

KOF Swiss Economic Institute

The KOF Education System Factbook:
Spain

Edition 1, March 2019

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List of Abbreviations

CVET	Continuing Vocational Education
EU	European Union
GCI	Global Competitiveness Index
GII	Global Innovation Index
GDP	Gross Domestic Product
IMF	International Monetary Fund
IVET	Initial Vocational Education
ISCED	International Standard Classification of Education
KOF	Swiss Economic Institute
LOE	Ley Orgánica de Educación (span. Organic Law on Education)
LOMCE	Ley Orgánica para la Mejora de la Calidad Educativa (span. Organic Law for the Improvement of Educational Quality)
LOU	Ley Orgánica de Universidades (span. Organic Law on Universities)
OECD	Organisation for Economic Co-operation and Development
PET	Professional Education and Training
UNESCO	United Nations Educational, Scientific and Cultural Organization
VET	Vocational Education and Training
VPET	Vocational Professional Education and Training
VPETA	Vocational and Professional Education and Training Act
WEF	World Economic Forum
YLMI	Youth Labour Market Index

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FOREWORD

The increasing competitiveness of the world economy as well as the high youth unemployment rates after the worldwide economic crises have put pressure on countries to upgrade the skills of their workforces. Consequently, vocational education and training (VET) has received growing attention in recent years, especially amongst policy-makers. For example, the European Commission defined common objectives and an action plan for the development of VET systems in European countries in the *Bruges Communiqué on Enhanced European Cooperation in Vocational Education and Training for 2011-2020* (European Commission, 2010). In addition, a growing number of US states and other industrialized, transition, and developing countries (for example Hong Kong, Singapore, Chile, Costa Rica, Benin and Nepal) are interested in either implementing VET systems or making their VET system more labour-market oriented.

The appealing outcome of the VET system is that it improves the transition of young people into the labour market by simultaneously providing work experience, remuneration and formal education degrees at the secondary education level. If the VET system is optimally designed, VET providers are in constant dialogue with the demand-side of the labour market, i.e. the companies. This close relationship guarantees that the learned skills are in demand on the labour market. Besides practical skills, VET systems also foster soft-skills such as emotional intelligence, reliability, accuracy, precision, and responsibility, which are important attributes for success in the labour market. Depending on the design and permeability of the education system, VET may also provide access to tertiary level education (according to the ISCED classification): either general education at the tertiary A level or professional education and training (PET) at the tertiary B level. PET provides occupation-specific qualifications that prepare students for highly technical and managerial positions. VET and PET systems are often referred to together as “vocational and professional education training (VPET)” systems.

Few countries have elaborate and efficient VPET systems. Among these is the Swiss VPET system, which is an example of an education system that successfully matches market supply and demand. The Swiss VPET system efficiently introduces adolescents to the labour market, as shown by Switzerland’s 2007-2017 average youth unemployment rate of 8.1 percent compared to 14.8 percent for the OECD average (OECD, 2017a).

Though not many countries have VPET systems that are comparable to Switzerland’s in terms of quality, efficiency and permeability, many have education pathways that involve some kind of practical or school-based vocational education. The purpose of the KOF Education System Factbook Series is to provide information about the education systems of countries across the world, with a special focus on vocational and professional education and training.

In the KOF Education System Factbook: Spain, we describe Spain's vocational system and discuss the characteristics that are crucial to the functioning of the system. Essential components comprise the regulatory framework and the governance of the VPET system, the involved actors, and their competencies and duties. The Factbook also provides information regarding the financing of the system and describes the process of curriculum development and the involved actors.

The Factbook is structured as follows: First, we provide an overview of Spain's economy, labour market, and political system. The second part is dedicated to the description of the formal education system. The third section explains Spain's vocational education system. The last section offers a perspective on Spain's recent education reforms and challenges to be faced in the future.

EDITING AND ACKNOWLEDGEMENTS

This Factbook is edited by Johanna Kemper. We want to thank Guy Fleury for the elaboration of the contents, and Clair Premzic for the language and content editing. Without you, the realization of this Factbook would have been impossible!

The KOF Education System Factbooks has to be regarded as work in progress. The authors do not claim completeness of the information which has been collected carefully and in all conscience. Any suggestions for improvement are highly welcome!

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Suggested citation:

KOF Swiss Economic Institute (year). KOF Education System Factbook: Spain. KOF Education System Factbooks, ed. 1. Zurich: Swiss Federal Institute of Technology.

1. The Spanish Economy and its Political System

One of the main purposes of an education system is to provide the future workforce with the skills needed in the labour market. The particularities of a country's economy and labour market are important factors determining the current and future demand for skills. Therefore, these will briefly be described in the first part of this Factbook. In addition, this part provides an overview of the Spanish political system with emphasis on the description of the education politics.

1.1 The Spanish Economy

In 2016, the Spanish Economy had a below average domestic product (GDP) per capita compared to the average of the European Union (EU) (US\$ 32,777¹ versus US\$ 35,384 of the EU or US\$ 38,158 OECD average (OECD, 2018a). From 1990 to 2016, the Spanish economy grew each year similarly to the OECD members with an average growth rate of 2.1 percent (World Bank, 2018a).

According to the KOF Index of Globalisation², Spain experienced a vast increase in economic globalisation from 1970 to 2000, outperforming the world average. The index developed from a value of 37.7 (World average: 39.7) in 1970 to 74.9 (World average: 54.2) in 2000. Since post millennium, the economic globalisation growth came to a halt and decreased slightly. In 2015, Spain ranked 36 out of 209 countries evaluated by the KOF globalization index with an index value of 73.4 (World average: 56.2) (KOF, 2018). The Spanish economy is still struggling with the consequences of the financial crisis in 2007/08. It did not recover as quickly as other countries in the EU. However, today, real GDP is growing and recovery is underway. Thanks to the recent stronger economic growth, the unemployment rate gradually decreased from 26.1 percent in 2013 to 19.6 percent in 2016, which is still at a high level compared to the OECD average of 6.3 percent (OECD, 2017b). The IMF expects the unemployment rate to further decrease from 17.2 percent in 2017 to 13.6 percent until 2023 (IMF, 2018).

Table 1 shows gross value added and employment by sector for Spain and the EU28 average for 2017. The tertiary sector accounts for the largest share of (around 78 percent) of total employment and gross value added (73.3 percent), which is typical for a developed country. The same pattern holds for the EU28 countries on average. However, it also stands out that

¹ Constant prices, constant purchasing power parity (PPP), reference year 2010.

² The KOF Index of Globalization measures the economic, social and political dimensions of globalization, observes changes in the globalization of a series of countries over a long-term period. Based on 23 variables, the KOF Index of Globalization 2017 covers 187 countries and relates to the period 1970 to 2014. The Index measures globalization on a scale from 1 to 100.

Spain's primary sector accounts for a larger share of gross value added, while for a smaller portion of total employment if compared to the EU28. Within the tertiary sector, the sub-sector wholesale, retail trade and hospitality services has a particularly high share in terms of value added and employment, most probably due to the important tourism industry. Overall, the distribution in added value and employment is somewhat similar to that of the EU28 average in 2017.

Table 1: Value added and employment by sector³, 2017

Sector	Spain: Value added (%)	EU-28: Value added (%)	Spain: Employment (%)	EU-28: Employment (%)
Primary sector	2.9	1.6	4.0	4.4
Agriculture, hunting and forestry, fishing	2.9	1.6	4.0	4.4
Secondary sector	23.9	25.0	17.9	21.6
Manufacturing, mining and quarrying and other industrial activities	18.1	19.6	12.2	15.3
of which: Manufacturing	14.4	16.3	10.9	13.8
Construction	5.8	5.4	5.7	6.3
Tertiary sector	73.3	73.5	78.0	73.9
Wholesale and retail trade, repairs; hotels and restaurants; transport; information and communication	27.8	24.2	32.9	27.7
Financial intermediation; real estate, renting & business activities	23.2	27.3	15.0	16.5
Public administration, defence, education, health, and other service activities	22.3	22.0	30.1	29.7

Source: Eurostat (2018a; 2018b).

Figure 1 shows the historical development of employment by sector from 1991 until 2017. The importance of the tertiary sector increased gradually since the 1990s (from 56 percent in 1991 to almost 77 percent in 2017), whereas the importance of the secondary and primary sector in that time period diminished (from almost 33 percent to 19 percent and from almost 11 percent to 4 percent). The decline of employment in the primary and secondary sector highlights the development of an economy from an industrial to a more service-driven economy.

³ Due to rounding differences, the sum of all sectors falls above or below 100 percent.

Figure 1: Employment by sector (as % of total employment), 1991-2017



Source: (World Bank, 2018b).

In the Global Competitiveness Index (GCI) of the World Economic Forum (WEF), Spain was ranked 34th. Compared to the rest of Europe and North America, the country invests less in innovation and has an inimical macroeconomic environment and labour market inefficiencies (WEF, 2016). Spain's economy stands out in terms of travel and tourism competitiveness, where it got top ranked in 2017. The country can benefit from the vast cultural and natural resources and a well-established infrastructure (WEF, 2017).

Regarding the innovativeness of the economy, the Global Innovation Index (GII) ranks Spain at 28 out of 127 countries (Dutta, Lanvin, & Wunsch-Vincent, 2017). The GII considers the regulatory barriers for starting a business as well as the low degree of innovation linkages in business sophistication as the main factors restraining the full innovative potential of the economy.

1.2 The Labour Market

In the first part of this section, we will describe the general situation of Spain's labour market. In the second part, we will refer to the youth labour market in particular.

1.2.1 Overview of the Spanish Labour Market

The financial crisis in 2007/08 hit the Spanish labour market, leading to a high unemployment rate in the following years, in particular a high youth unemployment rate. Since 2013, the unemployment rate has been gradually decreasing. However, the duality of the labour market—with a high share of temporary employed workers on the one and the residuum share of incumbent workers who are well protected through employment protection on the other hand—creates an insecure environment (OECD, 2017b).

The OECD Index of Employment Protection is a multidimensional index that quantifies the strictness of Employment Protection legislation (EPL) across countries. It is scaled between

zero to six, where zero refers to a low level of EPL, and six to a high level of protection. According to the 2013 *OECD Index of Employment Protection* for regular contracts, Spain is among the moderately regulated economies and ranks 24 out of 68 countries with an index value of 2.05 compared to the OECD average of 2.04. For temporary contracts Spain is more regulated than the OECD average with an index value of 2.56 compared to 1.72 (OECD, 2018b). The right to collective bargaining and the freedom of association as well as minimum wage, hours of work and safety standards are enforced through the Ministry of Employment and Social Security. The national minimum wage was \$8,648.64 per year in 2015 (US Department of State, 2016).

Table 2 shows the labour force participation and unemployment rates for Spain and the OECD average for the year 2016. In 2016, the Spanish labour force participation rate (15-64 years) was above the OECD average with 19.7 percent compared to 6.5 percent. The labour market integration of young workers (15-24 years) in Spain was more than 10 percent lower than the OECD average. Only 36.9 percent of the Spanish young workers were either actively searching for a vacancy or were in employment (OECD average: 47.2 percent). In 2016, the overall unemployment rate (15-64 years) of 19.7 percent was significantly higher than the OECD average of 6.5 percent. Especially the Spanish youth unemployment was excessively high with 44.4 percent compared to the OECD average of 12.9 percent.

Table 2: Labour force participation rate, unemployment rate by age 2016

Age Group	Labour force participation rate		Unemployment rate	
	Spain	OECD average	Spain	OECD average
Total (15-64 years)	75.4	71.7	19.7	6.5
Youth (15-24 years)	36.9	47.2	44.4	12.9
Adults (25-64 years)	81.2	77.3	18.0	5.6

Source: OECD (OECD, 2016).

Globalisation and technological advances are fundamentally restructuring labour markets, which leads to a polarisation of both high- and low-skill jobs, whereas the share of middle-skill and middle-salary jobs declines. Keeping up with this evolution is a challenge and requires a broad understanding of the labour markets. Especially the labour market resilience is gaining in importance after the recent financial crisis (OECD, 2017d).

Table 3: Labour force participation rate, unemployment rate by educational attainment, 2015 (persons aged 25-64)

	Labour force participation		Unemployment rate	
Education Level	Spain	OECD average	Spain	OECD average
Less than upper secondary education	72.6	63.6	28.9	12.4
Upper secondary level education	83.8	80.1	19.2	7.3
Tertiary education	89.66	88.0	12.4	4.9

Source: (OECD, 2017c).

Table 3 shows the unemployment and labour force participation rate in Spain compared to the OECD average for 2015. Not only for lower qualified, also for workers with a tertiary education, relatively high unemployment rates could be observed. This despite the fact that the risk of becoming/ being unemployment normally decreases with a higher level of education.

1.2.2 The Youth Labour Market

The KOF Swiss Economic Institute developed the KOF Youth Labour Market Index (KOF YLMI) to compare how adolescents participate in the labour market across countries (Renold et al., 2014). The foundation for this index is the critique that a single indicator, such as the unemployment rate, does not suffice to describe the youth labour market adequately nor provide enough information for a comprehensive cross-country analysis. To increase the amount of information analysed and to foster a multi-dimensional approach, the KOF YLMI consists of twelve labour market indicators⁴ that are grouped into four categories.

Dimensions of the KOF YLMI
Activity state <ul style="list-style-type: none"> - Unemployment rate - Relaxed unemployment rate⁵ - Neither in employment nor in education or training rate (NEET rate)
Working conditions <p>Rate of adolescents:</p> <ul style="list-style-type: none"> - with a temporary contract - in involuntary part-time work - in jobs with atypical working hours - in work at risk of poverty⁶ Vulnerable unemployment rate⁷
Education <ul style="list-style-type: none"> - Rate of adolescents in formal education and training - Skills mismatch rate
Transition smoothness <ul style="list-style-type: none"> - Relative unemployment ratio⁸ - Long-term unemployment rate⁹
Source: Renold et al. (2014).

The first category describes the *activity state* of youth (ages 15-24 years old) in the labour market. Adolescents are classified according to whether they are employed, in education, or neither (unemployed, discouraged and neither in employment nor in education or training; see info box to the right). The category *working conditions* and the corresponding indicators reflect the type and quality of jobs the working youth have. The *education* category accounts for the share of adolescents in education and training and for the relevance of their skills on the labour market. The fourth category, *transition smoothness*, connects the other three categories by capturing the school-to-work transition phase of the youth. Each country obtains a score of 1 to 7 on each particular indicator of the KOF YLMI. A higher score reflects a more favourable situation regarding the youth labour market and a more efficient integration of the youth into the labour market.

One of the major drawbacks of the KOF YLMI is data availability. When data is lacking, a category can occasionally be based on a single indicator or must be omitted entirely when not a single indicator for that category exists in a given country. A lack of indicators can make

⁴ The data for these indicators are collected from different international institutions and cover up to 178 countries for the time period between 1991 and 2012.

⁵ It is calculated as the number of unemployed and discouraged workers as a share of the entire labour force. Discouraged workers have given up the search for work (not actively seeking), although they have no job and are currently available for work (also: "involuntary inactive").

⁶ Those who cannot make a decent living out of their earnings, being at risk of poverty as a percentage of the working population.

⁷ Share of the employed population working on their own account or those working in their family business and thus contributing to the entire family income. Both are less likely to have formal work arrangements and are therefore less protected by labour laws and more exposed to economic risk.

⁸ Is defined as the youth unemployment rate (15-24 years) as a share of the adult unemployment rate (25+). If the youth cohort is affected in the same way than the adult group with respect to unemployment, then the relative unemployment ratio will be equal to one. If the youth are relatively more affected, then the ratio will be bigger than one.

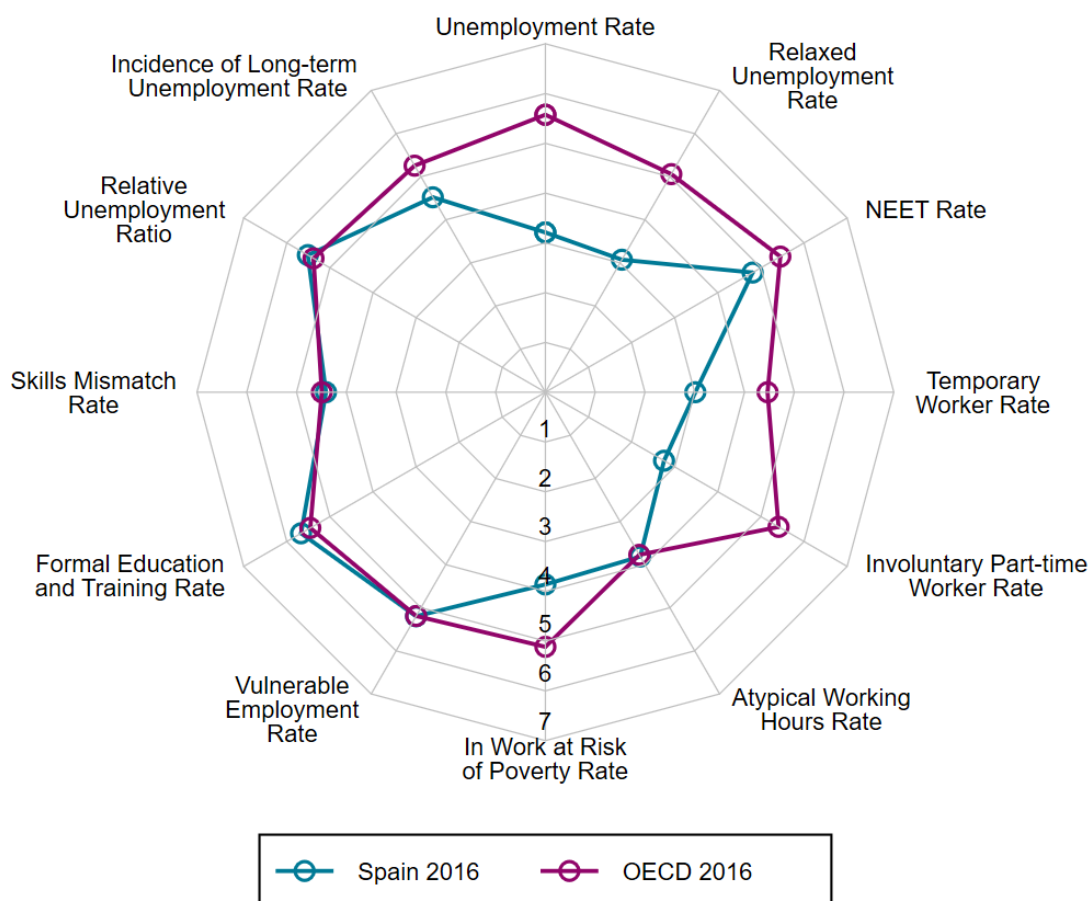
⁹ Those unemployed for more than one year (52 weeks) in the total number of unemployed (according to the ILO definition).

comparisons across certain countries or groups of countries problematic and sometimes even impossible.

1.2.3 The KOF Youth Labour Market Index (KOF YLMI) for Spain

The KOF YLMI for Spain could be derived based on all 12 indicators. Therefore data availability is given. Spain's youth labour market scores mostly below OECD averages for the indicators in focus, as illustrated in Figure 2. Especially the involuntary part-time work rate and the unemployment rate show the biggest discrepancy, where Spain's KOF YLMI score is below the OECD average. In terms of the relative unemployment ratio, the skills mismatch rate, vulnerable employment rate and atypical working hours rate, Spain scores around OECD average. The formal education and training rate is slightly higher in Spain.

Figure 2: YLM Scoreboard: Spain versus OECD average, 2016

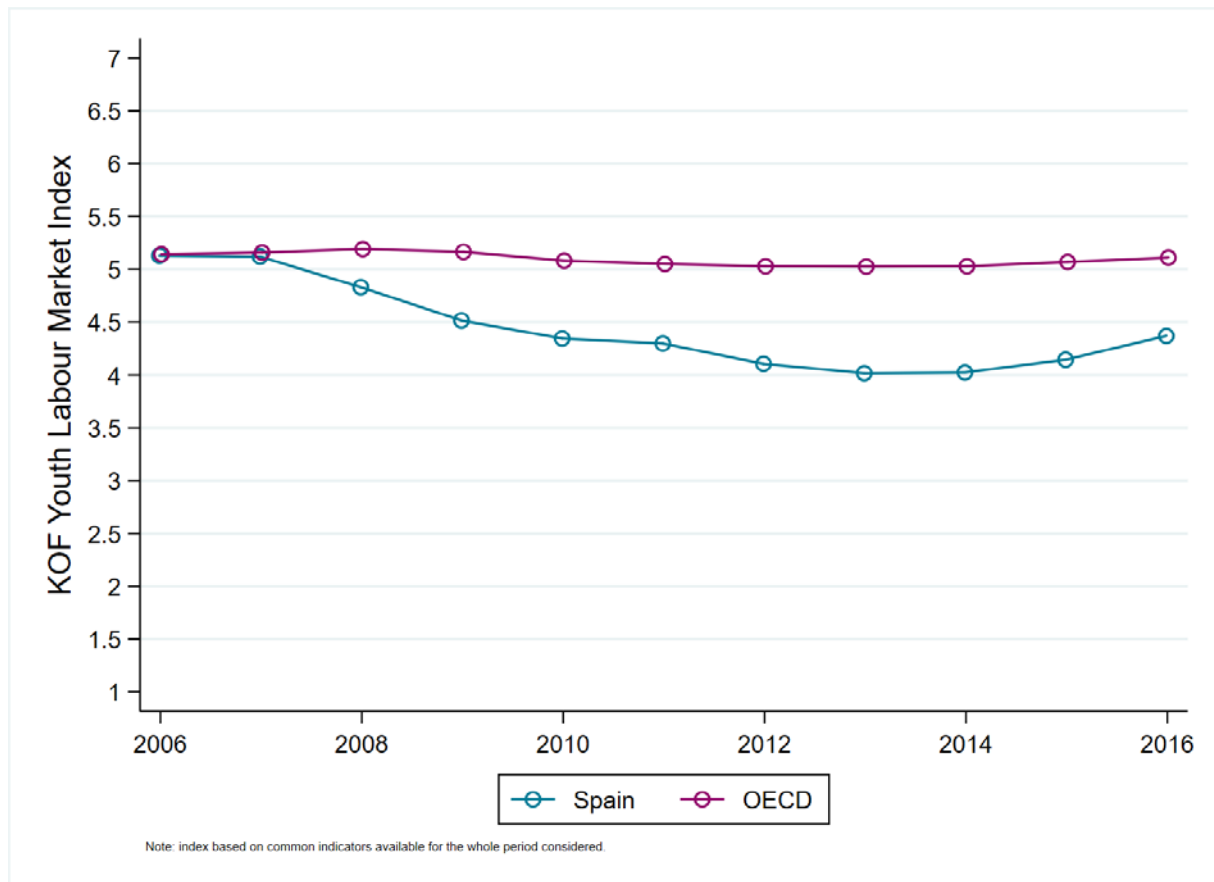


Source: (KOF, 2017)

The historical evolution of the aggregated KOF YLMI from 2006 to 2016 is shown in Figure 3 below. For this timespan of analysis, all 12 indicators are available, which enables the comparison against the aggregate YLMI for the OECD average. Spain's YLM-Index was around the OECD average until 2007. After 2007, the YLMI performance deteriorated until

2013. Since 2014, the Spanish youth labour market is recovering, but it is still at a lower pace than the OECD average.

Figure 3: YLM-Index: Spain vs OECD, 2006-2016



Source: (KOF, 2017)

1.3 The Political System

Understanding the basics of a country's political system and getting to know the political goals with respect to its education system are crucial points for the understanding of the education system in a broader sense. In the first part, we explain Spain's political system in general. The politics and goals regarding the education system will be referred to in the second part.

1.3.1 Overview of the Spain Political System

Spain has the political form of a parliamentary monarchy. The Crown is the highest representative of Spain, whereas the policy is formed only by the parliament. The Crown confirms the bills and is responsible for the nomination of the President. Apart from that, the Crown has mostly representative functions. The legislative power falls to the Cortes Generales, which represents the Spanish people. The Congress of Deputies and the Senate embody the two chambers of the Cortes Generales. The Congress, which is directly elected, develops all

bills. The Senate, which is partly elected and partly appointed, holds veto rights against the produced text. The Congress then has the final decision right after a new bill examination. The Government represents the executive power and takes on all the functions as in common contemporary parliamentarianism. It consists of the President and the summoned Council of Ministers. Together, they are responsible for domestic and foreign policy, civil and military administration and the defence of Spain. The territorial organisation of Spain is divided into Autonomous Communities, which are further divided into provinces. Several municipalities constitute a province. In terms of political and administrative power, the Autonomous Communities have limited autonomy due to the contrasting entities with different cultural backgrounds that make up Spain. Each Autonomous Community has its Statute of Regional Autonomy, approved by framework law, which makes Spain one of the most decentralised countries in Europe (La Moncloa, 2018).

The Corruption Perception Index (CPI) ranks Spain as 42 out of 180 countries in 2017 with an index score of 57. The CPI aggregates data on the perceptions of country experts and business people focusing on the level of corruption in the public sector (Transparency International, 2017). From 2006 to 2016 the political stability and the absence of violence and terrorism indicator of the World Bank improved from a percentile rank of 41 to 62 (World Bank, 2016). However, the recent developments in independence movements of Autonomous Communities have diminished the political stability.

1.3.2 Politics and Goals of the Education System

The approval of the Spanish Constitution in 1978 transformed the education system radically from a centralised system run by the State Administration to a partly decentralised assignment of responsibilities to the autonomous regions. The education powers are distributed and shared among all tiers of the government. The local municipal authorities focus on running the education system through regional education institutes, whereas the General State Administration (Ministry of Education, Culture and Sport) and the autonomous regions (regional education departments) share and divide different education powers (La Moncloa, 2017a).

In 2012 Spain introduced a legal framework for the dual VET system by law (Royal Decree 1529/2012), where students carry out alternating trainings at the workplace and in education institutions. Since then several projects have been launched, increasing the number of apprentices to 24'000 in 2017. However, this figure is relatively low, since only 3 percent of the students are pursuing this education path (CEDEFOP, 2018). Further measures are required to improve the participation in dual VET. In particular, the establishment of a new, clarifying

legal framework for education authorities in dual VET is subject of current research by the Alliance for dual VET in Spain.

Despite the economy growth in the recent years, the high unemployment rate is still a critical issue, which needs to be solved. The Spanish administration is facing several corruption allegations, which is also visible in the decreasing performance in the Control of Corruption indicator (World Bank, 2016). Furthermore, the independence aspirations of the economically powerful autonomous region of Catalonia compromises the political stability of Spain.

2. Formal System of Education

Compulsory schooling in Spain starts at the age of 6 to 16. After these 10 years of basic education, pupils meet the legal age to enter the labour market (European Youth Portal, 2018). Figure 4 illustrates the different stages and pathways in the Spanish education system. Chapters 2.1 to 2.4 elaborate on the different stages in more detail. Next to the general secondary and higher education, there are other pathways in VET and arts or sports programmes. Reforms have been designed to improve permeability in the VET system and provide access to academic upper secondary education after successful completion of upper secondary VET.

Figure 4: The Spanish Education System

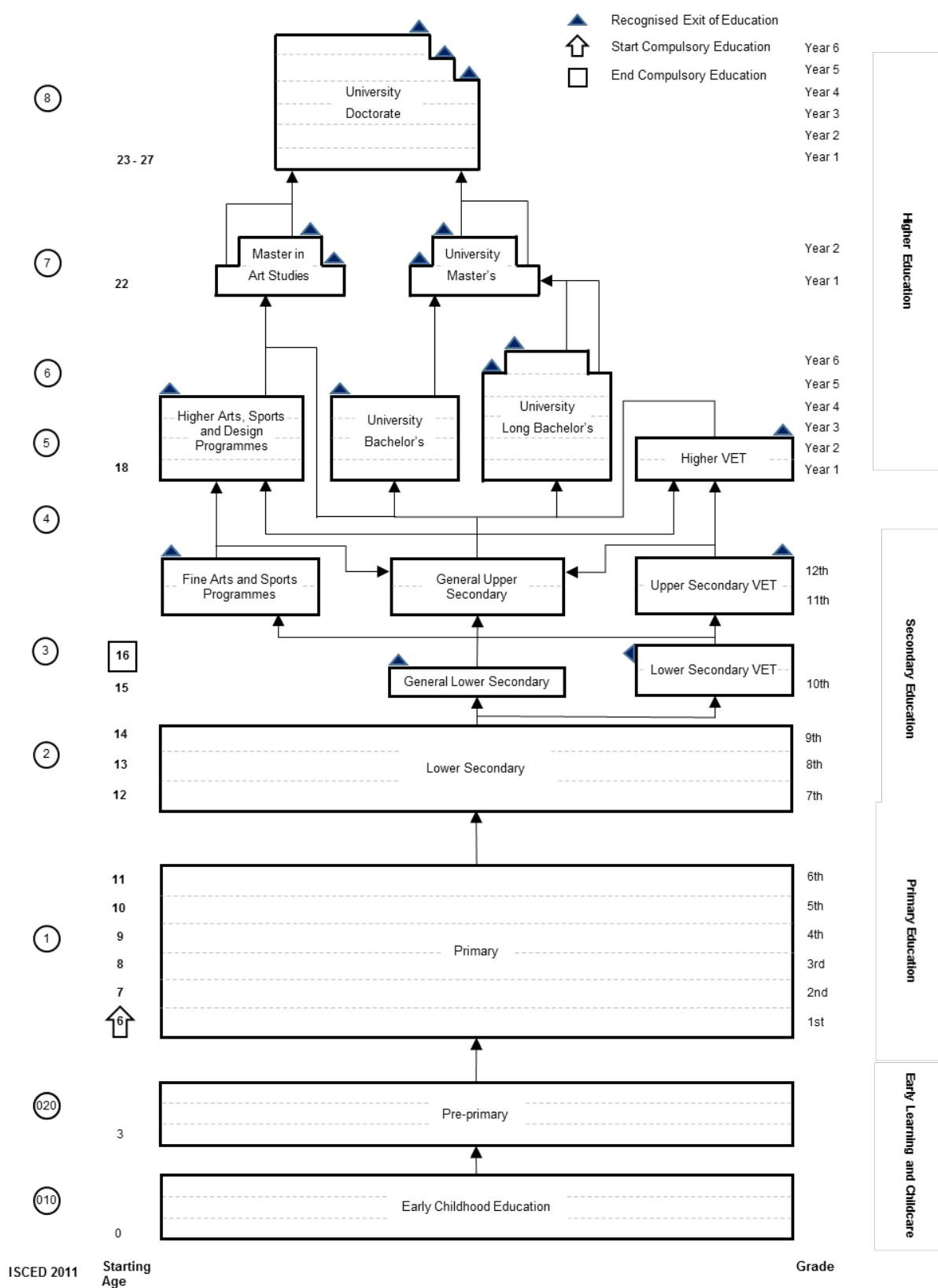


Table 4 shows the gross enrolment ratio (GER)¹⁰ and net enrolment ratio (NER)¹¹ by education level for the year 2016. The NER quantifies the total number of students in the theoretical age group for a given education level enrolled at that level expressed as a percentage of the total population in that age group. The GER quantifies the number of students enrolled at a given education level—irrespective of their age—as a percentage of the official school-age population corresponding to the same level of education.¹² Relevant figures of Table 4 will be discussed in Chapters 2.1 to 2.4 below.

Table 4: Net Enrolment Rate (NER) and Gross enrolment ratio (GER) 2016

Educational level	ISCED 2011	Net Enrolment Ratio	Gross Enrolment Ratio
Early childhood educational development programmes	010	-	36.28
Pre-primary education	020	95.00	95.38
Primary education	1	98.46	103.87
Secondary education	2 – 3	96.27	127.95
<i>Lower secondary education</i>	2	94.05	120.79
<i>Upper secondary education</i>	3	82.12	135.59
<i>Percentage enrolled in vocational secondary education</i>	2-3	9.21	-
Compulsory education age group	1-3	99.27	-
Post-secondary non-tertiary education	4	-	2.90
Tertiary education	5 – 8	-	91.18

Source: (UNESCO, 2018)

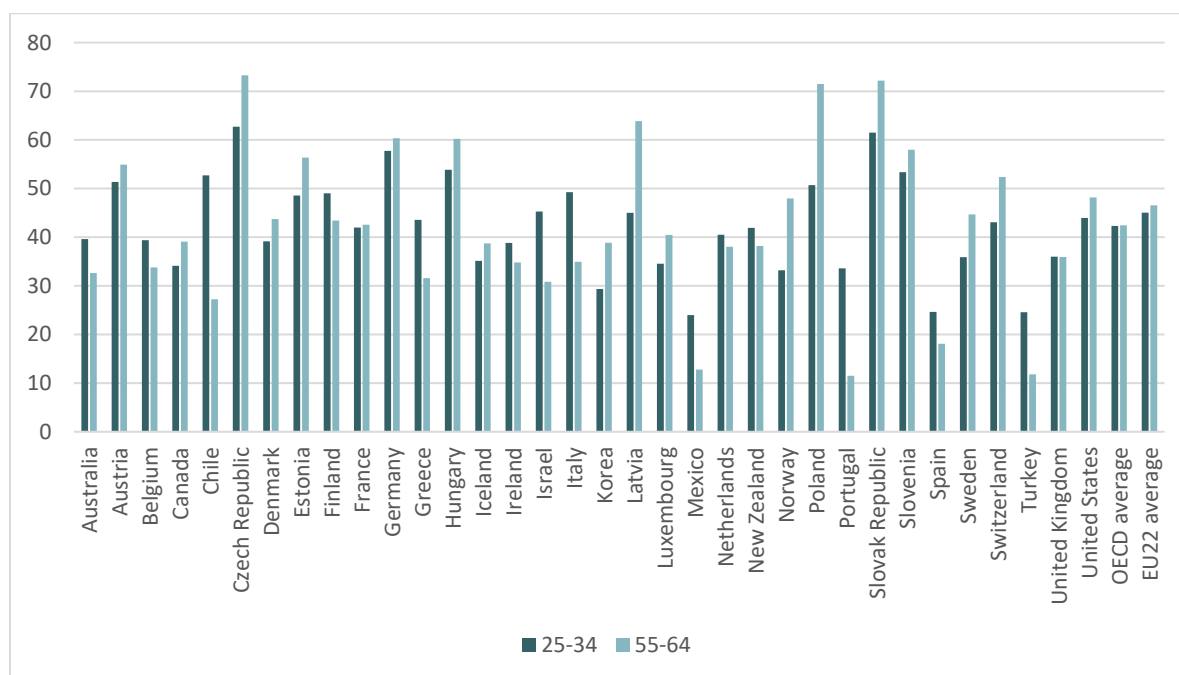
Figure 5 illustrates that a relatively low percentage of Spain's population has attained upper secondary or post-secondary non-tertiary education. The share amounts to 25 percent (25-34 years) and 18 percent (55-64 years) versus the OECD average of around 42 percent for both age groups.

¹⁰ The UNESCO Institute for Statistics (UIS) (2016) defines the gross enrolment ratio as the “number of students enrolled in a given level of education, regardless of age, expressed as a percentage of the official school-age population corresponding to the same level of education.”

¹¹ The UIS (2016) defines the net enrolment ratio as the “Total number of students in the theoretical age group for a given level of education enrolled in that level, expressed as a percentage of the total population in that age group.”

¹² For example, for the primary education level, the NER tells how many students in the typical primary school age are actually enrolled in primary school, while the GER sets the actual number of students in primary education—irrespective of their age—in relation to those who are in the official age to attend primary education. A gross enrollment ratio of 100 corresponds to a situation where each child in a given country is enrolled in primary education. A value above 100 could occur due to students who are older than the typical enrolment age for primary education (e.g. have to repeat grade, adult learners). A value below 100 implies that not everyone who is in the typical age for primary education is actually enrolled.

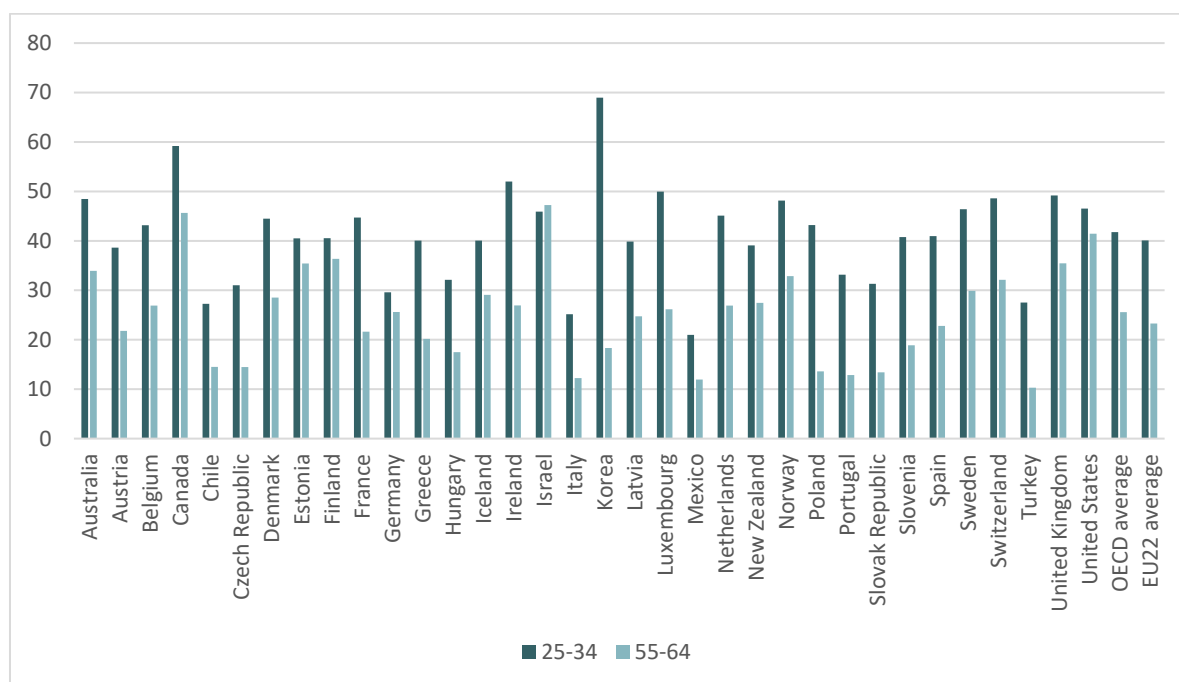
Figure 5: Percentage of population that has attained upper secondary or post-secondary non-tertiary education in OECD countries (2015)



Source: (OECD, 2016).

The share of the Spanish population, which has attained a tertiary education, amounts to 41 percent (25-34 years) and 23 percent (55-64 years) and is in the same range as the OECD and EU22 average.

Figure 6: Percentage of population that has attained tertiary education in OECD countries (2015)



Source: (OECD, 2016)

2.1 Pre-Primary Education

Pre-primary education is divided into two stages: the first stage, nursery school, starts with the age of five months; the second stage starts with the age of 3 years pre-primary schools and lasts up to the age of 6 years. The curriculum of the first stage is determined by the Autonomous Communities (see section 1.3.1 for more details about Spain's Autonomous Communities). The Ministry of Education, Culture and Sports sets the core curriculum for the second stage, which is implemented by regional education authorities.

The first stage is nursery school, which provides publicly subsidized, supervised childcare for children from the age of five months at a cost of maximum €395 per month depending on the family income (Ajuntament de Barcelona, 2018). The fees depend on the local provider. Around one third of all nursery schools are owned or financed by independent private institutions in the school year 2015/16. The enrolment rates by age in the school year 2014/15 show a gradually increasing rate (Age 1: 35.6 percent, Age 2: 55.4 percent and Age 3: 94.9 percent) (Ministry of Education, Culture and Sports, 2017).

The second stage (from 3 to 6) is available free of charge in all publicly funded schools, even though it is not part of the compulsory education. The schools providing the second cycle of pre-primary education are called pre-primary schools. (Eurydice, 2018). According to Table 4, the net enrolment rate at this education stage is particularly high in Spain (95.8 percent) compared to the EU28 (85.3 percent in school year 2013/14). About 67.7 percent of pre-primary schools are owned or financed publicly. Government-dependent private institutions account for 28.6 percent, whereas independent private institutions have a share of only 3.7 percent (Ministry of Education, Culture and Sports, 2017).

2.2 Primary and Lower Secondary Education

Spanish pupils spend the first 6 years of compulsory education in primary schools. The second part, namely the compulsory lower secondary education is attained for further 4 years in secondary schools, where they can enter lower secondary vocational training or they directly pursue the Diploma of Compulsory Secondary Education. Around the age of 16, the Spanish pupils receive their first official certificate allowing them access to the upper secondary education (European Youth Portal, 2018).

2.2.1 Primary Education

Primary school is free of charge and compulsory for every child. Parents themselves are free in the choice of school. There are public schools (67.7 percent), publicly funded private schools (28.5 percent) and private schools (3.8 percent) (Ministry of Education, Culture and Sports,

2017). The Ministry of Education, Culture and Sport sets the basic curriculum according to the general regulations of the 2013 Act on the Improvement of the Quality of Education. The education authorities of the Autonomous Communities are responsible for completing the contents of the subjects that are not specified by the Ministry of Education accordingly. The net enrolment ratio in primary education of 98.5 percent in 2016 was higher than the European average of 96.8 percent (UNESCO, 2016).

2.2.2 Lower Secondary Education

Pupils who successfully complete primary education are eligible for direct access to compulsory secondary education schools. Most of the secondary schools are either public or publicly funded private schools. The age range is from 12 to 17 years, depending on the chosen path (Eurydice, 2018).

Compared to the EU28 average Spain has a high early drop-out rate after lower secondary education. In 2015, 19.9 percent of the 18 to 24 years old have lower secondary education as their highest level of education, compared to the EU28 average of around 11 percent (OECD, 2017b). Early school leaving figures have been decreasing from 26.3 percent in 2011 to 19.9 percent in 2015, but further improvements are required to reach the Europe 2020 target of 15 percent. In primary school and lower secondary school, Spain has especially high rates of grade repetition of 31 percent (European Commission, 2017), which is the second highest in the EU. Table 4 also indicates high repetition rates with a GER of 135.6 percent in 2016. High grade repetition rates may reflect social inequalities and foster the early drop-out rate. School repeaters tend to have a more negative attitude towards school (Miyako & García, 2014), thus are more likely to discontinue further school education after compulsory school.

General Lower Secondary Education

After the first cycle of lower secondary education (year 1 to 3), pupils can pursue the second cycle (year 4) in general lower secondary education, which prepares them for the final assessment in academic/ applied studies, where they receive the ESO Academic/ Applied Graduate Qualification.

Vocational Lower Secondary Education

During the first cycle, pupils can also enter the lower secondary vocational training programme, where they pursue one of the 27 basic vocational certificates after two years of studies. The curriculum consists of practical school-based learning and work- based learning in companies, which must last at least 12 percent of the entire training cycle.

2.3 Upper secondary Education

After the compulsory part of general lower secondary education or lower secondary vocational training, students may attend general upper secondary educations or upper secondary vocational training. In 2016, about 82.1 percent of the pupils in the typical age attended upper secondary education whereas only 9.2 percent attended vocational secondary education (see Table 4). In addition to these two pathways, there are also fine arts and sports programmes, which can be pursued after completing the general lower secondary education.

General Upper Secondary Education

In the “*Bachillerato*” of general upper secondary education, the Spanish students eventually take the school leaving exams (baccalaureate certificate), which allow them to pursue their studies at a university or a polytechnical school. Most schools providing “*Bachillerato*” are publicly owned and financed (Ministry of Education, Culture and Sports, 2017).

Vocational Upper Secondary Education

There are 54 different qualifications for professional competences in upper secondary vocational education. The Ministry of Education defines the common structure of vocational training, whereas the Autonomous Communities establish the specific curricula corresponding to various qualifications available. The curriculum consist of school-based and work-placement modules. Spain introduced the regulatory framework for dual VET in November 2012. Since then, different types of dual vocational trainings are available in cooperation with a training institution and a company (Eurydice, 2018). More details can be found in section 3.1.

2.4 Postsecondary / Higher Education

Higher education in Spain consists of university education, advanced vocational training or a specialised education in arts or sports. The Spanish Qualifications Framework for Higher Education differentiates four levels of degrees: Advanced Technician (1), Bachelor’s Degree (2), Master’s Degree (2) and Doctoral Degree (4) (Eurydice, 2018). Student fees are determined by the field of study. They differ between autonomous regions in Spain. Dispensations or discount fees are available for large families or disabled persons. Approximately 71 percent of full-time students pay fees, whereas 23 percent of all students receive grants (European Commission/EACEA/Eurydice, 2016). Having received a baccalaureate certificate can grant direct admission to university education. However, universities have the autonomy to establish additional admission procedures, which can include an entrance exam.

2.5 Continuing Education (Adult Education)

For professional qualification improvement or development of additional personal skills, adult training is available for people over 18. The training provision is organised by the education, employment or local authorities. In addition, basic training is provided in order to have access to different further qualifications or obtain an official qualification approved by education authorities. In addition, employment authorities offer courses for employed workers or unemployed people to improve the work-linked capabilities. Local authorities provide continuing trainings in a wide range of topics, also in cultural activities to improve the quality of life of the community and the people (Eurydice, 2018). Continuing Education is supported by the lifelong learning strategy 2014 to 2020, to tackle low levels of qualification and eventually the high unemployment rates (Ministry of Education, Culture and Sports, 2014). Consequently, all citizens must have access to education both from inside and outside the basic educational system.

2.6 Teacher Education

Education staff is divided into university teachers and non-university teachers. Non-university teachers (pre-primary, primary, compulsory secondary, *Bachillerato* or vocational training) need one or two university degrees. The type and the number of degrees depend on the education level. The requirements for non-university teaching staff is regulated in the 2006 Education Act and the 2013 Act on the Improvement of the Quality of Education. The requirements for university teachers are regulated in the 2001 Act on Universities and the 2007 Act modifying the Act on Universities. According to the latter, it is required to hold a doctoral degree in order to practise as a university senior lecturer. The National Institute for Education Technologies and Teachers Training establishes guidelines every year for continuing education of teachers and the Autonomous Communities organise the teaching public service within their competences. For university teachers, the university themselves are responsible of providing continuing professional development (Eurydice, 2018).

3. The System of Vocational and Professional Education and Training

This section of the Factbook describes the vocational education and training (VET) system at the upper secondary level and the professional education and training system (PET) at the tertiary level in more detail. Thereby, the term vocational and professional education and training (VPET) refers to both, the VET and the PET system.

Spain offers two different VET programs: a more school-based and a dual apprenticeship program. VET programmes of the first type are mostly carried out as a combination of school-based learning and internships in companies. Programs of the second type are available at lower, upper secondary and at the post-secondary stage. These programs alternate school- and work-based training. Students receive a scholarship salary for the time working in a company (EUVETSupport Portal, 2018). In the turn of implementing active labour market programs, the government also increased the number of apprenticeship contracts by 25 percent in 2014 (CEDEFOP, 2016). In 2017, the Spanish Government approved the Spanish Employment Activation Strategy 2017-2020, which aims at speeding up the transition of youth from unemployment to employment by implementing policies for further job creation (La Moncloa, 2017b).

To counteract the particularly high early drop-out rate during lower secondary education, the Spanish government extended the offer of initial VET in lower secondary education throughout the country. In addition, students who have not attained the necessary qualifications at the age of 16 are awarded a school certificate and may attend a lower secondary initial vocational education programme, which is often referred to as a fall-back programme (OECD, 2017b).

Table 5: Summary statistics of the Spanish VET system

VET pathway enrolment share out of all upper secondary (%)	9.21 percent in 2016 (Table 4) ? or 35.2 percent in 2015 (CEDEFOP, 2018b)? or 20.2 percent in 2015 (Figure 7) (OECD, 2018c)?
Program enrolment share out of all VET pathway (%)	?
Number of curricula/qualifications	Lower secondary: 27 Upper secondary: 54 Higher: 26
Ø Share of time spent in workplace (vs. classroom)	Lower secondary: 12% Upper secondary: 20% Higher: ns Dual: 33%
Work contract (Yes/No)	Work contracts are probably common, scholarship salary for their work is paid in dual VET programmes (EUVETSupport Portal, 2018) Higher: no employment status

Ø Share of vocation-specific content (vs. general) in classroom education	Lower secondary: Upper secondary: Higher:
Classroom/workplace sequencing (Alternating, Sequentially)	Lower secondary: Sequential Upper secondary: Sequential Higher: Education Authorities decide at which point work placement module takes place. Part-time possible -> Sequential or Alternating? Dual VET programme: Alternating
Frequency of workplace learning (Annually, Semi-annually, quarterly, monthly, weekly)	ns
Program duration (Years)	Lower secondary: 2 Upper secondary: 2 Higher: 2
Involved Actors	<ul style="list-style-type: none"> - Ministry of Education, Culture and Sports - Education Authorities of Autonomous Communities - Secondary Schools - Companies
Reform Years	2001, 2006, 2007, 2012, 2013
Reforms Summary	<p>Education system: Ley Orgánica de Universidades, 12/2001: LOU: Organic Law of Universities</p> <p>Ley Orgánica de Educación, 2/2006: LOE: Organic Law of Education</p> <p>Ley Orgánica de Universidades, 4/2007: LOU: Organic Law of Universities (amending law of 2001)</p> <p>Royal Decree 1529/2012: Dual VET by law with training and apprenticeship contracts</p> <p>Ley Orgánica para la Mejora de la Calidad Educativa 8/2013: LOMCE: Organic Law for the improvement of educational quality</p>

Source: own compilation. Note: ns = not specified.

3.1 Vocational Education and Training (VET))

3.1.1 Lower Secondary VET

In Spain, vocational education and training programmes at the lower secondary level are often regarded as means to lower school-drop out among young people with difficulties in school, rather than a full-fledged alternative to general education. This approach has been urged by several OECD review as it aims to reintegrate some young people into the labour market with workplace training (CEDEFOP, 2018a). Initial vocational training aims at providing professional development, consolidate lifelong learning skills and qualifies to exercise a given profession.

Participation in lower secondary VET increased by 55.6 percent from 2014 to 2016 (CEDEFOP, 2016). Usually, lower secondary vocational training is provided in educational institutions, where compulsory secondary education is offered. The duration of the lower secondary VET amounts to two full-time academic years. If the vocational education is part of a dual VET programme, the duration may be increased to three years and a maximum of four years. Entry requirements for lower secondary VET are:

- Age of 15 up to 17 within the current calendar year
- Completion of first cycle in compulsory secondary school (years 12 to 15)
- Recommendation of teaching team

Vocational learning modules, which are linked to common blocks and are taught by specialist teachers of compulsory secondary education. Specific modules are linked to competence units of the National Catalogue of Vocational Qualifications, which establish the specialisation required. There are 27 different Basic Vocational Training Certificates, which belong to 18 different occupational families as for example trade and marketing, hotel industry and tourism, installation and maintenance. Autonomous Communities may add specialisations of the basic curricula corresponding to the qualifications available. The local education authorities decide, at which point the student may attend the workplace training module depending on the availability of work in the collaborating companies. Workplace trainings which duration must represent at least 12 percent the total training cycle are coordinated by local education authorities and require contractual frameworks with the participating companies. The vocational learning modules of Communication and Society and Applied Sciences are school-based and they depend on the professional profile of the vocational qualification and represent around 35 to 40 percent of the total training cycle duration. The Ministry of Education, Culture and Sports regulates the evaluation procedures of the student's performance throughout the whole state. Each vocational module may be subject of maximum two examination sessions. The final grade is expressed by the arithmetic mean of all examination sessions, whereas the workplace-training module is graded as passed or failed. After fulfilment of all passing requirements, the students receive the Basic Vocational Training Certificate. Students, who have achieved the objectives of compulsory secondary education, may as well obtain the Lower Compulsory Secondary Education Certificate. The Professional Certificate Level 1 may be also awarded to students aged 22, who have proven the competence required during work experience (Eurydice, 2018).

3.1.2 Upper Secondary VET

Upper secondary VET is also organised in different cycles comprising of vocational modules with specific theoretical contents regarding the chosen professional fields. The training is provided in the same institutions as compulsory secondary education and "*Bachillerato*". The

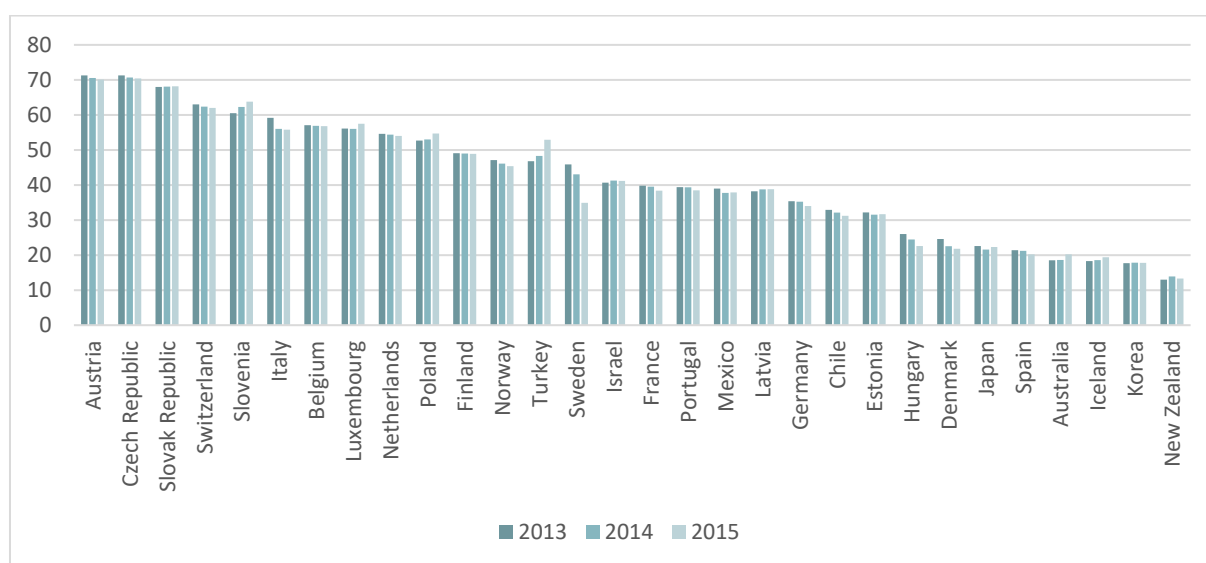
Ministry of Education offers partly distance learning over the internet for students, who cannot attend in person. Participation is flexible ranging from full-time to part-time and classroom-based, distance or part-attendance. Upper secondary VET is voluntary education and can be accessed with following requirements:

- Lower compulsory Secondary Education Certificate or
- Basic Vocational Training Certificate (lower secondary VET) or
- *Bachillerato* Certificate or
- Technician or Advanced Technician Certificate or
- Being over 17 years of age and passing the entrance examination

The duration of the programme is one or two academic years or 2000 hours and offers a variety of modular training programmes. The specific training cycles refer to the national Catalogue of Vocational Qualifications. There are 54 different qualifications available, which belong to 25 occupational families. Similar to lower secondary VET, there is a vocational workplace training, which represents 20 percent of the programme duration. Access to the workplace training is granted as soon as all other vocational modules have been successfully completed at the educational institution. Vocational modules are classroom-based courses of theoretical and practical knowledge areas corresponding to the chosen qualifications direction. Successful participants of the upper secondary VET are awarded the Technician Certificate for the corresponding occupational family (Eurydice, 2018).

Figure 7 shows that Spain has a relatively low share of students (20.2 percent in 2015) in the typical age range, which are enrolled in upper secondary vocational education, compared to other OECD countries.

Figure 7: Share of students (15-19 years) enrolled in upper secondary vocational education (2013-2015)



Source: (OECD, 2018c).

Participation in upper secondary VET with distance learning increased by 16.7 percent from 2014 to 2016. The number of students enrolled in upper secondary VET with classroom learning decreased by 2.5 percent. In absolute terms the overall number of students enrolled in upper secondary VET decreased from 2014 to 2016. Most of the students (65.89 percent) attend high school in general upper secondary education rather than opt for upper secondary VET (34.11 percent) (CEDEFOP, 2016).

3.1.3 Higher VET

In the last stage of formal vocational education, Spanish students can pursue the Advanced Technician Certificate within the relevant specialisation. The catalogue contains 26 different professional families for specialisation. Admission to higher VET is granted by fulfilment of following requirements:

- Technician Certificate (upper secondary VET) or
- Bachillerato Certificate or
- University degree or equivalent or
- Passing the entrance examination for higher VET or university

The training is structured in cycles and vocational modules with a strong focus on flexible organisation and based on self-learning. The training is offered classroom-based, however, it physical attendance is not possible; there are distance-learning modules available. This flexibility ensures its compatibility with work or family responsibilities of students. There are modules associated to the competence units from the National Catalogue of Professional Qualifications, modules with professional training and guidance, where students learn about general topics as labour legislation, safety at work, employment opportunities and more. Additionally, there are business skills and entrepreneurship modules, which include management courses and teaching of self-employment opportunities and a workplace training module. Official regulations establish the required vocational modules to apply for the workplace training, however, the workplace training has no employment status (Eurydice, 2018).

Various learning paths provide access to higher VET and the curriculum can be adapted flexibly to the student's needs. Participation in higher VET with distance learning becomes more popular. Participation in distance learning increased by 22.9 percent from 2014 to 2016, whereas the participation in classroom learning decreased by 3.1 percent. The overall participation in higher VET decreased over that time period in absolute terms (CEDEFOP, 2016). In distance training, online courses are provided, although in-class examinations in approved centres are required to receive the final mark of each vocational module.

3.1.4 Dual VET / Apprenticeships

Recent regulatory efforts have been made to improve the links between vocational education provider and companies to foster earlier involvement of students in the labour market and decrease early school leaving rates. Spanish students can either pursue dual VET by training and apprenticeship contracts, which are delivered by the education and employment systems or they can be part of dual VET projects offered by the education systems of their region (CEDEFOP, 2016). The education and employment system can either be the local Department of Education in the Autonomous Community (Royal Decree 1529/2012) or the Public Employment Service in the Autonomous Community (Order ESS/2518/2013). Still only 3 percent of the students were pursuing this kind of vocational education in 2017 (CEDEFOP, 2018). Even though the number of companies providing dual VET programmes multiplied by a factor of ten by 2015 since the introduction in 2012, the share of all companies participating in dual VET is still very low with about 0.2 percent (OECD, 2017b).

Dual VET comprises a work-linked training scheme mixed with school-based training at an educational institution. The duration of the training cycle can be extended to 3 years. There are five different types of dual VET ranging from training only at the educational institution and work at a company to full training and work at a company. If the company carries out the educational training as well, education authorities must accredit the professional competence and qualification of the training. Basic requirements and conditions for the development by education authorities are regulated by the Ministry of Education, Culture and Sport. The Department of Education or the Public Employment Service of the Autonomous Community authorises the dual VET project and the conditions of the agreement between the educational institution and the company. Such agreements include working hours, a training schedule at the company, grants, number of students participating and insurance coverage during training. Teachers and the trainers at the company assess the development of students on a monthly basis in close collaboration. (Eurydice, 2018)

3.2 Professional Education and Training (PET; Post-Secondary Level)

According to the International Standard Classification of Education established by the UNESCO, there is no PET as ISCED 6B available in Spain. The Advanced Level Certificate and Diploma in vocational training is at level ISCED 5B according to the ISCED mapping (UNESCO, 2011).

3.3 Regulatory and Institutional Framework of the VPET System

3.3.1 Central Elements of VPET Legislation

The regulation of the Spanish education system at the upper secondary and post-secondary level comprises the Spanish Constitution and four main organic acts. The Spanish Constitution (1978, Section 27) establishes the right for education for everyone, defines elementary education as compulsory and free and grants universities autonomy. The Organic Act on Education (LOE, 2/2006) and the amending Organic Law for the Improvement of Educational Quality (LOMCE, 8/2013) provide the regulation for general organisation and principles in education. Despite these national organic laws, the Autonomous Communities are able to regulate the adaptation of these acts to their territories on the topics, which the framework legislation has left open. University education is regulated by the Organic Law on Universities (LOU, 12/2001) and the amending Law on Universities (LOU, 4/2007). The implementation of the training and apprenticeship contract and laying the foundations for dual professional training is established by the Royal Decree 1529/2012 (Eurydice, 2018b).

The VET system is formally defined in the Act 5/2002 as “the set of training activities that prepare people for qualified performance in diverse occupations, access to employment and active participation in social, cultural and economic life”. Furthermore, the Act 5/2002 on qualifications and vocational education and training (*Ley Orgánica de las Cualificaciones y la Formación Profesional - LOCFP*) regulates the system of vocational training, qualifications and validation. The National catalogue of occupational standards (*Catálogo Nacional de Cualificaciones Profesionales –CNCP*) defines most occupations of the Spanish sector. The catalogue is organised in 26 professional branches. The occupational standards are defined by a set of competence units that outline the responsibilities and capabilities of a job holder in the respective occupation (CEDEFOP, 2016).

3.3.2 Key Actors in VPET

Government

Spain has a relatively decentralised vocational education and training system. Power is shared between the Ministry of Education, Culture and Sport, the Ministry of Employment and Social Security, and the autonomous communities and their local education authorities, which are represented by the departments of education of the respective autonomous territories. Within the Ministry of Education, Culture and Sport, the State Secretariat for Education, Vocational Training and Universities (*Secretaría de Estado de Educación, Formación Profesional y Universidades*) is the main body designing qualifications for the vocational education system. The Ministry of Education, Culture and Sport and the Ministry of Employment and Social

Security are responsible for approving the qualifications and the competence units in the national qualifications catalogue. The regional education departments have the competence to complement the basic curriculum of the VET qualifications to adapt it to regional needs (Eurydice, 2018).

Representation and advisory bodies

The National Education Council (*Consejo Escolar del Estado*) is the main advisory body of the national government for general education policies. All relevant stakeholders within the education sector are part of this council; national government, regional governments, schools, experts, teachers, students, unions and employer representatives. The Council reports the state of the education system annually. Thereby, it analyses all aspects of the education system- including the VET system. The Council's reports also contain suggestions to improve the various parts of the education system (CEDEFOP, 2016).

The General Council on Vocational Training (*Consejo General de la Formación Profesional, CGFP*) consists of education and labour authorities responsible for VET, at the national and the regional level. The General Council on Vocational Training is the national government's central advisory body on VET policy. Its main duties are providing advice in the reviewing and approving process of vocational qualifications requests, providing advice in the designing of competence units for vocational qualifications, and reviewing the national catalogue of occupational standards. This General Council on Vocational Training works together with social trade unions and employer's associations, to coordinate the VET policies and the national, respectively regional needs of the employers and employees. The CGFP is alternately lead by the Ministry of Education and the Ministry of Employment (Eurydice, 2018).

Regional Councils for Vocational Training (*Consejos Regionales de Formación Profesional, CRFP*) adapt VET policies to regional needs, evaluate the regional vocational education system and propose improvements of the VET policies. They operate in a similar manner as the General Council on Vocational Training, but on a regional level. The CRFP and the CGFP cooperate, whereby the CGFP relies on the CRFP to include regional needs in their assessment of VET policies (CEDEFOP, 2018).

Education and training providers

Vocational training programmes are offered by private and public vocational training institutions. The accreditation of the institutions is overseen by the SEPE or by regional labour authorities. In addition, there exist training centres operated by accredited foundations and NGOs. All training providers must follow the general requirements and guidelines outlined in the National Standards for VET qualifications. Depending on the region and the qualification, the guidelines can be adjusted to regional circumstances (CEDEFOP, 2016).

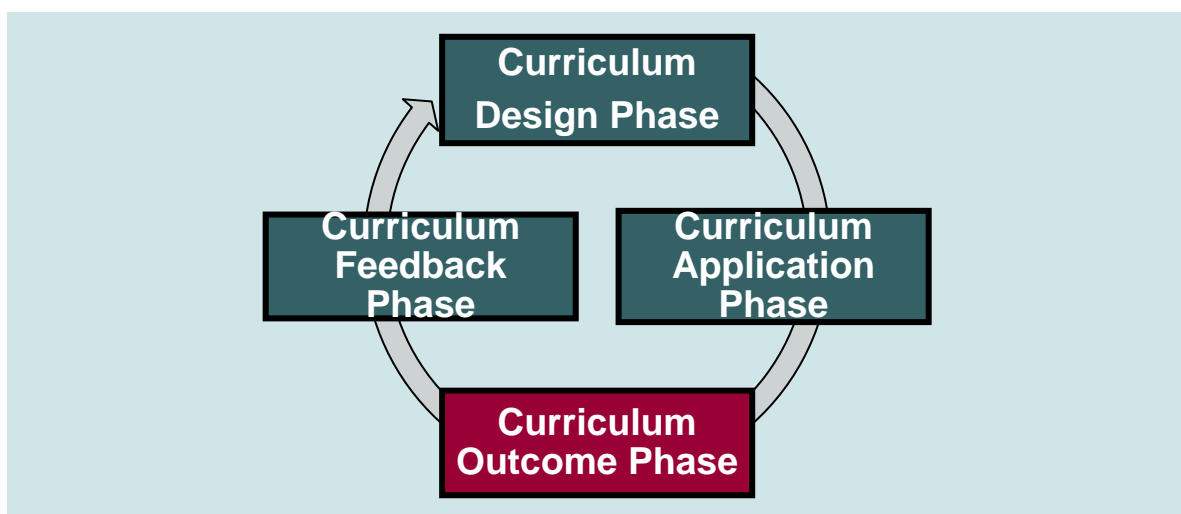
3.4 Educational Finance of the VPET System

In Spain, education is mainly financed by public funding. Thereby, the regions have autonomy to manage and allocate their annual budget according to their preferences. In 2015, the Spanish government spent 10.2 billion Euros on upper secondary level. The share spent for upper secondary vocational education was 35.8 percent. A series of mechanisms, solidarity between the regions and the guaranteed founding of basic educational expenditures by the central government guarantees a sufficient transfer of funds to each region. The Ministry of Education, Culture and Sports monitors the regional expenditures to make sure that these funds are used for their initial purpose. In general, educational institutions receive public funding relative to the number of students enrolled. Additional sources of funding can be registration and tuition fees, funds from companies and donations or grants from private foundations. Most private schools are partly publicly funded and are obliged to follow the same rules as the public institutions (Eurydice, 2018b; Eurostat, 2018b).

3.5 Curriculum Development

The curriculum is a central element for the functioning of a VPET system by defining the framework and the (quality) standards for the education system. The development of a curriculum can be decomposed into a three-step process with a curriculum design, a curriculum application and a curriculum feedback phase. This theoretical concept is called the Curriculum Value Chain and is depicted in the picture below (CVC; for more details see (Bolli, et al., 2016)).

Figure 8: Curriculum Value Chain (CVC)



Source: (Bolli, et al., 2016).

In the curriculum design phase, VET curriculum content and qualification standards are decided upon by the relevant actors. Therefore, the discussion in the respective subchapter below focuses on the degree and the amount of stakeholder participation concerning curriculum design in Spain. The curriculum application phase revolves around the implementation of the curriculum. Because learning environments differ heavily across countries—especially with respect to the prevalence of workplace learning—the curriculum application phase subchapter in this Factbook focuses those learning environments. Specifically, it addresses where learning takes place and whether the curriculum dictates both school and workplace learning or only one of the two. Finally, curriculum outcomes can be collected and analysed in the curriculum feedback phase. This evaluation process is important as it may render a more refined curriculum design than was possible in the first place.

3.5.1 Curriculum Design Phase

The design phase is crucial for the whole curriculum process. In order to ensure that the skills taught in the VPET programmes correspond to the needs of the labour market, experts from companies should be involved in defining the qualification standards and learning contents of the curricula.

The General Council on Vocational Training and the Region Councils on Vocational Training are responsible for reviewing requests for new qualifications or for changes in existing qualifications. If the request is granted, the councils have to define the qualification in the right structure and check for its completeness. The final decision if a new occupation is taken into the national catalogue of occupations, or if an existing occupation is changed, is either taken by the Ministry of Education, Culture and Sport or the Ministry of Employment and Social Security. After this decision, the National Institute of Qualifications (*Instituto Nacional de Cualificaciones- INCUAL*), again reviews new occupations regarding their completeness and correctness. The National catalogue of occupational standards (*Catálogo Nacional de Cualificaciones Profesionales –CNCP*) is the backbone of the curriculum design process and incorporates almost all occupations of the Spanish sector. The occupational standards outlined in the catalogue of national qualifications serve as a reference in the development of the vocational training programmes. The design of curricula for training programmes either takes place on a national or on a regional level and is overviewed by the Ministry of Education, Culture and Sport, the Ministry of Employment and Social Security or by regional education departments (CEDEFOP, 2016).

3.5.2 Curriculum Application Phase

The way in which a curriculum is implemented—especially with respect to learning environments—is important to achieve the intended learning outcome. As described in section 3.1.1, educational training institutions are responsible for providing VET programs. Companies are so far not formally involved in the VET system in Spain and therefore not part of the formal curriculum application phase (Eurydice, 2018).

3.5.3 Curriculum Feedback Phase

The curriculum feedback phase deals with the question, whether and how educational outcomes are analysed. Based on this, the curriculum could be re-worked and improved.

In 2013, the General Council on Vocational Training approved a procedure to update and review all vocational qualifications starting with qualifications at that time older than 5 years. This ongoing process involves the participation of all parties including experts from companies as well as VET institutions. The reviews are based on the analysis of the needs of the labour market including all sectors and professional branches. INCUAL collects information using qualitative and quantitative approaches, through various channels such as meetings and interviews with institutions, companies and experts from all productive sectors. VET qualifications are being updated accordingly and new occupational standards are created based on identified emerging professional profiles (CEDEFOP, 2018).

The evaluation mechanism implemented by the Ministry of Education, Culture and Sport assesses to which extent a vocational program improves the access of an individual person to the labour market, the improvement of the employability of workers and the improvement of the competitiveness of companies. In addition, the evaluation mechanism measures the effectiveness of the system in terms of how well labour supply and demand match. Finally, the Ministry of Education, Culture and Sport assesses the effectiveness of vocational programs relative to the spent resources for the respective program for evaluating the economical net benefit (Eurydice, 2018b).

3.6 Supplying Personnel for the VPET System (Teacher Education)

In Spain, it is differentiated between instructor-trainers who teach practical technical vocational training in a classroom setting and vocational teachers who provide technical vocational and general education at a theoretical level. In VET programs with alternating training, the practical part is generally provided by professionals with high practical experience, whereas the theoretical part is commonly provided by teachers with a high educational level in the respective field. Teachers and trainers generally hold certificates that are at least equivalent

to the program level they teach. In general, in order to become a vocational teacher, a candidate must hold either a Bachelor's degree in a relevant field and a Master's degree on vocational teacher training or a vocational certificate and a certificate for teaching purposes. Candidates wishing to enrol in a Master's degree on vocational teacher training have to apply for the program and to pass an entry exam designed by the university. Candidates holding a Bachelor's degree corresponding to the chosen specialisation of their Master are exempted from this evaluation process. Depending on the supply and demand of vocational teachers and trainers and the professional experience of the candidates, it is possible to hire professionals without a relevant certificate. In this case, the requirements for vocational teachers and trainers largely depend on the type of qualification. The requirements for qualifications regulated by Royal Decrees are defined in the respective Royal Decree. The requirements for qualifications not linked to such a decree are specified in a training specialisation file by the state public employment service. Teaching staff providing training outside of the official curriculum i.e. training in companies must only meet the requirements established by the companies (Eurydice, 2018b).

4. Major Reforms in the Past and Challenges for the Future

4.1 Major reforms

The *Programa Integral de Cualificación y Empleo* is implemented by chambers of commerce. It aims to provide continuous education, training or apprenticeship to people under 30 who have finished formal education or became unemployed. Thereby, it aims to strengthen vocational education and training and to promote partnerships between vocational institutions and companies. The program aims to develop individual programs for participants based on the participants' profile, interests, level of education and additional skills. The program takes the demand of companies for better-qualified employees into account. It includes complementary training and dual education and training. For the dual education, apprenticeship contracts are introduced, new vocational certificates are created and a new framework for matching companies and students is designed (CEDEFOP, 2018).

In December 2016, the government decided to allocate EUR 325 million for supporting regional initiatives for strengthening VET programs. In addition, the government increased the regions' autonomy to recruit teachers to provide them more flexibility in responding to changes of requirements of certain professions. In addition, the funds are used for funding dual VET programs, which exist in some regions (CEDEFOP, 2018b).

In 2015, the Spanish government finalized the reform of the program "training for employment" (*TES — subsistema de formación para el empleo*), which is an active labour market program. The reform promotes additional training for vocational trainers, teachers and advisers. It aims to ease the entry of students into the industry by closing the gap between demand for skills through the labour market and supply of skills. Joint sectoral structures were introduced to bring together sectoral business and unions to ensure that the needs of all sectors are included in the vocational training (European Commission, 2017).

The law 30/2015 was introduced to strengthen VET and improving the employability of workers. It gives workers the right to training and the opportunity to validate their professional skills obtained through training and work. This allows workers to obtain a full qualification at their own pace outside of the regular vocational education system (CEDEFOP, 2016).

4.2 Major challenges

The European Union sees a causal relation between failing a grade and leaving the education system without any certificate. With over 31 percent of students having repeated at least one grade, Spain also has the second-highest rate of grade repetition in the EU. The European Union criticizes that a clear social gap is evident and states that disadvantaged students are much more likely to fail a grade. Despite making progress in reducing the rate of early school leaving, Spain has still the second highest rate of early school dropout in the EU. There are large differences between regions and some regions even experience an increasing rate of early school dropout. The European Union criticizes that the socioeconomic status and the parent's level of education play a significant role in the access to education (Eurydice, 2018b) (CEDEFOP, 2018).

The European Union states that Spain needs to ensure a better fit between the education system and the requirements of the job market. Further, the EU sees a lack in increasing the attractiveness of VET programs. Even if, VET graduates have a much higher employment rate than other graduates, the VET programs are not very popular among pupils (Eurydice, 2018b).

Spain has introduced some dual VET programs recently. However, the European Union regards the efforts in promoting the new programs as too low and states that Spain is still one of the European countries with the lowest share of apprentices (European Commission, 2017).

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