements of the studies. On the basis of the clear commitment of the corporate partners, which are actually more than partners, namely active members of the DHBW (see section 2.2.5), this institutional arrangement fulfils clearly the claims of the German science Council.

### *2.2.3. Assurance of scientific standards*

The DHBW is – different than regular, pure research oriented universities in Germany – focused on applied sciences. To ensure an institutional basis 2009 a centralized research support centre was founded. With respect to the high amount of lecturers from both academia and practice, relatively small classes ensure intense schooling. Regarding the sheer number of teaching staff a distinct orientation towards practice is observable; besides 620 academic employees almost 9000 “dual lecturers”, i.e. employees of the partner companies (DBW, 3) fulfil teaching functions. To ensure didactical quality the DHBW provides training for the practitioners.

According to the German higher education act degrees of the DHBW are equivalent with degrees from any other regular university. Though the corporate partners are fully integrated in the organizational structure, the institutional design ensures that curricula and new degree forms are long-term-oriented and not a reflection of short-term demand of the labour market (see Veuglers 2014, 2).

### *2.2.4. Design of vocational elements*

The design of the practical or vocational elements is of course to a high degree oriented to the specific needs of the corporate partners. The DHBW has drawn guidelines for a successful implementation of the workplace training (Brugger/Frech/Melzer-Ridinger 2013), which emphasize ten points: 1) workplace training has to be planned carefully, 2) responsible departments are informed regarding aims, contents and phase of study, 3) mentoring has to be ensured 4) clear communication towards the student 5) the duties of the students contribute to the personal and professional development of the student and are value-adding for the company as well, 6) workplace-training ensures insight in business processes and allows the student to act autonomously, 7) the corporate partner ensures a mentor for the whole time of the studies 8) if possible, one phase of workplace training should be abroad, 9) students have to be integrated in teams and 10) the mentor will support in writing both the thesis and in finding a first job after gaining the degree.

Workplace training is hence closely interlinked to the content of classroom education. Due to the given regularities corporate partners ensure that the workplace training means a transfer and expedient specification of the general, “academic” knowledge taught at the university.

### *2.2.5. Commitment of corporate partners*

Regarding the commitment of the corporate partners the DHBW has achieved a sound institutional solution. Since 2009, one of the main differences to its former status as “university of collaborative education” is that dual partners are defined as parts of the organization. This ensures a participation in the decisive bodies of the DHBW. 17 out of 18 members of the supervisory board have to be delegated by dual partners, the chair is alternating between a dual partner and a delegate of the responsible ministry of education. Similarly, half of the members of the “dual senates”, which decide on the design of the curricula and the implementation of new degree programmes are sent from the partner companies. Due to this the further development of the DHBW will be hand in hand with industrial partners, i.e. close enough to the development of the labour market, but simultaneously sufficiently long-term oriented. Regarding schooling, corporate partners are liable to ensure a clear commitment in the dual degree program.

According to the federal higher education act, companies have to ensure an employment contract, i.e. students draw wages. Insofar applicants fulfil the formal criteria to enrol, the dual partner decides. The statutory source obligates the companies to provide a liable tutor (§ 65 b Abs. 3 LHG) over the whole study time.

## **3. SITUATION IN HUNGARY**

### **3.1. Hungarian higher education and the world of work: a snapshot**

From the point of view of the labour market, traditional higher education in Hungary is seen to be too theoretical and academic. Most of the teaching staff has no practical experience at all. VET, in contrast, has a traditionally low reputation. Regarding the technical development these are two reasons for the skills shortage which occurred over the last years.

It is the explicit aim of the Hungarian government to make education better to match the needs of the labour market and to increase the attractiveness of education. One of the key aspects is the closer cooperation between educational institutions and local companies. According to this a cornerstone of the reform is the reorganization of the vocational education and training system corresponding to German standards (see Szigeti 2015b, 4f.). A further experiment is the introduction of the dual degree form in higher education. It is notable, that the key arguments for the reorganization of vocational education and training are used for a new, dual approach in higher education as well (see Czomba 2015).

The changes forced in the educational system are, first of all, answers to the industrial structure in the light of the “reindustrialization” plans of the government (Czomba 2015; see also EUCR 2014 for the European perspective). According to official statements, the government of Hungary plans to increase the share of industrial production in GDP from the recent 23% to 30% (Czomba 2015). This means an increased need for technical degrees, which is underpinned by the findings of Schwab (2014, 11; 208).

At present there is no accessible research guiding or assessing the content and structure of reforms.<sup>5</sup> According to this our description in the following refers to the official statements of the government and the respective higher education act as the currently only reliable sources.<sup>6</sup>

## 3.2. Institutional Design

### 3.2.1. Legal framework

In July 2014, the Hungarian government modified the higher education act to enable a dual approach in higher education. § 108. § 1a defines engineering, computer sciences, agricultural sciences and business or economics (or related subjects) as possible areas of dual studies; this quite obviously reflects the German practice (see BBIB 2014, 51; Wissenschaftsrat 2013, 13). The higher education act defines dual studies to be “in step with actual practice” and is possible for both bachelor and master degree courses. Dual degree programs must be designed as full-time programs. The concrete content regarding curriculum, the terms of admission and completion, methods and evaluation of the knowledge to be acquired has to conform with a framework given by the especially created Council for Dual Education (“Duális Képzési Tanács”), which accredits the partner companies as well.

The Council for Dual Education is the outstanding key institution of the new approach. According to the official information given by the Hungarian Ministry of Human Capacities (HMHC 2015) it has 13 members, which represent the society of the multinational companies located in Hungary, two universities, two colleges, the agrarian sector, three ministries concerned with economic duties, the German foreign investor Audi and Hungary’s biggest oil and gas company, MOL. It seems debatable, if this composition reflects the needs of the stakeholders.

The Council for Dual Education has exclusive competencies. Based on the new higher education act the council defines the possible areas of dual education, elaborates parameters regarding quality and evaluation for all institutions, organizations and experts taking part in dual education. It qualifies the workshops of the companies and follows up the cooperation between institutions of higher education and the companies taking part in dual studies. It is responsible for setting standards and for dual studies’ outcomes and quality. We will track its duties and influence in the following subsections.

### 3.2.2. Local arrangement of academic- and workplace training

Because the Hungarian government was not brave enough to set up a completely new format there have not been any constraints to ensure new local arrangements. Corporate partnerships can only be developed

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<sup>5</sup> Noelke/Horn (2014) provide an excellent study regarding “Social Transformation and the Transition from Vocational Education to Work in Hungary” and focus on the traditional VET-system, not on higher education. However, their statement that “existing studies neither focus on detail on the changing situation of VET graduates nor try to directly measure the role of a specific institutional mechanism, causing the outcomes of VET graduates to change” (ibid., 432) formulates a desideratum for considerations regarding the change of higher education, too. The comparative study of Vasilache et al. (2012) focuses on structure, history and financing of the higher education system and the implementation of the Bologna-Process.

<sup>6</sup> See Szigeti (2015a)

between institutions of higher education and companies, which were close to each other anyway.

The commitment of corporate partners is defined by the Council of Dual Education, which framed general responsibilities such as long time commitment, the assurance of expert support for the students during their workplace-training and an own entrance examination. But beyond the general responsibilities there is no more specification as e.g. framed in the guidelines of the DHBW. The suitability of the partner companies is generally based on an existing regulation, the general prescriptions for internships (230/2012. VIII.28. Kormányrendelet).

Among other (formal) criteria the collaboration contracts define the length of the cooperation, the parameters of the entrance qualification, the modes of evaluation of the acquired knowledge, and explicitly define the role of the companies within the curriculum and the modes of student evaluation. Similar to the model of the DHBW, students draw wages during their learning period.

### *3.2.3. Assurance of scientific standards*

Dual degree programmes are bound to the exactly same rules as regular degree programmes. More precisely: they are the same degree programmes and they are hence scientifically as demanding as any other degree program. A deviation from the traditional model is possible up to a grade of 10% of the given ECTS. In this manner higher education policy avoided a confrontation with the Hungarian Accreditation Committee, which releases degree programmes, because 10% of the ECTS is a general mark to which extent universities have the freedom to design existing degrees on their own.

### *3.2.4. Design of vocational elements*

90% of the curricula have to conform to “traditional” degrees. The first trick to make a “dual degree” out of a 90% traditional degree is that 10% of “deviant” percent is only allowed to be realized at the companies. Moreover, students of dual degree programs will give up their semester breaks and, because the existing degree programs are extended by a practical complement of 22 weeks, which is developed in common with the corporate partners and released by the Council for Dual education. It must be emphasized, that “traditional content” cannot be modified – but only replaced to an extent of 10%.

Generally, the workplace training curriculum has to include 1) the deepening of theoretical knowledge relevant for the tasks at the workplace, 2) a laboratory course, 3) autonomous project work and 4) a part of skills and competence development, e.g. communication-training or project management. These aspects are similar to the guidelines given by the DHBW, but it seems questionable, to what extent they may be realized.

### *3.2.5. Commitment of corporate partners*

Corporate Partners in general do not differ from any company in Hungary which ensures workplace training. Companies have to ensure an employment contract over the study period and the workplace training itself has to meet the standards set up by the Council for Dual Education. Within this framework companies and institutions of higher education have to achieve individual solutions. A lot of public discussions, meetings and conferences regarding that topic and involving stakeholders from the industry, the involved ministries and the universities show, that there is a strong willingness on part of the corporate sector to take part in this process.

## **4. CONCLUSIONS**

First of all we observe that the implementation of a dual degree format in education may be a straight answer to the weaknesses of the higher education system in Hungary. To take the DHBW out of the vast number of institutions of dual education in Germany seems feasible for a couple of reasons. One might think of Hungary’s industrial structure, the high number of foreign investors from Germany or even of importance of the federal state of Baden-Württemberg as a trading partner. But first and foremost the motives of starting a dual approach, which is driven by the companies, seem to be similar. The intention of the Hungarian government is without any doubt a first step in the right direction.

With a view to the German ideal the realization though seems to suffer from several weaknesses. It may mean on the one hand an advantage that a strong government is able to implement rapid changes. On the other hand the actual reform shows a tendency towards centralization, which is clearly observable by the role and composition of the Council for Dual Education. Regarding a nationwide education strategy it is utterly not comprehensible, why exactly two companies and only certain institutions of higher education have an official vote to qualify other companies as suitable for dual degree programs or not. Someone might think, this institution is rather an instrument of certain interests than an objectively guided reform. The question

must be raised, why the coordination of interlinking classroom-learning and workplace training is centralized at all while any institution of higher education is allowed to build up its own dual degree courses. The institutional integration of corporate partners at the Baden-Wuerttemberg Cooperative State University would be a more appropriate approach – but this would, against the background of the actual legal basis, force the government to rethink the entire higher education system. Considerable resistance of the traditional institutions would be expected, because it would cause a divide between traditional and new, “dual” institutions. However, the actual approach seems half-hearted and gives more importance to certain players. A central council should have had depicted both the industrial and academic stakeholders more wisely. The cooperation between companies and institutions of higher education could have been designed more flexible on the institutional level to create individually appropriate forms of corporate commitment. As several conferences show, this work is going on driven by the companies. But a different institutional setting would have been more helpful.

Overall, the reform is not only a partial-reform, but a reform with legally integrated self-restraint. While in the Federal Estate of Baden-Württemberg certain tracks of vocational education, as e.g. in the health care sector, are transferred to academic programmes due to the increasing complexity of the “world of work”, the new Hungarian higher education act defines and limits the possible content of dual degree programmes. This seems to document an ignorance of the dephased development of an economy and education system.

The half-hearted character of the reform is obvious regarding the complete design of vocational elements: while each subsidy of the Baden-Wuerttemberg Cooperative State University ensures academic studies and workplace training in alternating three-month-intervals and employs a vast number of practitioners, the “dual” element of the new degree programmes in Hungary is nothing more than a considerable ad-on. It means a plus in experience and workload, but is *not* a new form of interlinkage between academia and world of work. Without any doubt, graduates will be attractive on the labour market, because they not only have been accepted by an employer and an institution of higher education, but have proven to be extremely resilient and diligent. But overall, higher education did not come as close to the world of work, as the label “dual” may promise.

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