

National Skill Systems: A Comparative Analysis of Vocational Education and Training in Germany, Japan and Turkey¹

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Vildan Taşlı*

*Öğr. Gör. Dr, Yalova Üniversitesi, İİBF Fakültesi, Yalova / Türkiye
E-Mail: vildan.tasli@yalova.edu.tr ORCID: [0000-0001-7629-6774](https://orcid.org/0000-0001-7629-6774)

Abstract

Having different institutional contexts (e.g. economy, society and culture), countries follow different skill regimes to prepare their people for the labour market. A rich body of literature examines the different characteristics of countries' skill regimes. Drawing on the related literature, this paper introduces varieties of skill regimes in a classification of countries' different approaches in shaping their skill systems. This is to capture the specifics of institutional variety that shapes differences in an economic organisation including skill development. The paper focuses on examining the characteristics of the vocational education and training (VET) systems in three countries: Germany, Japan, and Turkey. It compares the systems in these countries according to several themes including governance and financing of VET, skill specificity, and status of the VET system. The paper shows that three countries represent three different types of skill regimes. In Germany, VET performs in a consensus-led approach that entails coordination and cooperation of all social partners while shaping the VET system. Japan, on the other hand, has a firm-based VET system that depends on firms' specific and different strategies in training and employing individuals. Despite sharing some similar characteristics with these two countries, Turkey is categorised as having a state-led VET system in which the state plays a dominant role in shaping the system.

Keywords: National skill systems, Vocational education and training (VET), Germany, Japan, Turkey

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Ulusal Beceri Sistemleri: Almanya, Japonya ve Türkiye'nin Mesleki Eğitim Sisteminin Karşılaştırmalı Analizi

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Öz

Farklı kurumsal bağlamlara (ör. ekonomi, toplum ve kültür) sahip olan ülkeler, insanlarını iş gücü piyasasına hazırlamak için farklı beceri rejimlerini takip ederler. Ülkelerin beceri gelişiminde benimsediği yaklaşımları inceleyen zengin bir literatür bulunmaktadır. İlgili literatürden yararlanarak, bu makale, ülkelerin beceri gelişim sistemlerini şekillendirirken benimsedikleri farklı yaklaşımları ele almaktadır. Makale, üç ülkede (Almanya, Japonya ve Türkiye) mesleki eğitim sistemlerinin özelliklerini incelemektedir. Bu ülkeler mesleki eğitim sistemlerinin yönetilmesi ve finanse edilmesi, spesifik becerilerin gelişimine odaklanma ve mesleki eğitim sisteminin toplumdaki statüsü/algısı gibi çeşitli temalara göre karşılaştırılmıştır. Çalışmada öne çıkan önemli bir nokta incelenen üç ülkenin üç farklı beceri rejimini temsil ettiği şeklindedir. Almanya'da mesleki eğitim sistemi tüm sosyal paydaşların dahil olduğu ve işbirliği içinde hareket ettiği uzlaşmaya dayalı bir yaklaşımla yönetilmektedir. Öte yandan Japonya'da, firmaların bireyleri eğitip istihdam ederken farklı stratejiler geliştirdiği ve tüm sosyal paydaşların katılımını gerektirmeyen daha firma-odaklı bir mesleki eğitim sistemi bulunmaktadır. Türkiye'nin de Japonya ve Almanya ile benzer özellikler gösterdiği noktalar olsa da, mesleki eğitim sisteminin şekillenmesinde devlet daha güçlü bir rol oynamaktadır.

Anahtar Kelimeler: Ulusal beceri sistemleri, Mesleki eğitim sistemi, Almanya, Japonya, Türkiye

Introduction

Vocational education and training (VET) is defined as “education and training which aims to equip people with knowledge, know-how, skill, and/or competences required in particular occupations or more broadly on the labour market” (CEDEFOP, 2008:202). VET’s nature is, therefore, different from that of general education such that the curricula of vocational schools are primarily shaped to meet the demand of employers in specific industries.

As often emphasised in the literature, not all countries follow the same approach to equip people with the skills required in the labour market and to increase these people’s employability (see Thelen, 2004; Hall and Soskice, 2001). Countries adopt different approaches in accordance with the conditions and requirements of their different institutional contexts. Some countries (e.g. Germany and Austria) build a collective skill system integrated with the wider institutional environment including labour market, industrial relations system, and the dominant production system and product model (e.g. producing quality and innovative products) (see Busemeyer and Trampsuch, 2012). Yet, some other countries (e.g. the US) leave the governance of the skill system to the market in which employers and individuals follow their own agenda in skill development.

Given these different approaches of countries, the aim of this paper is to conduct a comparative analysis of VET in Germany, Japan, and Turkey. Germany and Japan are known as prominent countries in terms of employers’ substantial investment in their workers’ skills (Thelen and Kume, 2001). Besides, they are two discrete examples in terms of the vocational skill system. In Germany, skill formation is organised at the national level, whereas it is firm-based in Japan (ibid). In addition, these countries and Turkey are deliberately chosen for analysis because the research examines the engagement of one German and one Japanese MNC and one Turkish firm with the Turkish VET system. The structure of the paper is as follows. The first section explores the debate on the varieties of skill regimes and presents different approaches in classifying different countries’ skill systems. This is important to understand in what aspects countries are similar and different in terms of skill for-

mation and how the literature conceptualises these similarities and differences. The second section examines the characteristics of the VET systems in Germany, Japan, and Turkey. The section presents a comparative analysis of the skill systems in these countries on the basis of several themes including governance and financing of VET, skill specificity, and status of the VET system. Based on this analysis, the third section focuses on the implication of countries' different systems on firms' behaviours, including MNCs and local firms by examining the transfer of German and Japanese skill systems.

1. Varieties of skill regimes

There has been substantial effort but also different approaches in the literature to understand different country systems in organising their economic activities. This large body of literature on comparative capitalism including the Varieties of Capitalism (VoC) literature (see Hall and Soskice, 2001) and National Business System (NBS) theory (see Whitley, 1999) compares and classifies countries according to their national configurations and firm-level practices, which also concerns the embeddedness of skill systems in the wider institutional context of countries.

A well-known distinction in the VoC literature is the dichotomous classification of countries as the liberal market economy (LME) and coordinated market economy (CME). Focusing on the perspective of firms, Hall and Soskice (2001) employ five domains to understand firms' relationship with other actors. These domains are identified as industrial relations, VET, corporate governance, inter-firm relations, and relations with employees. As this thesis focuses on skill-related issues, the other domains are not covered in this section. In LMEs, the skill system mostly generates general skills that are portable across different countries and industries. The skill system of CMEs, on the other hand, tends to produce industry- or firm-specific skills. The binary typology on LMEs and CMEs as representative of two opposite types of national training systems may be helpful for a 'helicopter' view to evaluate countries' skill systems and to compare and contrast their characteristics. Nevertheless, Bosch and Charest (2008) warn that due to their static nature, such typologies may not explain the dynamics of different systems. Besides, it is

important to consider country-specific differences and explore whether all countries categorized within CMEs or LMEs display similar characteristics and tendencies in terms of the skill system. Considering the difference within CMEs, Thelen (2004) differentiates CMEs as collectivist and segmentalist countries. The characteristics of collectivist countries such as Germany include the collective involvement of stakeholders in training and the production of occupational skills (Thelen and Busemeyer, 2008). In this context, stakeholders jointly determine the skill standards and guarantee its enforcement at the national level (ibid). Segmentalist country systems, on the other hand, are characterised by the production of company-specific skills. In this form of a system, “individual employers attempt to shield themselves from competition over labour by erecting barriers to the outside labour market” (Thelen, 2001:81). This also encompasses several measures such as internal career ladders, seniority wages, and company-based training (ibid). Anderson and Hassel (2008) also criticise the VoC theory due to its predominant emphasis on similarities rather than differences within CMEs and LMEs. They focus on the different characteristics of the CME countries and distinguish three distinct skill regimes in CMEs in terms of primary place of skill acquisition: segmentalist (firm-based), integrationist (school-based occupational), and differentiated (workplace-based occupational), e.g. Japan, Sweden, and Germany, respectively.

Levy (2006:22-23) acknowledges that the VoC theory of Hall and Soskice (2001) provides several contributions. For example, it unpacks the concept of the Germanic CME and shows how a highly regulated and organised institutional context can serve both employers and employees, and strengthen business development (ibid). But Levy (2006) argues that Hall and Soskice’s VoC theory downplays the role of the state by eliminating the statist category from their typology, and therefore reducing the number of categories to two as CME and LME. In particular, the inadequate analysis of two countries, namely, Japan and France, reveals the problematic aspect of this theory regarding the state’s role. Hall and Soskice categorise Japan as CME due to its keiretsu-based characteristics encompassing networks of business associations and relational subcontracting (ibid). However, the theory ignores the important role of the related ministries and decision-makers (Levy, 2006). Moreo-

ver, countries like France that have a statist tradition are not included in these categories, but left in 'typological purgatory'². Levy (2006) draws attention to these missing points and suggests three main varieties of capitalism as liberalism, corporatism, and statism.

Busemeyer (2009) criticises the dichotomous distinction between general and specific skill systems associated with LME and CME systems, respectively. As a response, he suggests a matrix model with two separate dimensions to cover a variety of skill regimes by building on the distinction of Anderson and Hassel (2008). These dimensions are firms' involvement in skill formation defined as superficial and deep, and vocational specificity of the education system defined as high and low specificity that consequently enables or disables the portability of skill (Table 1). The argument of Busemeyer (2009) is that countries' skill systems differ with regard to their mechanisms for certification of vocational skills as well as to what extent firms are deeply involved in the process of skill formation (ibid, 386). Busemeyer's classification of skill regimes contributes to the VoC literature especially because it captures the important differences between CME countries' skill systems.

Table 1. Variety of countries' skill regimes

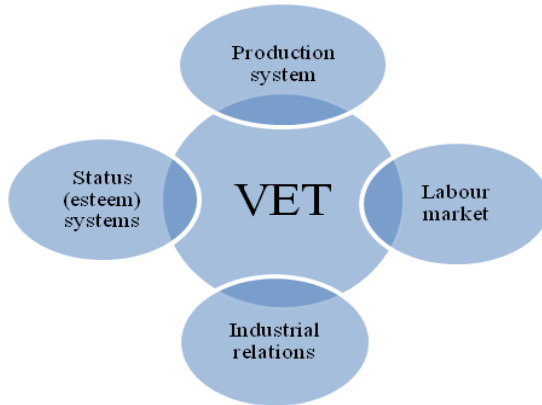
		Firm involvement in skill formation	
		Superficial	Deep
Vocational specificity of education system	Low	General (USA)	Firm-based (Japan)
	High	School-based/ occupational (Sweden)	Workplace based/ occupational (Germany)

Source: adapted from Busemeyer (2009)

Another contribution that places skill development in the wider institutional context of countries is the work on NBS emphasising the embeddedness of skill systems. NBS is defined as "a set of interlocking structures and institutions in different spheres of economic and social life that combine to create a nationally distinct pattern of organising economic activity" (Whitley, 1999 cited in Edwards and Kuruvilla, 2005:9). Ac-

² "Although Hall and Soskice refer to the possibility of a third category 'Mediterranean type of capitalism' including the countries of France, Italy, Spain, Portugal, Greece and Turkey, the features of this category are not elaborated in any kind of systematic way, like the CME and LME ideal types" (Levy, 2006:397).

According to Whitley (1999), the skill development and control system that is defined to be the ways of acquisition, certification, and organisation of practical skills is considered as one of the key institutional features structuring business systems. Similarly, Bosch and Charest (2008) suggest that VET is embedded in the status system, the country-specific configuration of production, labour market, and industrial relations (Figure 1). VET has different status in CMEs and LMEs (Bosch and Charest, 2008). In LMEs, VET tends to have lower status whereas, in CMEs, it is mostly treated as an important source of qualified labour and innovation. However, it is still important to remember the differences within CMEs. For example, VET does not have the same status in Germany and Japan, which is elaborated in the second section of the paper.



Source: adapted from Bosch and Charest (2008)

Figure 1. Embeddedness of VET in a national context

The production system of a country is another important driving force that influences the skill system. One well-known example is the German model of Diversified Quality Production (DQP). Thelen and Busemeyer (2012:69) highlight “‘forced and facilitated’ German firms’ pursuit of high quality, high wage, and high-value-added production” as a requirement of this model. This, in turn, shapes the quality requirements for skills system and nationally standardized occupational profiles (ibid).

The characteristics of a country's labour market and industrial relations are other key factors that deserve consideration. The distinction between occupational labour markets (OLM) and internal labour markets (ILM) provides insight into the link between labour markets and skill systems in different country contexts (see Rubery and Grimshaw, 2003). In OLM, nationally recognized occupational qualifications are created according to the industry-specific skill needs. The skill system, including an established apprenticeship system, is generally regulated and coordinated by social partners. In ILM, on the other hand, firms are responsible to design training programmes according to their firm-specific needs. For example, in Japan, a highly regulated ILM model can be visible in large firms leading to internal advancement for all employees. On the other hand, in Germany, strong OLM principles in the form of apprenticeship exist across firms while strong ILM principles can still be observed within the firms in the form of internal promotion opportunities for workers.

Another important point to consider regarding the labour market is the labour market outcomes that concern the transition from school to work and subsequently the jobs available for VET graduates, and employers' approach to the training of newcomers and skill certificates (see Allmendinger, 1989; Rubery and Grimshaw, 2003). One would expect that VET graduates having recognised occupational qualifications experience a smoother transition from school to work and have better job opportunities matching with their skills. However, this is not likely to be generalizable across all labour markets. It is essential to consider different country contexts. The countries with highly stratified school systems (e.g. Germany) have the educational systems closely linked to the qualification system (Allmendinger, 1989). In such countries that can be also considered as OLM countries, employers mostly rely on information given by standardised vocational certificates. Therefore they do not need to train employees entering the labour force from scratch but rather building on their prior knowledge (ibid). The expected outcome in this context is the smooth transition from school to work, not requiring 'repeated job shifts to achieve a good match' (ibid, 239) and more job mobility of qualified workers across firms (Rubery and Grimshaw, 2003). The countries with relatively more unstratified school systems (e.g. the US)

have a loose coupling between educational attainment and labour market outcome (Allmendinger, 1989). The expected outcome for VET graduates in this context is a less smooth transition from school to work and restricted job mobility across firms. Employers mostly do not rely on the certificates generated by these unstratified school systems. They train the newcomers from scratch in accordance with their specific needs. In summary, considering the VET graduates of the countries having stratified or unstratified schooling systems, it is argued that the graduates of the former system have more and perhaps better job opportunities when compared to the graduates of the latter system. But, as emphasised by Rubery and Grimshaw (2003:111), rather than attempting “to fit countries too neatly into one or other abstract models”, it is necessary to consider the complexities of country-specific approaches to the integration of education and employment and labour outcomes of VET graduates in these different contexts.

Regarding the connection of the industrial relations and skill systems, the role of trade unions and employer associations is important. For example, in LMEs such as the US, the decentralised system of industrial relations does not encourage social actors' involvement in the apprenticeship system (Bosch and Charest, 2008). On the contrary, collective action of industrial actors in CMEs is expected to guarantee a coordinated skill system. In the countries such as Germany, trade unions and employer associations play an active role in the planning of the system including the process of VET delivery and qualification of skills. In this way, they ensure the development of occupational skills portable across the industry. Japan is also categorised in the CME model. However, it has a different type of industrial relations in which enterprise-based unionism characterises the relationship between labour and management. This consequently is expected to result in a weaker role of industrial actors in shaping national skill system but rather fostering in-firm skill strategies. These institutional elements leading to different characteristics of countries confirm the need to develop more hybrid forms rather than neatly organised country clusters (Bosch and Charest, 2008).

2. Germany, Japan, Turkey: Three different skill systems

This section introduces a comparative analysis of three countries: Japan, Germany, and Turkey. The countries' skill systems are analysed within the framework of five dimensions derived from the literature (Table 2).

Table 2. Varieties of skill systems in the three focused countries

	Germany	Japan	Turkey
Governance & financing of training	Collective and coordinated system & Shared responsibility of firms and the state in funding	Employer-led governance & Firms' sponsorship	State-led governance & State sponsored
Primary place of vocational training	Dual system (Combination of workplace-based and school-based VET)	Firm-based training	School-based VET
VET status (national system)	Strong	Weak	Weak
Skill specificity	Industry-specific (Portable occupational skills)	Firm-specific skills (built on general skills)	Tendency towards industry-specific skills
Transition from school to work	Smooth	Smooth	Challenging

The governance and financing of VET refer to the specific roles of social partners (e.g. the state, employers, and unions) in decision-making in the design and delivery of the VET system, and in sponsoring the system. The state, in particular, may play different roles in training and development in different countries (Houwing et al., 2011) and is cited as the key 'transformative agency' (Lloyd and Payne, 2004). In this respect, Ashton and Green (1996:190) highlight the conflict and power relations operating within the state but also the existence of 'workable consensus' between the ruling political elite and leading employers. The motivation of employers to invest in the skill system is another important issue that

needs attention regarding financing of the VET. According to Whitley (1999:62), “the combination of a strong national vocational training system and high job security is particularly conducive to cumulative investments in skills on both a formal and informal basis”. This suggests that employers’ motivation can be linked to the level of employment protection and risk of skill poaching. High employment protection is expected to result in less skill poaching risk for employers and therefore more motivation for investment in employee skills.

The second dimension, the primary place of vocational training, refers to the place where individuals acquire vocational skills. The main distinction employed in this paper is the school-based and workplace-based training. The former means that individuals mostly acquire the required vocational skills by enrolling in an educational institution (high school, university, and training centre) that is officially regulated through the state acts. Workplace-based training, on the other hand, means that people acquire the required skills in a firm.

VET status, the third dimension, refers to an overall position of VET in the education system as well as its perception in the society. In some countries such as Germany, it may have a superior position as compared to general education and provide more opportunities in the sense of employability. This consequently encourages students and parents to consider the VET path. On the other hand, in some other countries such as the US, VET may have an inferior status such that individuals tend to choose this path as a last resort if they cannot succeed in general education. In such a case, VET becomes an option that ‘loser students’ of the education system choose.

The fourth dimension is skill specificity. This refers to the dominance of industry-specific or firm-specific skill. In a context where industry-specific skills dominate the labour market, collective action of industry actors (employers, unions) and the state is expected to define the standards and qualifications of particular skills in each industry. This also suggests the existence of a well-established certification system recognised by all social partners. Firm-specific skills’ dominance in the labour market, on the other hand, refers to the autonomy of individual firms to shape the skills in accordance with their needs.

The last dimension in Table 2 is the transition from school to work. Two inter-related issues are used to assess the transition of individuals: the effect of vocational education on increasing the chance of employability and employers' satisfaction in the post-employment period, that is, the graduates of the VET system and their employment process. At this point, the major issue that several countries struggle with is the concept of 'skill mismatch' that basically means that the skills supplied by the national skill system mostly do not match the requirements of employers (industry).

Before further discussion, it should be noted that these different dimensions discussed above are not independent but they are closely linked to each other, which concerns the 'system effect'. For example, the strong industrial relations system and social partnership in Germany classified as an OLM type model supports the skill system organised at the industry level and strong VET status. On the other hand, Japan classified as an ILM model has a strong enterprise unionism and firm-based skill system. Such a context consequently supports the generation of firm-specific skills. The following section will elaborate these two countries' institutional environments resulting in the different dimensions displayed in Table 2.

2.1. Germany

2.1.1. Governance and financing: The German skill system is historically defined as a collective and coordinated system (Thelen and Busemeyer, 2008). It is a strongly regulated system shaped by the joint decision of employers, trade unions and public authorities (Anderson and Hassel 2008). In other words, the system has private-public duality in the governance structure that means partnership among the social partners (the state, unions, employers, chambers) in the design and provision of the system and skill certification (Solga et al 2014). In this partnership, firms are financial sponsors of the skill formation at the workplace while the state controls the training process by executing regulations, assigning employer chambers to monitor the process, and funding the off-site schooling (Brown et al., 2001; Thelen, 2007). The state also monitors the enforcement of collectively defined standards and subsidises the provi-

sion of portable skills (Thelen and Busemeyer, 2008). Regarding this, the argument is that the role of the state has been changed from “neutral broker and facilitator’ between business and labour to more actively involved initiator and reformer” (ibid, 23). The chambers have the responsibility of administrating final exams of VET students. In addition to the active role of employers and public authorities, unions having a strong voice play an important role in skill formation process (Rubery and Grimshaw, 2003; Graf, 2013). They strongly support vocational training by collaborating with firms in terms of the development of the workplace training programmes. Social partnership at the industry level as well as national level also enables the effective coordination across all employers in the industry (coordination of wage and definition and certification of skills). At the firm-level, a wide-range of firms participates in and supports the skill formation system. In doing this, the main aim is to maintain the national standards in terms of content and quality and to generate transferable occupational skills. However, this does not mean that all firms have to provide the same type of training. For instance, large firms predominantly provide off-the-job training in a particular training centre while small sized firms prefer on-the-job training (Thelen 2007). In addition, the existence of a strong legal framework provides a crucial support for the German system (Rubery and Grimshaw, 2003).

Regarding the funding of the system, the state governments (*landers*) and employers share the cost of vocational training (Solga et al., 2004). Employers cover the costs of firm-based training including the cost of training staff and equipment while the state governments cover the costs of school-based components including the salary of teachers (ibid). In addition, they pay the wages apprentices (ibid). Apprentice wage is calculated as one-third of the starting salary for a trained skilled worker and it is regulated in separate collective agreements between social partners (Anderson and Hassel 2008; Hummelsheim and Baur 2014). Workers also support the system indirectly by accepting a lower payment during the training process (Rubery and Grimshaw, 2003).

An important issue regarding the financing of VET is firms’ motivation to invest in training. In this respect, the German skill system is defined to be a voluntarist system in which firms are not forced to train people (Anderson and Hassel 2008). But it is necessary to avoid the as-

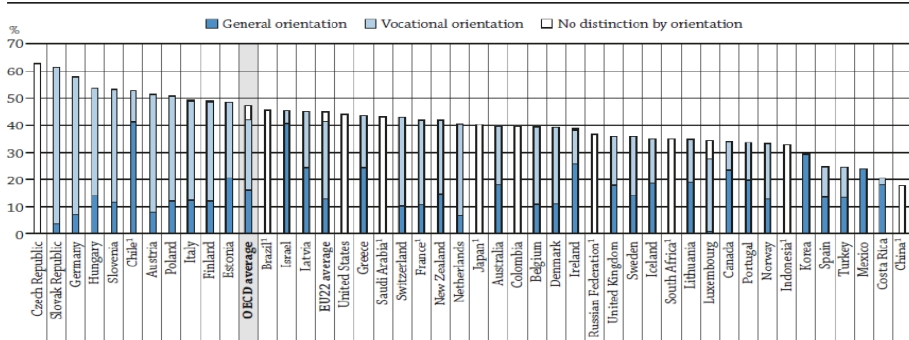
sumption that large and small firms adopt similar approaches towards investment in training. The training motivation of large and high productivity firms is mostly based on utilisation of high-skilled employees to meet the need of productivity and quality production and to generate a pool of skilled people (ibid). On the other hand, the motivation of small and artisan firms is characterised by utilising the cheap labour (ibid). Acemoglu and Pichke (1998) explain why employers in countries such as Germany want to engage in a nationally standardized training system by stressing the concept of 'labour market imperfection'. It means that in such countries, firms cannot compete through offering higher wages to employees as wage bargaining is coordinated collectively. This reduces the risk of skill poaching by offering a higher wage to skilled employees and consequently fosters firms' motivation to invest in training. Regarding the collectivist and voluntarist nature of the German skill system, however, Thelen and Busemeyer (2008) claim the deterioration of collectivism and decline in participation rates of firms in training. They state that the decentralisation of collective wage bargaining and liberalisation of labour markets loosen the close link between vocational training and collective bargaining and strengthen the firm-specific components in vocational training. In this context, firms tend to be less voluntarist in contributing to the national skill system and more motivated to train only for their own needs (ibid).

2.1.2. Primary place of vocational training: Individuals mostly acquire vocational skills through a dual system combining school-based vocational education with in-firm vocational training and lasting for three years (Solga et al., 2014). This system is widely known and associated with Germany in the international VET literature. The system is often praised due to its major characteristic of a duality in theoretical and practical knowledge acquired in vocational schools and workplaces (ibid). In this system, the school and the company collectively organise VET on theories and practice in parallel (Terada, 2012). Germany's legal framework also supports the system and achieves standardisation of skill formation through vocational training acts having the content of "the general conditions of vocational training, the duties and rights of apprentices and training firms, the recognition of training, financial aspects, dura-

tion and curriculum, and examination requirements” (Solga et al 2014:21). Powell et al. (2012) therefore speak of a highly institutionalized and standardised VET system in Germany. Regarding the standardisation of training, one important issue is the generation of transferable vocational skills and maintaining the national standards in terms of the content and quality (Thelen 2007). Firms are expected to comply with national standards but they are still flexible in terms of organising in-plant training. For example, large firms provide off-the-job training in a particular centre to apprentices while small-sized firms directly involve apprentices in the workplace by offering them on-the-job training facilities (ibid).

Although Germany’s VET system is formed of a combination of school-based education and in-firm training, it can be argued that firm-based training dominates the system as between three and four days of the week are allocated for firm-based training (60-80% of the training time) (Solga et al., 2014). In terms of the level of firm participation in training, Solga et al (2014) highlight the market-driven nature of the firm-based dual system and state that it is highly competitive like the normal labour market. Training places offered by firms are limited compared to the higher demand of youth searching for training (Hummelsheim and Baur, 2014; Thelen, 2007). According to the report of BIBB, “it is often believed that almost all German firms participate in training. This is definitely not the case... Only 56 percent of firms are authorized to provide firm-based VET programmes. Of these, only 54 percent actively trained young people in 2011. In total, only 25 percent of German firms employed at least one apprentice in 2011” (BIBB 2013: 221 in Solga et al 2014:8). As mentioned earlier, Thelen and Busemeyer (2008) point out the decreasing involvement of firms in vocational training. “The overall share of firms participating in apprenticeship training regardless of firm size and the economic sector has decreased significantly from 35 percent in 1993 to 26 percent in 2006” (ibid:9-10). Nevertheless, Thelen and Busemeyer (2008) warn that it is the small firms that mainly cause the overall decrease in training participation while large firms’ support has stayed constant or even increased.

2.1.3. VET status: Contrary to LMEs (e.g. the US and UK), in Germany, ‘academic education’ is not necessarily associated with ‘high status’, and similarly ‘vocational education’ is not associated with ‘lower status’ (Phillips and Ochs, 2003). On the contrary, the ‘vocational principle’ (*Berufsprinzip*) is known as the basis of the German skill system (Powell and Solga, 2011). Wagner (1999) points out the contribution of the vocational training system to Germany’s comparative advantage in quality production. This system has a priority status on the national policy agenda. Training under VET is acknowledged as an important source of “innovative strength and competitiveness” (Hippah-Schneider et al., 2009:13). In this system, apprentices are perceived as ‘quasi-employees’, rather than the academic losers choosing VET as the last resort (Powell and Solga, 2011; Powell et al., 2012). In accordance with this, VET has a major role and strong status in the German education system. According to the OECD indicators in 2014, the enrolment rate in upper secondary vocational education in Germany is 48% that is slightly higher than the OECD average (44%) (OECD, 2016). Moreover, Germany has the third largest proportion (51%) among OECD countries of 25-34 year-olds that have earned a vocational qualification at the upper secondary and post-secondary non-tertiary level as their highest degree (Figure 2) (ibid).



1. Reference year differs from 2015. Refer to the source table for more details.
 Countries are ranked in descending order of the percentage of 25-34 year-olds with upper secondary or post-secondary non-tertiary education as highest level of attainment, regardless of the orientation of the programmes.
 Source: OECD, Table A1.4. See Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).
 StatLink <http://dx.doi.org/10.1787/888933396593>

Figure 2. Percentage of 25-34 year-olds whose highest level of education is upper-secondary or post-secondary non-tertiary, by programme orientation (2015)

2.1.4. Skills specificity: The German VET system is known for its well-organised nature in providing “institutionally defined and nationally recognized, portable occupational skills and standardised skill credentials” (Buechtemann et al., 1993: 109). Accordingly, the system is associated with a ‘specific skill’ regime (Hall and Soskice, 2001); and ‘differentiated skill’ regime based on occupational training due to its high level of vocational specificity in the education system (Busemeyer, 2009). Important evidence in this sense would be the joint participation of social partners in designing the curricula for training profiles of more than 300 occupations (ibid). In this continuous process, employer associations and trade unions play an important role in devising new occupational profiles and reforming the older ones. This joint effort in organising the skill system enables the achievement of broadly defined industry specific training curricula and promotion of nationally defined standards while discouraging employers to teach narrowly defined firm specific skills (Solga et al., 2014). This high level of standardisation in skill formation and qualification strengthens the position of occupation-specific skills and facilitates transferability of skills across firms. Solga et al. (2014:7) note that this outcome is related to the nature of the German occupational labour market in which “access to jobs is highly structured by occupational certificates”. It means that there is a close link between specialised training and an individual’s employed area (Pilz et al., 2015). This link is strengthened by the *Berufskonzept*, “a concept of employment and training based on the structural integrity, uniformity and systematic nature of the skills development process” (ibid, 81). In this context, both employers and unions reward and benefit from occupation-specific skills in collective bargaining process (Solga et al., 2014; Anderson and Hassel 2008). For employers, the system enables them to tailor skill specification in accordance with their needs. Unions also benefit from the system by linking occupational classifications and wage rates and guaranteeing employment of trainees after completing their apprenticeship (ibid).

Although the German system is known for its dominance of occupation-specific skills, in recent years, employers have begun to require broader skills based on theoretical knowledge rather than narrowly specified vocational skills (Thelen, 2007). The firms’ requirement for ‘quicker ways of obtaining qualified skills’, has led them to question the length of

skill acquisition through the traditional German apprenticeship system (Lauder et al., 2008). Employers' concern for the strength and viability of the skill system has compelled policy-makers to develop new reforms to reduce costs and increase flexibility by redesigning apprenticeship occupations for new markets and updating existing qualifications. The state developed the 'New Vocational Act' in 2005 (Thelen 2007). Vocational schools' curricula have been revised with more focus on broad-based core subjects and less focus on a functional specialty. This new form of the VET system has enabled apprentices to acquire broader technical and general skills. Firms have become more flexible in terms of in-firm training by organising employee training on a relatively more 'modular level' (Hassel 2007). This implementation is expected to enable changes in skill formation and development practices in line with the changing skill requirements in terms of technology or industry needs while maintaining national quality standards.

2.1.5. Transition from school to work: The German VET system is defined to be a 'great success' for the labour market (OECD, 2016), as it is an effective path enabling a smooth transition from school to work as a result of firm-based apprenticeship and consequently fostering employability of individuals (Powell et al., 2012). As of 2015, Germany was one of the OECD countries having the lowest unemployment rate for 25-64 year-old adults with a vocational education at the upper secondary or post-secondary non-tertiary level (the unemployment rate is 4.2% in Germany and 7.7% across the OECD) (OECD, 2016).

The dual system is credited for a smooth transition from school to work. Solga et al. (2014) state that the system functions as the main entry into the labour market. The majority of school-leavers, in particular, enter the labour market through the dual system (Rubery and Grimshaw, 2003; Anderson and Hassel 2008). From the perspective of employers, it is perceived as an important source of occupational skilled labour for the industrial and service occupations. In 2012, 66 percent of the apprentices stayed at their firms after completing the apprenticeship programme (Solga et al., 2014). Acknowledging the function of the dual system in facilitating the transition to work, Powell et al. (2012) nevertheless warn that this system results in a less smooth transition when compared with

the past due to an increase in youth unemployment. Similarly, Busemeyer (2009) argue the existence of less smooth transition due to decentralization of collective bargaining, the decline in union density, and the decrease in firms' offering training place since the 1980s. As earlier mentioned, the changing skill demand of employers is also important in assessments of transitions. Graf (2013) states that the German system is criticised due to the lack of an effective and prompt response to employers' demand shifting towards more general skills. The German skill system is based on a stratified educational system separating academic and vocational training and urging students to choose either academic or vocational path (at an early age) (Busemeyer, 2009). Powell and Solga (2011) argue that this lack of permeability between VET and HE (higher education) is considered to be a barrier against a prompt response to the employers' changing skill demand. This, in turn, may have an adverse effect on the employability of VET graduates.

2.2. Japan

2.2.1. Governance and financing: The provision and supervision of the Japanese skill system are assumed to be the shared responsibility of the Ministry of Education, Sports, Culture, Science and Technology (MEXT) and the Ministry of Health, Labour and Welfare (MHLW) (Tsukamoto, 2016). However, unlike the concept *Berufskonzept* in Germany, Japan does not have the "independent and state-endorsed concept of vocational training" (Pilz and Alexander, 2011:269). The Japanese skill system does not have an independent law of vocational education and a consistent system of vocational education from secondary education to higher education (Terada, 2012). The system is weakly coordinated and co-determined at the national level but rather mostly organised at the firm-level. Even the public authorities are not closely linked to each other in terms of the coordination of skills. The Japanese government ministries (Administration of Education and the Administration Labour) do not have a shared agenda regarding the acquirable academic degrees and vocational qualifications (Terada, 2012). In this context, it is unlikely to achieve the 'institutionalisation of vocational education' (ibid).

Contrary to the collective system of Germany, the Japanese skill system can be defined as an employer-led model. Employers exert direct influence on vocational training and financially support it while the state rather plays a supplementary role in skill development by subsidizing the private training institutions and in-firm training (Koike, 1997). However, Tsukamoto (2016) highlights the changing role of the state and employers. The state started to play a more active role in the system by taking substantial steps to improve the quality of VET and develop better pathway between vocational schools and employment (ibid). After 2003, the two related ministries introduced the 'Japanese-version dual system', which is "apparently based on the German model", to fix the problems regarding 'the bridge of transition' from education to employment (Terada, 2012:109). The state recently started working on the development of new policies and establishment of new types of tertiary education institutions in VET- e.g. professional universities focusing on VET, vocational and practical professional courses certified by MEXT, professional high schools (Tsukamoto, 2016). The state's changing role in the Japanese VET system seems to support the argument of Levy (2006) who highlights the weakness of the VoC approach of Hall and Soskice (2001) and argues that they downplay the role of the state authorities in Japan while classifying it as the CME.

2.2.2. Primary place of vocational training: The Japanese training system is known as a strong firm-based system. The public vocational system is fairly weak when compared to general education (Witt, 2014). This, when considered together with the highly firm-specific nature of skills in the Japanese workplace (Dore, 2000), entails extensive training for individuals after their employment. "Firms are not only willing but also perceive it as a duty to offer comprehensive training to new recruits" (Pilz and Alexander, 2011:275). But Busemeyer (2009) highlights that firms primarily provide formalized on-the job training for entry-level employees. The firms offer actual skill formation programmes for those core employees at later stages after ensuring their permanent stay in the firm (ibid).

Japanese firms organise skill development through a mixture of on-the-job training (OJT), off-the-job training (offJT), and other different

methods including small group activities (Rubery and Grimshaw, 2003). OJT allows employees to learn by doing and acquire job-specific skills. It is commonly assumed that OJT is a form of informal training since it is held in the workplace rather than in a proper classroom. However, in the context of the majority of Japanese firms, it is often conducted through formal channels, which makes it as a specific characteristic of the Japanese firms. The companies arrange planned and scheduled OJT with clear objectives and responsibilities (Dore and Sako, 1989). In large firms, off-JT functions as complementary of OJT and tends to substitute school education (Pilz and Alexander, 2011).

2.2.3. VET status: Unlike the situation in Germany, the VET system does not have a special status in Japan. Vocational high schools are perceived as inferior when compared to general education (Lauglo, 1993). These schools are rather chosen by academically poor students as the second choice (Kariya, 1999). The gap in participation between vocational and generalist education has become wider over time. “College enrolment rose by 15.1 % between 1990–2009, while vocational student numbers fell by 19.0 % during the same period (Ministry of Education 2011)”. (Witt, 2014:10). The recent statistics also support this pattern. 20% of students in the senior secondary education choose VET path, and 20% of those choosing VET path go to university (Tsukamoto, 2016). Witt (2014) states that the Japanese VET system has not only a weak image at the national level, but it has also a weaker position at the international level. “For 2009, OECD statistics show 279,434 graduates from vocational and technical programmes at the upper secondary level in Japan less than two-thirds of the number for Germany (441,522), a country with about two-thirds of the population of Japan” (ibid:10). Similarly, in 2012, fewer students (23%) than the OECD average (46%) enrolled in VET in Japan at the upper secondary level (OECD-JAPAN, 2015).

2.2.4. Skills specificity: Japan displays the characteristics of the internal labour market (ILM) in which employees are associated with their firms rather than with their occupations. Therefore vocational skills are not nationally standardized but often defined as firm specific (Thelen and Busemeyer 2008). Japanese firms prefer to recruit young people with a

learning aptitude rather than job specific competence or experience since it is believed to be easier to train and mould such people in accordance with the Japanese working philosophy (Dore and Sako, 1989). Lynch (1994) refers to the quote of one transplant manager in a Japanese automotive firm illustrates the common Japanese approach to recruitment. He says: “Give us stable and dependable people with good heart, and we can make anything of them” (ibid, 130). It explains why Japanese firms tend to offer intense in-house training to the beginners. Accordingly, the firms do not complain regarding the job-specific skills of new graduates coming from the national education system as they recruit employees with general skills and provide them company-specific training (Crouch et al., 2001).

In addition to the labour market’s characteristics, Japan’s industrial relations system is influential in supporting the firm-specific skill regime. The existence of strong enterprise unions but weak industrial and national unions encourages employers to develop firm-specific training strategies (Busemeyer, 2009). Life-time employment is another factor that encourages firms to invest in skill formation for their employees and employee-employer collaboration in skill development (ibid). Unlike the German skill regime, the Japanese regime does not have effective mechanisms for official certification of skills. Although the Ministry of Labour carries out the exams for specific skills and certification for vocational skills, the aim is not to enhance job mobility but rather contribute to the individual satisfaction of employees (Dore and Sako, 1989). Highlighting the changes in recent years, however, Terada (2012) notes that qualification system of vocational education has become more important over time such that several ministries including the MEXT and MHLW attempt to formulate Japanese-version NQF (National Qualification Framework).

2.2.5. Transition from school to work: The Japanese skill system is a widely admired system perceived as a major contributor to a smooth transition from education to employment (Pilz and Alexander, 2011). Two issues are addressed as enabling the smooth transition: strong emphasis on the close relationship between schools and employers and flexible company-specific training building on general education delivered

in schools. One important characteristic of the Japanese system is the close and long-standing collaboration between high schools and employers in filling vacancies with appropriately qualified individuals (Kariya, 1999; Brinton and Tang, 2010). This collaboration is based on *jisseki kankei* (results-oriented relationship) between schools and employers (Brinton and Tang, 2010). This is a trust-based relationship influencing the chance of employability of individuals from particular high schools. Rosenbaum and Kariya (1989) define the relationship as a 'semi-formal employment contract' between the school and employer. This contract is not formal or written, but it exists between the related parties (ibid). By using this informal network with particular schools, employers start searching for the profiles of their candidates from an earlier period. Brinton and Tang (2010) argue that the national context of Japan fosters the close relationship between schools and employers. The stratified education system sorts students into relatively homogenous schools according to the quality of education and distinction of vocational and academic content (ibid). This serves as guidance for employers to search for candidates by collaborating with particular schools supplying potential candidates. Regarding this, the argument would be that graduation from a particular school becomes more important than graduation with certain vocational skills to increase employability. The nature of the labour market is also influential in encouraging a bilateral relationship between schools and firms. In the ILM context of Japan, firms offer a position to high-school graduates (ibid). Connected with this, the longstanding relationship between employer and (core) employees encourages companies to recruit the best candidates at the entry-level, have careful recruitment and selection process, and offer internal promotion over time. The principle of 'life-time employment' is an important driving force for employers in this sense to pay attention to recruitment and investment in training of individuals (OECD (2010)).

Changes in Japan's institutional context, however, are argued to adversely influence the transition from school to work especially in the sense of school-employer collaboration (Terada, 2012). Regarding these changes, Terada (2012) addresses the fluctuation in lifetime employment principle and employers' changed recruitment strategy from targeting high-school graduates to college or university graduates. As a response

to the weakening transition, the state introduced the 'Japanese-version dual system' after 2003 by attempting to align vocational education in high schools and training in companies. The related ministries organised the system between vocational high schools and local companies in about 20 prefectures throughout Japan, which is however yet to become an actual reform of VET (ibid).

The second important issue fostering smooth transition is flexible company-specific training building on general education delivered in schools. This is strongly related to recruitment strategies of firms. Recruitment and selection in Japanese companies are mostly based on general knowledge and general attitudinal skills (hard work, perseverance, loyalty) rather than vocational-specific skills that are already acquired through on-the-job training during employment (ibid). In this respect, the Japanese system can be considered as an idiosyncratic system "in which new employees are a blank template that can be shaped to the necessary skills profile in-house" (Pilz and Alexandre, 2011: 269). This suggests that vocational training is not necessarily a prerequisite for newly recruited employees, but it becomes important in later stages in skills acquisition and further training with companies (Kosugi, 2007). The issue of initial skills in employment, therefore, differentiates Japan from other countries such as Germany where the acquisition of vocational skills is a major prerequisite for employment. Due to the lack of vocational skills as pre-requirement in recruitment in Japan, it is also difficult to "attribute a clear employment value to an individual's school-leaving qualification" (Pilz and Alexandre, 2011:271).

2.3. Turkey

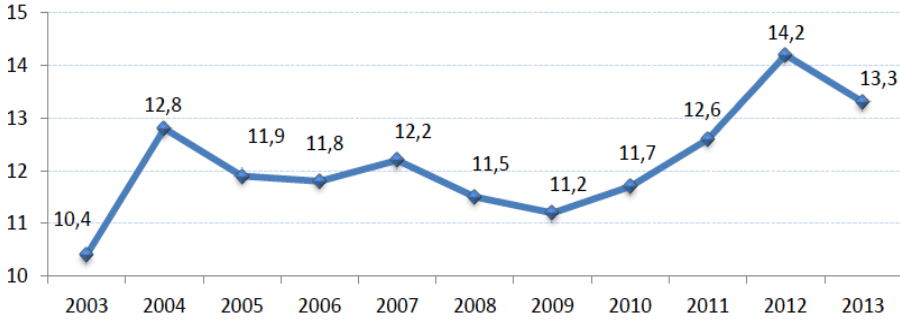
2.3.1. Governance and financing: The Turkish education system is known as having a centralized multilevel governance structure where the MoNE (Ministry of National Education) shapes the education policy at the secondary education level and the HEC at the tertiary level (OECD, 2013). Governance in the VET context concerns the decision-making and funding of the system. The state is the main decision-making authority at the national level in terms of coordinating the VET system. The Vocational Education Council affiliated to the MoNE makes decisions on the plan-

ning, development, and evaluation of VET (ETF, 2014:39). The council has members from different social partners including the relevant ministries, trade unions and employer associations, and chambers of industry and trade.

At the local level, 'Provincial Employment and Vocational Education Board' (PEVEB) serves as an important governance and communication mechanism bringing stakeholders together. Members of this board include representatives of trade unions and employers' organisation, industry chambers, universities, and local government agencies. This board is officially authorized to make local-level VET decisions and deliver these decisions to the MoNE for approval (MEB Mevzuat, 2011). The board revises the changing needs of vocational schools at different provinces. It determines which particular fields need to be launched in vocational schools to meet skill need of the industry at that particular city or region and then conveys its decisions to the MoNE. In other words, this board revises both employment and education policies at the local level. In this sense, it has an important role in overall VET system by acting as a bridge between business and education. The existence and function of the PEVEB can be read as a sign of decentralization of the VET system- i.e. delegation of the authority from centre to social partners at the local level. Although the MoNE, as the state agency, holds the control of governance at the national level, it seems to delegate authority to the PEVEB at the local level.

Regarding the funding of VET, the state is the main actor and official sponsor shaping the system by covering the cost of education in vocational schools and training centres and paying the salary of vocational teachers. The main source of funding is provided through the national budget allocated to VET and supported by international projects to education, the private sector and NGOs, and the revolving fund enterprises in schools (ETF, 2014:47). With the aim of strengthening the VET system, the state dramatically increased the budget allocation for VET in overall education between 2009 and 2012 (Figure 3). This investment increase can be considered as an indicator reflecting the growing importance of VET in Turkey and substantial support of the state for this type of education. The agreement signed between the MoNE and MoSIT in 2012 enabled NGOs to establish private vocational schools in organised industrial

zones. This situation may be one of the reasons explaining the dramatic decrease of budget allocation between 2012 and 2013, creating external sources of funding for VET.



Source: MoNE (2014)

Figure 3. *The share of budget allocation for vocational and technical education from overall budget of MoNE (%)*

2.3.2. Primary place of vocational training: Vocational high schools, colleges, and public training centres are the main institutions offering vocational education in Turkey. One specific characteristic of vocational education in schools is that classrooms inside the schools are differentiated between laboratories (firm-sponsored classes) and state-sponsored classes. In addition to vocational education, students gain practical skills during their training at the workplace and this is regulated by the Law No 3308³ imposing obligations to firms in terms of providing vocational training to the students.

Three options are available for the students following the VET path to acquire basic vocational knowledge and skills: laboratories, dual vocational training centres, and the state-sponsored classes in vocational schools. Laboratories, firm-sponsored classes located in vocational schools, are considered as a form of school-based VET system because

³ The 3308 Vocational Education Act (1986) defines firms' relationship with the VET system. According to Article 18 of this Act, enterprises with more than twenty employees are obliged to provide vocational training to final-year students in the workplace during one academic year and pay one-third of the national minimum wage to each student during this period. Source: <http://mevzuat.meb.gov.tr/html/3.html> (Access date: 22.02.2016)

the majority of students' learning takes place in the school while they receive workplace training only in the final-year. In this final year, the students spend three weekdays of the week for vocational training at the workplace while completing vocational education for two weekdays. After completing the 9th grade (typically age of 14-15) students apply to the firms' laboratories to pursue the education in these special classes. In collaboration with teachers of vocational schools, the firms select the most successful 20-30 students on the basis of several criteria including the students' national exam score⁴, the 9th grade point average, face-to-face interviews, and absenteeism records of the 9th grade. This may indicate how the laboratory model is institutionalised and how firms take it as serious.

As an alternative to laboratories, students may choose the path of dual VET system after the 9th grade. The dual system is an example of the enterprise-based VET system because the majority of learning takes place at the enterprise. In this system, the students sign a three-year contract with a particular workplace to receive practical training while continuing theoretical education in dual vocational education centres mostly located inside a vocational school. During three years, the students spend two days at a dual centre and three days at the workplace. The selection process of students in the dual VET system is similar to the process of laboratories. A number of students apply to firms' laboratories or dual training centres and the firms select the most successful ones among the applicants. However, the firms also promote themselves to the students by visiting vocational schools and introducing their opportunities. In other words, they compete with other firms in attracting the successful students. Since a limited number of students are accepted to these firm-supported training programmes, the remaining students continue their education in the state-sponsored classes.

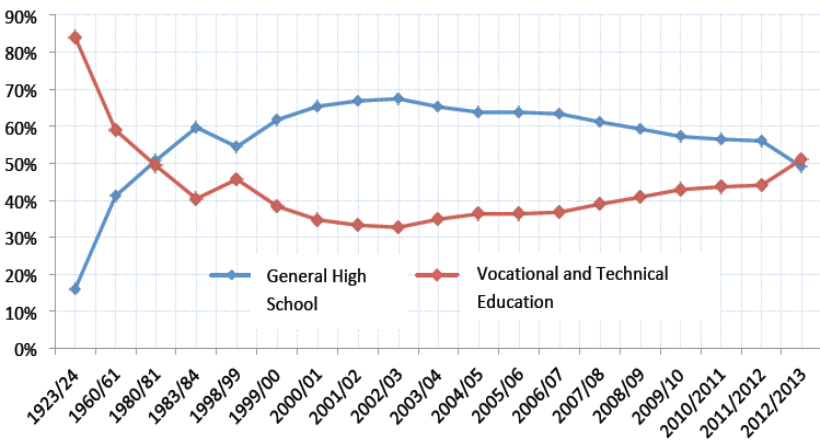
What makes the laboratory model or dual VET system prestigious is an important issue to understand the students' motivation to be selected. One major advantage the students gain in these models is employability because the firms prioritize employment of the graduates of their own

⁴ Students take this exam when they are in the 8th grade of national education. The exam determines which type of high school (e.g. general, vocational and science-based) the students will pursue their education.

training programmes. In addition, in the laboratories or dual training centres, the students receive more quality and updated education linked with workplace experience due to the firms' support when compared with those students in the state-sponsored classes. This enables them to be employed in several other firms in the industry. Comparing the dual system with laboratory model from students' perspective, it appears that the dual system offers more workplace experience to students as the students spend three days of the week at the workplace during the three-year programme. In the laboratory model, on the other hand, students receive workplace training in their final year. This difference also has an implication in students' payment during the training process. As introduced earlier, firms are legally required to pay one-third of the national minimum wage to students during OJT. The students of the laboratory model benefit from this regulation for one year- i.e. their final year. The firms implementing the dual VET system, on the other hand, provide three-year financial support to their students. Additionally, the graduates of the laboratories are only awarded high school diploma and a firm-specific certificate influential in their employment of that particular firm whereas the graduates of the dual system are additionally awarded a journeyman's certificate if they successfully pass the required exams. This certificate is an official requirement for individuals who want to acquire the status of 'master craftsman' in a later period and run their own business (become self-employed). The journeyman's certificate paves the way of craftsmanship and provides to the graduates the opportunity of beginning their own business.

2.3.3. VET status: VET has been the subject of heated debate in Turkey for decades. Although the majority of Turkish society agrees on the fact that the VET system plays a crucial role in the country's national development, the system is still far from the positive status where it is expected to be. In order to understand why this is the case, it is important to adopt a historical perspective (see Appendix 2). One of the most influential turning points of the Turkish VET system is the decision of the Higher Education Council (HEC) in 1999 to change the regulation for VET graduates' entrance to the university. Actually, this decision was an indirect effect of the HEC's decision to change the examination system

for the university entrance. Before 1999, the system was formed of two stages whereby students had to take two different exams at different times. In this system, the students were free to choose any field to study in the university regardless of their graduation field. In 1999, the HEC introduced a new examination system formed of single stage and implemented the concept ‘weighted high school grade point average’ while calculating the students’ scores for the university entrance (Ozdemir, 2010). According to this new system, VET graduates were placed in a disadvantageous position in the university entrance exams by losing points if they opted a different field to study in a university other than their graduation field. In such cases, a different coefficient was implemented in the calculation of the graduates’ overall scores for the exam. Kenar (2010) argues that this new regulation has been one of the key factors resulting in a dramatic decrease in the enrolment rate of students choosing vocational education as compared with the enrolment rate in general high school (see Figure 4). In other words, VET became less attractive after the legal changes of 1999 (Winterton, 2006).



Source: MoNE (2014)

Figure 4. Distribution of general and vocational and technical high school students in secondary education (%)

The HEC’s coefficient decision for VET graduates is considered as a follow-up step of the breakpoint event known as ‘28 February Process’

(MEB, 2015), the time period when “the last ‘post-modern military intervention’ took place in 1997 which aimed at curbing the growth of political Islam in Turkey” (Yucel, 2002 in Sozen and Shaw, 2003:110). Considering the political context of Turkey at that time, the ‘coefficient implementation’ of HEC is perceived as an adverse impact of political attempts on the VET system. Dogan and Yuret (2015) state that the decision of the HEC was interpreted as a deliberate obstacle against graduates of religious vocational schools (*‘imam-hatip liseleri’* in Turkish) that are officially labelled in ‘vocational school’ category, and therefore the decision influenced all VET graduates in a negative way.

2.3.4. Skills specificity: There is an on-going effort in Turkey to institutionalise skill qualifications and to create an OLM model. It has a national vocational qualification system (VQS) that covers the definition of national vocational standards, the adaptation of vocational education and training in line with these standards, and certification of skills according to the defined standards. The Vocational Qualifications Authority (VQA), a public institution, is the authorised agency coordinating the whole process by monitoring and evaluating the activities related with the system. However, the governance of VQS has a consensus-led model whereby social partners including the representatives of employer associations and unions are also involved in each stage of the decision-making process.

The VQS is formed of two main steps. The first step is the definition of standards and qualifications. Particularly, employer associations and trade unions play an active role in this step. In order to determine specific requirements of a vocation, these actors may conduct fieldwork through plant visits and collect data on the site by talking with employees, team leaders, and managers. Alternatively, a specific method called DACUM⁵ (developing a curriculum) is employed for the definition of vocational standards. In this model, instead of working in the field, the

⁵ *Developing a Curriculum (DACUM) is a process that incorporates the use of a focus group in a facilitated storyboarding process to capture the major duties and related tasks included in an occupation, as well as, the necessary knowledge, skills, and traits. This cost-effective method provides a quick and thorough analysis of any job.*

Source: <http://facilitation.eku.edu/what-developing-curriculum-dacum> (Access date: 28.04.2016)

responsible actors invite people from the industry and establish a commission to discuss the minimum requirements of a vocation. Once all social partners including the NGOs and actors from industry and education agree on defined standards, the VQA informs the education agencies (the MoNE at the secondary level and HEC for tertiary education) so they can adapt the VET curriculum in line with the industry's requirement. The second step of VQS is the certification that refers to the official recognition of skills. VQA acts as the coordinating body in the process of examination and certification. However, the institutions accredited by the VQA perform the actual task of providing certification to individuals who want to validate their skills.

2.3.5. Transition from school to work: Youth unemployment and skill mismatch are two major issues that can be considered as strongly related to the transition from school to work in the Turkish context. According to the recent official records, youth unemployment (15-24) is 24.5% in Turkey (TUIK, 2017), which is almost twice the rate of OECD average (13%) (OECD, 2016). VET graduates' unemployment rate is 14.6%, which is slightly lower than the rate of the graduates of general education (15.4%) (TUIK, 2017). In addition to the high unemployment rate of VET graduates, skill mismatch is another issue that Turkey needs to deal with urgently. The concept of skill mismatch refers to a mismatch between skill supply of the VET system and skill demand of the industry. Despite the high number of graduates looking for a job, employers still struggle to find qualified employees that meet their skill requirements. Shared complaint of employers is that education delivered in vocational schools mostly does not match the requirements at work. Aytas (2014) notes that skill mismatch has become an important issue recently in Turkey, but very limited number of studies and official reports focused on this issue. The major source of the mismatch problem is the weak coordination between the VET curriculum and the skill need of the industry. Accordingly, the state initiated a number of projects to improve the VET system and deal with the skill-related problems (see Appendix 2 for the list of these projects).

In the sense of coping with high youth unemployment, the state took an important step and initiated the UMEM project in 2010 (*Uzmanlaşmış*

Meslek Edindirme Merkezleri- Specialised VET Centres for Employment). This project is a prominent example of the private sector's active engagement in skill generation by cooperating with public actors (UNDP, na). The main partners of the project are the Turkish Union of Chambers and Commodity Exchanges (TOBB), Turkish Ministry of Labour and Social Security, Ministry of Education and TOBB Economy and Technology (TOBB-ETU) University. The project is also known as the first project in Turkey in the sense of the skills need analysis of the industry at the provincial level as a result of the connection between VET actors and 500 firms from 19 cities providing 80% of the employment in Turkey and examining the skill needs of these firms (Diççag, 2011). Since 2011, as the outcome of the project, about 4,682 courses have been started and 31,125 people have been employed (UNDP, na).

In response to skill mismatch, another important step of the state is the on-going work of establishing the National Qualification Framework (NQF) and changing the curriculum of VET in accordance with this framework. The framework is jointly designed by social partners with an aim to develop a qualification system that is sustainable and comprehensive for skills in all sectors. This consequently seems promising to fix the skill mismatch problem. The whole process of aligning the qualification system with vocational education requires the VQA and the MoNE to work closely, which is yet to be achieved.

Conclusion

This paper focused on varieties of skill regime in different countries. The paper introduced the debate on the well-known distinction of Hall and Soskice who classify countries as LMEs and CMEs. However, it is seen that such distinction does not fully inform about different characteristics of the countries classified in the same group. Germany and Japan are covered as two distinct examples in this sense. Both of the countries are defined as CMEs. But, as elaborated in the second section of the paper, the countries reveal substantial differences on several dimensions including governance and financing, skill specificity, and VET status. Germany has a nationwide VET system supported by OLM whereas Japan is known with its firm-based system fostered by ILM. The paper intro-

duced the characteristics of Turkey on the basis of the same dimensions. Turkey has a dominantly state-led VET system with an attempt of establishing OLM but nevertheless suffering from skill mismatch and low VET status.

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