

Policy Brief

German Dual Apprenticeship System



Report by

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Contents

1. Introduction..... 3

2. Key features of the German “Dual System” 3

3. Market-oriented “Dual System” 3

4. Strong legal security and regulatory system 4

5. The universal “European Qualifications Framework (EQF)” 6

1. Introduction

German “dual apprenticeship system” is well known in the world. It links practice with theories systematically, which allows building professional competencies in line with the demand of industries and the job market. It also provides various possibilities for further qualification, which highly motivates individuals and also lays a good basis for higher salaries. Germany can provide China long lasting and internationally recognized experience in farmers’ vocational education and training system.

2. Key features of the German “Dual System”

In Germany, the "dual apprenticeship system" originated from handicraft training about 150 years ago. It is called a “dual system”, because training takes place in both enterprises and public training schools. Company training is the main part of the program, and will be supplemented by theoretical education in schools. Trainees are called “apprentices” (Azubis or Auszubildende), rather than “students” (Studenten), who focus on theoretical studies in full-time higher educational institutions.

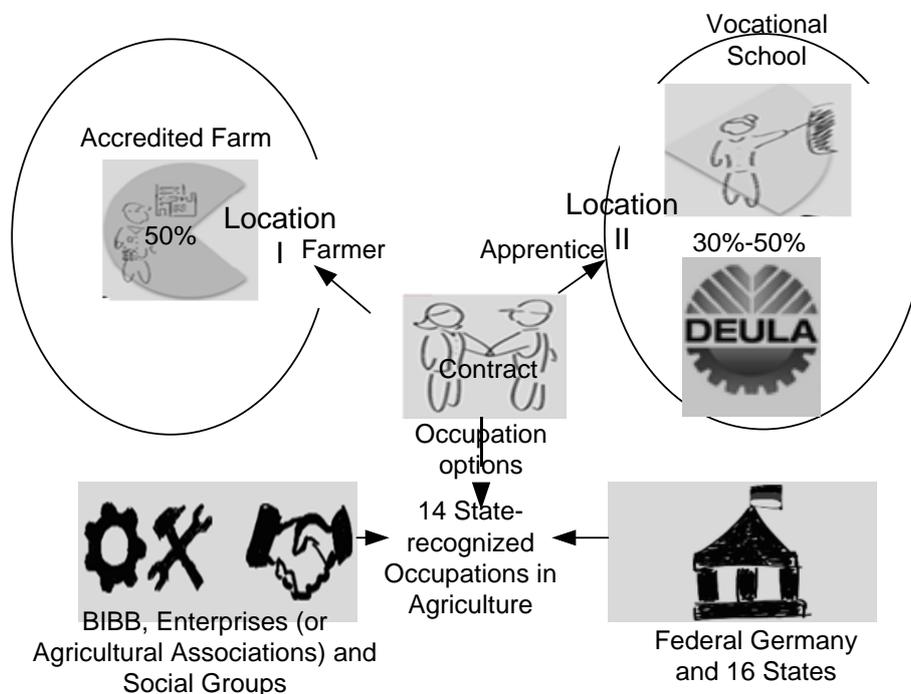
3. Market-oriented “Dual System”

As of 2016, there are 14 types of state-recognized agricultural occupations in the “dual system” of Germany. If a young adult decides to join an agricultural vocational training program, he/she shall first of all choose from the 14 types of agricultural occupations, and then contact a state-recognized farm in order to sign a formal training contract (Ausbildungsvertrag). The last step is to select a suitable vocational school (Berufsschule). The entire program takes about 2 to 3.5 years to finish, half of which would be spent on the farm, around 30% on theoretical study in schools, and the remaining 20% for practical inter-company training in schools or “inter-company training inits” (Überbetriebliche Ausbildung). At the end of the program, apprentices are required to sit for theoretical and practical exams with representatives of the farm and training school as jury members. Only apprentices who pass the exams are granted a diploma and a vocational qualification certificate (Figure 1).

The core element of a "dual system" program is the market; in this case the farm, which guides the whole process. Firstly, let us take a look at how the agricultural occupations are determined. Recognized agricultural occupations under the “dual system” are firstly proposed by the Federal Institute for Vocational Education and Training (BIBB), enterprises (or the agricultural trade association) and stakeholders from social groups, secondly reported to relevant governmental departments for approval, and finally confirmed by the Federal Ministry of Education and Research and the Federal Ministry of Food and Agriculture through legislation with the Ordinance on Vocational Education and Training (Ausbildungsordnung). Participation of social groups and enterprises (or agricultural trade association) ensures that final agricultural occupations reflect actual market demand (Figure 1). From the perspective of training, on-farm training is to help apprentices gradually acquire the competence and skill sets necessary to deal with problems. Afterwards, they are expected to work independently and supervise others in carrying out tasks. Theoretical studies in schools aim to support apprentices with a better understanding of working principles and practical skills. Practical inter-company training at school or professional training institutes such as the DEULA is to provide training for critical practical skills, which certain enterprises may not be able to provide. It is an effective supplement to training in

enterprises. In addition, from the perspective of participants, apprentices choose vocational education to acquire necessary qualification or as a stepping stone to a job in the agricultural sector, while farm owners accept apprentices in order to cultivate future employees. Both sides are certainly free to choose the next step: apprentices can continue to work or study, and farm owners can decide whether or not to offer employment to the apprentice on the basis of performance. As to the source of funding, enterprises take the initiative to assume a certain portion of the costs for vocational education: Farm owners shall provide apprentices with wage, insurance, accommodation and meals, and also pay for trainers. Large machinery for practical inter-company training is often donated by agricultural machinery enterprises to schools or training institutes such as DEULA. The government shall cover management expenditures of vocational schools. Thus, the government uses minimal resources to mobilize enterprises to participate in the process for maximization of economic and social benefits.

Figure 1: Germany's "Dual System"



4. Strong legal security and regulatory system

The success of vocational education in Germany is attributed to its full-fledged legal system (Table 1). At the federal level, there are a total of 11 laws and regulations related to agricultural vocational education. Among them, the supreme law — the Basic Law (Grundgesetz) clearly states: The entire school system shall be under the supervision of the state (Article 7). The Vocational Education Act (Berufsbildungsgesetz) offers detailed provisions on vocational education objectives, locations, stakeholders, examinations and regulatory bodies and is applicable to all occupations under the "dual system". Furthermore, it also clearly defines regulations over agricultural occupations, master farmer examinations, training qualifications, job protection and vacation. At the state level, each state can introduce additional laws and regulations. In Bavaria, for example, a total of 9 local regulations on agricultural vocational training and education have been implemented. Firstly,

the local constitution (Verfassung) includes vocational education and general education in primary and secondary schools in the compulsory education category (Article 129). Taking into consideration the local conditions, Bavaria introduced the "Bavarian Education Act", "Responsibility Regulation", the "Training Program Framework (Rahmlehrplan)", the "Vocational Education Examination Regulation (Pruefungsordnung der Berufsbildung)" and the "Regulation on Educational Costs (Bildungskostenregelung)", so as to clearly define responsibilities, rights and obligations of every actor in the process. A full-fledged legal system is in place as support. There are also provisions for related matters involving employment, social security and management system of the quality of vocational education. Thus, a legal framework system takes its form from the central to the local level, both to ensure unity as well as a certain degree of flexibility in vocational education and training, so that it is more suited to local market demand.

Table 1: Laws and regulations on vocational education and training

Laws and regulations at the German federal level	<ol style="list-style-type: none"> 1. The Basic Law (protection of people with disabilities, parents' right to education, freedom of occupation, freedom of association, social welfare principles, etc.) 2. The Vocational Education Act (BIBB, 2005) 3. Vocational Education Regulation (e.g. Regulation on Farmer's Vocational Education, 1995) 4. Requirements for Master Farmer examinations 5. Regulations on Trainer Qualifications 6. Regulations on Qualifications of Training Organizations 7. Requirements and Regulations on Professional Qualifications 8. Employment Protection Act 9. Young Protection Act 10. Federal Paid Leave Act 11. Working Hours Act
Regulations and guidelines at the state level (example of State of Bavaria)	<ol style="list-style-type: none"> 1. Constitution of Bavaria 2. Bavarian Education Act - Compulsory, Free schooling and Education Regulations 3. Responsibility Regulations 4. Vocational Education Examination Regulations 5. Guiding Principles for Promotion of Education 6. Rules on Educational Costs 7. Management Regulations on Every Occupation 8. Framework on Inter-company Training Program 9. Framework on Vocational School Training Program
Other regulations	<ol style="list-style-type: none"> 1. Collective Bargaining Agreement 2. Provisions on Social Security Costs 3. Provisions on Social Security Undertaker 4. Quality Management System for Vocational Education and Training

A key feature in the German vocational education and training system is the regulatory body – “Responsible Institutions” (Zuständige Stellen). In general, school education shall be supervised by local educational authorities, while training on farm shall be monitored by local agricultural authorities or trade associations. The situation in different states varies, but the ultimate goal is to ensure that schools and farms carry out vocational education in accordance with relevant requirements. Take on-farm training in Bavaria as an example. Any farm that wishes to take in apprentices shall register itself at local agricultural authorities. Once it is confirmed as a nationally recognized farm with qualified “master farmers”, it will be eligible to enter into vocational training contracts with apprentices. During apprenticeship, local agricultural authorities may visit the farm for check on training from time to time and reconcile differences of opinion between apprentices and the farm, if any. At the same time, the farm shall also submit regular progress reports of the training to local regulatory authorities. Supervision helps substantially reduce the number of events in which the apprentice is mistreated as cheap laborer by the farm, and ensure effective operation of the "Dual System" in general.

5. The universal “European Qualifications Framework (EQF)”

In Germany, young people choose different educational paths, and the achievable level of qualification upon completion of the study can be measured by the "European Qualifications Framework (EQF)". The EQF covers 3 key elements: knowledge, skills and competence. Knowledge is described as the “necessary theoretical and factual knowledge”. Skills are described as “capability of carrying out tasks”. Competence is described in terms of completing the work with responsibility and autonomy. By measuring these 3 elements, it is possible to rate the qualification of graduates of the entire German education system. Generally speaking, apprentices with three years of vocational education can reach EQF level 4, "master farmer" is at EQF level 6, and anyone with a PhD title is at EQF level 8.

Table 2: The "European Qualifications Framework (EQF)

EQF	Knowledge	Skills	Competence
Content	Theoretical and/or factual knowledge	Cognitive (involving the use of logical, intuitive and creative thinking), and practical (involving manual dexterity and the use of methods, materials, tools and instruments) skills	Competence is described in terms of responsibility and autonomy.
Level 3	Knowledge of facts, principles, processes and general concepts, in a field of work or study	A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information	Take responsibility for completion of tasks in work or study; Adapt own behavior to circumstances in solving problems

Level 4	Factual and theoretical knowledge in broad contexts within a field of work or study	A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study	Exercise self-management within the guidelines of work or study contexts that are usually predictable, but are subject to change; Supervise the routine work of others, taking some responsibility for the evaluation and improvement of work or study activities
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The EQF system is applicable to the entire education system in Germany, so that different educational paths can relate to each other. Based on the level of qualification achieved, young people are able to choose different educational paths to continue. For example, a young adult who starts with vocational education in Bavaria is eligible, after 3 years of vocational education courses, for further study in universities, as long as he/she completes the theory courses for general education and passes corresponding exams. Vice versa, if a college student considers practice-based learning more suitable, it is possible to make the transfer to a vocational school. Therefore, young people who choose vocational education in Germany are not considered as “low-achieving” students. Vocational schools are regarded equally as other types of schools, which is a unique charm of the German “Dual System”.