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SKILLS PARTNERSHIPS FOR THE SILK ROUTES

An introductory chapter and overview of technical and vocational education and training (TVET) systems in five countries that are part of the Budapest Process

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About the Budapest Process

The Budapest Process is an interregional dialogue on migration with the aim to strengthen regional cooperation on migration and mobility. As part of its objectives, the Budapest Process is committed to promoting safe, orderly and regular migration along the migration routes with a specific focus on the Silk Routes Region, namely Afghanistan, Bangladesh, Iran, Iraq and Pakistan.

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EXECUTIVE SUMMARY

This is an introductory chapter to give an overview of the technical and vocational education and training (TVET) systems in five countries that are part of the Budapest Process (three in Europe: Austria, Germany and Italy; and two in the Silk Routes Region: Pakistan and Bangladesh). The Budapest Process is an interregional dialogue on migration with the aim to strengthen regional cooperation on migration and mobility. As part of its objectives, the Budapest Process is committed to promoting safe, orderly and regular migration along the migration routes.

Within the purview of the Budapest Process, this research study aims to contribute to the broader Talents Partnerships approach of the European Union by assessing the potential of cooperation in the field of vocational education and training between the countries under study to promote the scope of new legal migration corridors. Aligning training curricula and regulation in the countries of origin with those in destination countries allows for the training of labour in skills and competencies required and valued in both the country of origin, as well as destination, which in turn fosters integration in both labour markets.

The purpose of this overview is to understand the institutional and governance structures in place, the guiding policies and legislative background, and skills qualification criteria in the respective five countries. Besides Austria and Germany, who share a similar VET system that depicts a good practice case of dual apprenticeship model where trainees get trained in companies as well as vocational school, the countries have diverse systems not only in terms of structure of VET programmes, but also governance systems across the national and sub-national levels, and degree of involvement of private sector and employers. This chapter highlights these similarities and differences in order to identify the way forward for potential cooperation. As an introductory research step, it presents an opportunity to delve deeper into the comparison between the (T)VET systems in these countries to foster greater scope for bilateral cooperation in this area to promote labour migration. In the next steps, the research aims to: i) identify relevant examples of skills and talents partnerships; ii) identify avenues for the development of talents partnerships in the field of Information Technology and Hospitality Industry; and iii) identify pre-conditions for a pilot project.

CONTENTS

EXECUTIVE SUMMARY	3
1. INTRODUCTION	8
2. VOCATIONAL EDUCATION AND TRAINING SYSTEMS IN PAKISTAN AND BANGLADESH	11
2.1 Pakistan	11
2.1.1 Historical context	11
2.1.2 Institutional, policy and legislative frameworks in Pakistan's TVET sector	13
2.1.3 Status of TVET institutes	16
2.1.4 Qualifications criteria and quality assurance	18
2.1.5 Challenges in the TVET sector	20
2.2 Bangladesh	22
2.2.1 Historical context	23
2.2.2 Institutional, policy and legislative frameworks in Bangladesh's TVET sector	23
2.2.3 Status of TVET institutes	26
2.2.4 Qualifications criteria and quality assurance	28
2.2.5 Challenges in the TVET sector	31
3. TECHNICAL AND VOCATIONAL EDUCATION IN THE EU	34
3.1 VET systems in the EU	34
3.2 The Dual VET systems in Germany and Austria	35
3.2.1 The dual VET system in Austria	36
3.2.2 The dual VET system in Germany	42
3.3 VET system in Italy	47
4. CONCLUSIONS AND NEXT STEPS	52
4.1 Conclusions and recommendations	53
4.2 Areas for further research	55
4.3 Comparative summary	56
BIBLIOGRAPHY	61
LIST OF FIGURES AND TABLES	
Figure 1 TVET Institutes in Pakistan	17
Figure 2 NVQF Qualifications Levels	19
Figure 3 Bangladesh National Qualifications Framework	29
Table 1 Interventions under the Skills for All Strategy	15
Table 2 Overview of the most popular vocational and technical courses per province as of 2017	17
Table 3 Number of TVET institutes in Bangladesh	26
Table 4 Top occupational fields in the VET sector in Austria, based on number of total apprentices	39
Table 5 Top occupations among females and males in Austria, 2019	40

LIST OF ACRONYMS

ADB	Asian Development Bank
AMS	Public Employment Service Austria (Arbeitsmarktservice)
AFBG	Upgrading Training Assistance Act (Aufstiegsfortbildungs-förderungsgesetz)
AUSAID	Australian Agency For International Development
AVT	Advanced Vocational Training
AWStG	Legislation Promoting Further Training (Arbeitslosenversicherungsschutz- und Weiterbildungsstärkungsgesetz)
BAB	Berufsausbildungshilf
BAG	Vocational Training Act (Berufsausbildungsgesetz)
BAföG	Bundesausbildungsförderungsgesetz
BBAB	Federal Advisory Board on Apprenticeship
BIA	Business and Industry Associations
BIBB	Federal Institute for Vocational Education and Training (Germany)
BMBF	Federal Ministry of Education and Research (Germany)
BMBWF	Ministry of Education, Science and Research (Austria)
BMDW	Federal Ministry of Digital and Economic Affairs (Austria)
BMET	Bureau of Manpower Employment and Training (Bangladesh)
BMWK	Federal Ministry for Economic Affairs and Energy (Bundesministerium für Wirtschaft und Energie, (Germany)
BNQF	Bangladesh National Qualification Framework
BQFG	Recognition Act
B-SkillFUL	Building Skills for Unemployed and Underemployed Labour
BTE	Boards of Technical Education
BTEB	Bangladesh Technical Education Board
CAD	Course Accreditation Document
CEDEFOP	European Centre for the Development of Vocational Training
DAE	Diploma of Associate Engineering
DQR	Deutscher Qualifikationsrahmen für lebenslanges Lernen
DTE	Directorate of Technical Education
EQ	<i>Einstiegsqualifizierung</i>
EQF	European Qualifications Framework

EU	European Union
FCDO	Foreign, Commonwealth and Development Office
FOSA	Foreign Skills Approval
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
IAB	Institute for Employment Research (Institut für Arbeitsmarkt und Berufsforschung)
IFTS	istruzione e formazione tecnica superiore
IHK	<i>Industrie- und Handelskammer</i>
ILO	International Labour Organisation
INAP	National Institute of Public Policy
INDIRE	National Institute for Documentation, Innovation and Educational Research
ISC	Industry Skills Council
ITS	istituti tecnici superiori
JICA	Japan's International Cooperation Agency
KP	Khyber Pakhtunkhwa
LBAB	Regional Advisory Board on Apprenticeship (Landes-Berufsausbildungsbeiräte)
leFP	istruzione e formazione professionale
LFBAG	Vocational Training Act for Agriculture and Forestry (Land und forstwirtschaftliches Berufsausbildungsgesetz)
LFS	Land- und forstwirtschaftliche Fachschulen
MIUR	Ministry of Education, University, and Research
MLPS	Ministry of Labour and Social Welfare
MoE	Ministry of Education
MoEWOE	Ministry of Expatriates' Welfare and Overseas Employment (Bangladesh)
MoFEPT	Ministry of Federal Education and Professional Training (Pakistan)
MRA	Mutual Recognition Agreement
NCAC	National Competency Assessment and Certification System
NCP	National Coordination Point
NGO	Non-Governmental Organisation
NSDA	National Skills Development Authority
NAVTTTC	National Vocational and Technical Training Commission
NQF	National Qualifications Framework
NSCDT	National Council for Skills Development and Training
NSIS	National Skills Information System
NSS	National Skills Strategy
NTB	National Training Bureau



NVQF	National Vocational Qualifications Framework
NTVQF	National Technical and Vocational Qualifications Framework
OeAD	Austrian Agency for International Cooperation in Education and Research (Österreichischer Austauschdienst)
PVTC	Provincial Vocational Training Council
QAB	Qualifications Awarding Body
QAM	Quality Assurance Manual
RPL	Recognition of Prior Learning
SCDC	Standards and Curriculum Development Committee
SEP-B	Skills for Employment Program in Bangladesh
SEIP	Skills for Employment Investment Program
SME	Small and Medium Enterprise
STEP	Skills Training and Enhancement Project
TTB	Trade Testing Board
TTC	Technical Training Centre
TVET	Technical and Vocation Education and Training
TVTC	Technical and Vocational Corporation
VET	Vocation Education and Training
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNDF	United Nations Detention Facility
UNICEF	United Nations International Children's Emergency Fund
UNIDO	United Nations Industrial Development Organisation



1. INTRODUCTION

Historically, labour migration from the Silk Routes countries has focused on the Gulf States, with a majority of migrants working as untrained or semi-skilled male workers in the construction and transport industries. The declining labour demand in these industries in the Gulf States and the restrictions imposed on labour migration during the COVID-19 crisis have highlighted the lack of sustainability of these labour migration corridors dominated by un- or semiskilled labour. In most Silk Routes countries, education and labour market policies aim at raising the average skills level of the workforce in order to improve domestic socio-economic development. Better linking labour migration to development needs an increase of migrants' training levels and a reduction of dependency on a limited number of migration corridors. Thus, new labour migration channels to different regions of the world that are in need of migrant labour need to be discussed and developed. In order to increase the gains from migration, these corridors should primarily focus on migration of qualified workers and college graduates from the Silk Routes countries, while also opening channels for lower skilled migrants in case of demand.

In most countries, both academic and vocational education systems are mainly organised at the state level, with a few exceptions of regional coordination, like the Bologna system, which harmonises university education in the European Union. Due to the lack of regional and international coordination of training systems, migrants' qualifications obtained in their countries of origin are often not recognised in target countries, leading to de-qualified employment, lacking career perspectives and low income. Despite the fact that systems for the formal recognition of foreign academic and vocational qualifications exist in many EU Member States, most of them are characterised by complex, cumbersome and inefficient procedures. Regional employers often do not trust the results and continue to privilege domestic candidates against migrants holding the same qualification.¹

In reaction to these subpar results, some private companies have started training programmes for their employees in company outlets in third countries according to the training standards in their home countries. This approach has been followed by e.g. Germany, which has started cooperation with some countries, including Kerala region in India, Bosnia and Herzegovina, Philippines, Tunisia, Indonesia, and Jordan, in the field of nurse training according to German training curricula.² While training and skills partnerships have been developed and implemented by the Philippines and the Indian State of Kerala already since the 1980s in the field of nursing, this approach has gained ground at the EU level only recently with the development of the "talent partnership" approach. Aligning training curricula in the countries of origin with those in destination countries allows for the training of potential migrants according to both the standards of the country of origin and destination, which fosters integration in both labour markets.

1 Vicky Donlevy et al., "Study on Obstacles to Recognition of Skills and Qualifications," 2016,

2 GIZ, "Sustainable Recruitment of Nurses (Triple Win)," 2022, <https://www.giz.de/en/worldwide/41533.html>.

The concept of “talent partnerships” is based on a cooperation between countries of origin and destination both in the field of training and labour migration.³ Joint training programmes aligning training curricula and definitions of professional skills, which are often also implemented in both countries, lead to training certificates being recognised in both the country of origin and destination. Their holders usually gain privileged access to labour migration to the partner countries, thus harnessing the positive impact of migration for the country of origin, the country of destination and for the migrants themselves.

Applying this approach to labour migration between the Silk Routes countries and the EU will be beneficial for both regions, as it can harness the potential of labour migration as a tool for human development and for the transfer of knowledge and competence between the two regions. In addition, the talent partnership approach can help developing new migration corridors, which will reduce the dependency of Silk Routes countries on a limited number of destination states. Joint training of migrants for qualified positions both in the Silk Routes countries and in cooperating EU countries according to common standards will allow migrants to invest their knowledge and competencies both in Europe and in professional positions in the Silk Routes countries upon return.

Moreover, the European countries part of this study as well as Pakistan are also members of the Budapest Process, while Bangladesh has an observer status. In February 2019, the Budapest Process’ 6th Ministerial Conference in Istanbul adopted *The Istanbul Commitments on the Silk Routes Partnership for Migration and its Call for Action* which endorsed six priority goals to be pursued with multifaceted approaches.⁴ Priority Goal 2 of the Call for Action focuses on better organisation and improved conditions for legal migration and mobility. Sub-actions include: the development of appropriate tools, like labour market assessments, mobility agreements or programmes for circular and temporary migration and the improvement of skills matching and skills recognition mechanisms. By promoting avenues for legal labour migration cooperation, talent partnerships and such initiatives and partnerships are, thus, aligned with Priority Goal 2 of the Budapest Process, which focuses on improved labour migration governance between the countries of origin, transit and destination. Talent partnership programmes will not only foster the professional development of participants, but also allow their smooth legal entry into the EU partner countries and improve their labour market integration in qualified positions.

As the talent partnership approach hinges on cooperation between the relevant actors and authorities in both sending and receiving countries, a pilot study focusing on selected countries and selected economic sectors is needed. The selected sectors should reflect concrete labour demand in the EU, while also allowing training cooperation based on existing universal standards and tools. In this respect, due to its reliance on world-wide shared technologies, the IT sector can serve as a good example. The second suggested sector concerns the hospitality industry, which is also highly international and based on common training standards. Selected countries will include Austria, Germany, and Italy in the EU (which already have started some pilot partnerships with African countries) and Bangladesh and Pakistan in Asia.

3 European Commission, “Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee of the Regions: Attracting Skills and Talent to the EU” (Brussels, 2022), <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52022DC0657&from=EN>.

4 Budapest Process, “The Istanbul Commitments on the Silk Routes Partnership for Migration,” in *6th Ministerial Conference (ICMPD, 2019)*, https://www.icmpd.org/file/download/47950/file/BP_MC2019_Istanbul%2520Commitments%2520_Call_for_Action_.pdf.



Against this background, this introductory chapter sets the scene by giving a detailed overview of the existing technical and vocational education and training (TVET/VET) systems in two countries of origin (Pakistan and Bangladesh) and three countries of destination (Austria, Germany and Italy). The purpose of this overview is to understand the institutional and governance structures in place, the guiding policies and legislative background, and skills qualification criteria in the respective countries. Aspects such as financing mechanisms of the TVET/VET sector, teachers' training systems, and description of the general academic systems are not included in this chapter. This chapter sets the scene for a prospective deep-dive analysis of specific economic sectors (IT and the hospitality sectors), for identifying targeted actions for cooperation.

In principle, all five countries under discussion offer a mix of pathways for skills development comprising both school-based or apprenticeship-based models, however the degree of formality and popular model for skills development varies across the countries. For instance, while all five countries allow for apprenticeship programmes, supported through relevant legal stipulations and policies, the apprenticeship model is much more advanced and formally implemented in Germany and Austria as compared to the other three countries. In the following sections, these aspects are explained in detail.

The Chapter is organised as follows: Section 2 describes the existing TVET systems in Pakistan and Bangladesh as countries of origin, Section 3 describes the mechanisms at the EU level and the systems in place in Austria, Germany, and Italy as countries of destination, and Section 4 highlights, in a succinct manner, the key commonalities and differences across the five countries.

2. VOCATIONAL EDUCATION AND TRAINING SYSTEMS IN PAKISTAN AND BANGLADESH

2.1 PAKISTAN

Pakistan has one of the youngest population in South Asia. About 64% of its population is below the age of 30 years, offering Pakistan an immense potential to derive dividends from this demographic asset.⁵ However, the youth bulge can only be leveraged as a dividend when it is optimally skilled, trained, and educated to support the country's development. For doing so, a comprehensive and holistic policy approach to develop the skills and capacities of youth is absolutely essential.

While Pakistan has an extensive institutional structure built and strengthened over decades to support technical and vocational education and training (TVET) in the country, outcomes are generally low and the system experiences numerous challenges.⁶ A brief overview of the institutional and policy landscape that governs the TVET sector in Pakistan is provided below.

2.1.1 HISTORICAL CONTEXT

Before the advent of the formal skills training system in Pakistan, the *Ustad-shagird* (instructor-pupil) system was the common mode of transferring specialised skills to trainees.⁷ Policy considerations in the area of formalised skills training and technical education started in the 1960s, accompanying the golden era of the industrial development of the country. The decade of 1960s was focused on planning and deliberating the technical and vocational needs of Pakistan. In 1962, the Apprenticeship Ordinance was passed, laying the foundation of vocational training in Pakistan.⁸ As per the Ordinance, all registered enterprises that employ fifty or more employees are obliged to take part in the apprenticeship programme and get it registered with the competent authority. A few years later, in 1966, the Apprenticeship Rules were passed which defined the modalities of the implementation of the Apprenticeship Ordinance and detailed the responsibilities of the employee and the trainees, along with the terms and conditions that guided the apprenticeship.

5 UNDP Pakistan, "Unleashing the Potential of a Young Pakistan: National Human Development Report" (Islamabad, 2017), <http://nhdr.undp.org.pk/>.

6 Sehrish Fatima, "Pakistan Needs More Vocational Training," Dawn, accessed April 27, 2022, <https://www.dawn.com/news/1532054>.

7 UNESCO Institute for Lifelong Learning, "Pakistan RVA Country Profile in Education and Training," 2015, <https://uil.unesco.org/document/pakistan-rva-country-profile-education-and-training>.

8 Pervez Rahim, "Vocational Training," The News, accessed April 27, 2022, <https://www.thenews.com.pk/print/854127-vocational-training>.

From apprenticeship to career development: Exxon's success story in Pakistan

The Ordinance of 1962 was welcomed by many enterprises, paving the way for the establishment of associated apprenticeship centres. One success story is the American fertiliser company Exxon Chemical Pakistan Limited, which established a plant in Pakistan in the 1960s and also developed an associated apprenticeship centre. The apprenticeship centre offered two to three years long trainings for mechanical and chemical skills, in addition to introducing a career development pathway for the apprentices in the company on the basis of their training. Exxon was eventually succeeded by the Engro Fertiliser Limited, which continues to follow this apprenticeship scheme.⁹

Over the next decade, inadequate allocation of resources, combined with political instability and changing priorities of the successive regimes proved to be an obstacle in achieving the full potential of these developments.¹⁰ In the 1970s, some practical steps were initiated to revive the sector, which then gained momentum in the 1980s, when a renewed effort was made in the direction of institution and policy development in the field of TVET. In 1980, the National Training Ordinance was devised (which was later amended in 2002). One of the main objectives of introducing the Ordinance was to establish training boards in the provinces, to regulate and promote vocational training services, as well as broaden the scope of the vocational training by mandating training institutes to deliver training to any individual, regardless of employment, as opposed to apprenticeship programmes where apprentices are enrolled in specific enterprises.¹¹

In the 1990s, focus was shifted to improving the quality of the training programmes, as well as expanding the curriculum to initiate women training programmes. The decade of 2000s witnessed some further institutional and policy strengthening with the establishment of the National Vocational and Technical Training Commission (NAVTTTC)¹² in 2005 as the main authority for regulating, coordinating and policymaking, and the introduction of the National Skills Strategy in 2009 as the foundation for an era of reforms of the TVET sector which continue up to today. With the 18th constitutional amendment which devolved several federal subjects and competencies to the provinces,¹³ the TVET sector suffered to a great extent as education became a provincial matter, yet professional training remained under federal jurisdiction. In 2015, the National TVET Policy was introduced in order to revolutionise the TVET sector in Pakistan, this time with the support of international funding.

9 Pervez Rahim, "Vocational Training," *The News*, accessed April 27, 2022, <https://www.thenews.com.pk/print/854127-vocational-training>.

10 Sayed Asghar Shah and Mansoor Zaib Khan, "Comparative Analysis of TVET Sector in Pakistan," *Comparative Analysis of TVET Sector in Pakistan 1* (2017): 1-57, [https://www.skillingpakistan.org/files/1/Comparative Analysis of TVET Sector in Pakistan.pdf](https://www.skillingpakistan.org/files/1/Comparative%20Analysis%20of%20TVET%20Sector%20in%20Pakistan.pdf).

11 Pervez Rahim, "Vocational Training," *The News*, accessed April 27, 2022, <https://www.thenews.com.pk/print/854127-vocational-training>.

12 National Vocational and Technical Training Commission (NAVTTTC), "About Us," accessed April 28, 2022, <https://navttc.mne.skillingpakistan.org/>.

13 Government of Pakistan, "Constitution (Eighteenth Amendment) Act, 2010," *The Constitution of Pakistan, 2010*, <https://pakistani.org/pakistan/constitution/amendments/18amendment.html>.

2.1.2 INSTITUTIONAL, POLICY AND LEGISLATIVE FRAMEWORKS IN PAKISTAN'S TVET SECTOR

Pakistan's TVET sector is coordinated at the federal level, however, implementation is managed separately by each of the provinces through their own skills development systems.¹⁴ There is much variance in terms of service providers, trades and technologies offered, methods and duration of training programmes across the different provinces.

Overall, the TVET sector is governed under the NAVTTC, which serves as the apex body at the federal level, under the Ministry of Federal Education and Professional Training (MoFEPT). Guided by the NAVTTC Act of 2011, it is responsible for setting the policy direction, regulating the system, and coordinating and facilitating the activities and responsibilities of various public and private actors and stakeholders engaged in the TVET sector.¹⁵ It includes in its mandate the responsibilities of assessing training needs, developing curricula, and setting skills standards – the duties of former National Training Bureau (NTB), which was merged with the NAVTTC in 2016¹⁶.

NAVTTC also regulates the activities of the provincial Technical and Vocational Training Authorities (TEVTAs) and is responsible for quality assurance for their activities. Each of the four provinces in Pakistan have their own TEVTAs. In Punjab, Ordinance XXIV of 1999 and Act X of 2010; in KP TEVTA Act XXXIII of 2015, in Balochistan the TEVTA Act of 2011 and in Sindh, the TEVTA Act of 2010 guide the respective TEVTAs.

Despite this legislative backing, provincial TEVTA activities are covered by different provincial departments, ensuing much confusion and lack of coordination. For instance, vocational education is under the jurisdiction of provincial departments of education, while technical training and apprenticeship centres are mandates of provincial labour departments.¹⁷ In addition to TEVTAs, provinces also have Skill Development Councils that are responsible for designing and implementing training activities and drafting and revising curricula. Moreover, the provincial Directorates of Technical Education (DTEs), and the provincial Directorates of Manpower Training are also public sector bodies that implement their own vocational training programmes. The division of power and responsibility is unclear and leads to issues of duplication, poor coordination and implementation of training programmes, and lack of accountability (further discussed in the section below).

Policy documents that relate to TVET include the National Education Policies of 2009 and 2017, the National TVET Policy of 2015, as well as the National Skills Strategy (NSS) of 2009-2013.¹⁸ The provinces have their own skills development policies and strategy documents.

14 World Bank, "Skills Assessment for Economic Growth" (Washington D.C., 2019), <https://openknowledge.worldbank.org/bitstream/handle/10986/32752/Pakistan-Skills-Assessment-for-Economic-Growth.pdf?sequence=1>.

15 National Vocational and Technical Training Commission (NAVTTC), "About Us," accessed April 28, 2022, <https://navttc.mne.skillingpakistan.org/>.

16 National Assembly of Pakistan, "Press Release Details," accessed April 29, 2022, https://na.gov.pk/en/pressrelease_detail.php?id=2036.

17 Sayed Asghar Shah and Mansoor Zaib Khan, "Comparative Analysis of TVET Sector in Pakistan," Comparative Analysis of TVET Sector in Pakistan 1 (2017): 1-57, <https://www.skillingpakistan.org/files/1/Comparative Analysis of TVET Sector in Pakistan.pdf>.

18 World Bank, "Skills Assessment for Economic Growth" (Washington D.C., 2019), <https://openknowledge.worldbank.org/bitstream/handle/10986/32752/Pakistan-Skills-Assessment-for-Economic-Growth.pdf?sequence=1>.



NSS 2009-2013 was introduced to revive the TVET sector of Pakistan with the prime objective to reduce fragmentation and solve coordination issues among the federal and provincial bodies.¹⁹ NSS also focuses on skills development that match the needs for Pakistani industrial and economic development, including addressing concerns of access, equity, and employability.²⁰

To support the implementation of the NSS, the TVET Sector Support Programme was launched in 2011 with assistance from international organisations to facilitate the Government of Pakistan. The European Union funded the Support Programme, along with the Governments of the Netherlands and Germany, while the German international development agency – GIZ – is implementing the programme in collaboration with the NAVTTC and the private sector actors in the field.²¹ Other international actors in the TVET sector in Pakistan include the UN agencies such as the UNICEF, UNDF, UNIDO, as well as entities such as the World Bank, British Council, UK's FCDO, and Japan's International Cooperation Agency (JICA).²² The World Bank, for instance, supported the provincial governments of Punjab and Sindh with dedicated skills development programmes, under its national Skills Development Programme for Pakistan.²³

The main purpose of the TVET Sector Support Programme is to improve training quality and to broaden the range of courses offered at the institutes to better match the skill demands in the domestic and international labour markets. Through a dedicated Private Sector Enhancement Strategy, the Support Programme is also working towards enhancing the participation of the private sector in the decision-making bodies related to VETs through Business and Industry Associations (BIAs).²⁴ To encourage participation from employers, the Support Programme also established the Sector Skills Councils focusing on four key sectors initially, including construction, hospitality, textile and renewable energy. These Sector Skills Councils are coordinated by the BIAs and the employers. The TVET Sector Support Programme also introduced elements of a competency-based training approach, which necessitated the need for training not only of the trainees but also the trainers.²⁵ The TVET Support Programme entered its second phase in 2017.

Some of the initiatives made under the TVET Support Programme include **the National Skills Information System (NSIS)** which serves as the data and information source for skills repository and labour market conditions in Pakistan. With its utility for market demand analysis, it serves as the skills-matching platform for employers and those looking for employment. **The National Vocational Qualifications Framework (NVQF)** was established in 2013 under the NAVTTC which sets the standards for skills assessment, determine equivalence and competency standards, set criteria for recognition of prior learning, develop teaching and learning materials, and assure quality standards for trainings.²⁶

19 Sayed Asghar Shah and Mansoor Zaib Khan, "Comparative Analysis of TVET Sector in Pakistan," Comparative Analysis of TVET Sector in Pakistan 1 (2017): 1-57, [https://www.skillingpakistan.org/files/1/Comparative Analysis of TVET Sector in Pakistan.pdf](https://www.skillingpakistan.org/files/1/Comparative%20Analysis%20of%20TVET%20Sector%20in%20Pakistan.pdf).

20 *ibid.*

21 *ibid.*

22 *ibid.*

23 World Bank, "Punjab Skills Development," 2015, <https://projects.worldbank.org/en/projects-operations/project-detail/P130193?lang=en>; World Bank, "Sindh Skills Development Project," 2011, <https://projects.worldbank.org/en/projects-operations/project-detail/P118177>.

24 European Commission, "Private Sector Engagement in TVET," n.d., [https://tvetreform.org.pk/wp-content/uploads/downloads/Reports and Publications/Private Sector Engagement in TVET.pdf](https://tvetreform.org.pk/wp-content/uploads/downloads/Reports%20and%20Publications/Private%20Sector%20Engagement%20in%20TVET.pdf).

25 GIZ, "TVET in Pakistan: Fit for the Labour Market," accessed April 27, 2022, <https://www.giz.de/akademie/en/html/59625.html>.

26 NAVTTC, "Pakistan National Vocational Qualifications Framework," vol. 2 (Islamabad, 2015).



In 2018, the Federal government passed the **Apprenticeship Act**, replacing the now outdated Ordinance of 1962. However, the new legislation only applied to the Federal Capital of Islamabad, as under the 18th Constitutional Amendment, provinces are mandated to enforce their own legislation related to TVET.²⁷ Following the federal government, TEVTA Punjab replaced the 1962 Ordinance with the Apprenticeship Act 2021,²⁸ while the rest of the provinces are yet to upgrade their apprenticeship related legislation.

The same year (2018), the MoFEPT also launched the **Skills for All Strategy**, coupled with the Skills for All Programme (Hunarmand Pakistan) launched in 2020, with a value of 10 billion PKR under the TVET Reforms Programme.²⁹ The programme introduced 14 targeted interventions to sort out governance and operational issues in the TVET sector, strengthen industry linkages, and capacity enhancement by exploring opportunities for increased funding, international accreditation of certifications, expanding training facilities and courses, and introducing new incubation centres.³⁰ Under this programme, provinces have introduced their own schemes to reform and upgrade their respective TVET sectors.

These interventions are summarised below:

Table 1 Interventions under the Skills for All Strategy

SR. NO.	INDICATOR	INTERVENTION
1.	Standardisation of TVET sector	Development and standardisation of 200 TVET qualifications
2.	National accreditation	Accreditation of 2000 TVET institutes across Pakistan
3.	International accreditation	Accreditation of 50 TVET institutes and joint international degree programmes
4.	Employment portal and career counselling centres	Development of National Employment Exchange Tool (NEXT)
5.	Smart Tech labs	100 smart tech labs across Pakistan for distant learning
6.	Facilitation centres	10 country of destination specific facilitation centres across 10 cities in Pakistan
7.	Skill development activities in madrasa schools	Development of 70 new labs/workshops in Madrassas to promote skill development
8.	Focus on less developed areas for skill development programmes	Introduce skill development programmes for 50,000 youth belonging to less developed areas

27 Pervez Rahim, "Vocational Training," The News, accessed April 27, 2022, <https://www.thenews.com.pk/print/854127-vocational-training>.

28 TEVTA Punjab, "TEVTA Vision 2023: The New Skill Ecosystem," 2023, [https://tevta.punjab.gov.pk/system/files/Brochure final-15-02-21...pdf](https://tevta.punjab.gov.pk/system/files/Brochure%20final-15-02-21...pdf).

29 Government of Pakistan, "National Youth Development Programme Two Years Progress Report Oct 2019-Oct 2021," 2021, https://kamyabjawan.gov.pk/KJAssets/img/docs/2_years_Report.pdf.

30 Ministry of Federal Education and Professional Training, "National Skills for All Strategy" (Islamabad, 2018).



9.	Focus on high-tech skills	Introduce skill development programmes for 50,000 youth in high-end technologies
10.	Apprenticeship training	Provide apprenticeship training for 25,000 youth in various industries
11.	Recognition of prior learning (RPL)	Introduce RPL programmes to certify skills of youth who acquired skills informally
12.	Accreditation council	Establishment of National Accreditation Council in Islamabad
13.	Teachers training	Training of 2500 TVET teachers as per international standards
14.	Incubation centres	Establish 50 business incubation centres to promote self-employment in youth

While NAVTTC is responsible for the TVET sector at the national level, provincial TEVTAs set their own plans under the national scheme. TEVTA Punjab launched its TEVTA Vision 2023: The New Skill Ecosystem to guide the developments in the TVET sector.³¹ Provincial strategies and policies related to skills include the Punjab Growth Strategy 2018, Punjab Skills Development Sector Plan 2018, Skills Development Plan for Khyber Pakhtunkhwa (2012), and Skill Development Plan–Sindh (2012).

2.1.3 STATUS OF TVET INSTITUTES

While the system allows for company-based apprenticeships trainings, most of the TVET activities take place in class-rooms, in specialised TVET institutes, managed by the public as well as private sector. Candidates are eligible to apply for formal TVET after completion of secondary school certificates (grade 10). Government statistics on the number of TVET institutes in the country vary, and it is difficult to determine from publicly available sources which statistics are the most recent ones. The total number of documented TVET institutes in Pakistan ar3,634, of which the majority are in the province of Punjab (1,672) and Khyber Pakthunkhwa (686),³²as of 2017. Out of the total TVET institutes, 963 are technical institutes, while 2671 offer vocational education.³³ **Technical institutes** refer to the colleges of technologies, polytechnics and mono-technic institutions, in which theory is combined with practical experience, while **vocational schools** utilise a more hands-on approach to teach the skills.

About 386 technical institutes are for males, 286 for females, and 291 are co-education. Similarly, 1204 vocational institutes are for males only, 1250 for only females, and 381 are co-education. Together, all these public TVET institutes produce about 419,732 trained individuals annually, among which 294,149 are males and 125,583 are females. Compared to the estimated annual labour supply of 1.4 million individuals, this share of individuals trained from formal TVET institutes is much less.³⁴ There is no publicly available data on the accurate number of private TVET institutes, however, a 2009 NISDT study estimates that

31 TEVTA Punjab, “TEVTA Vision 2023: The New Skill Ecosystem.”

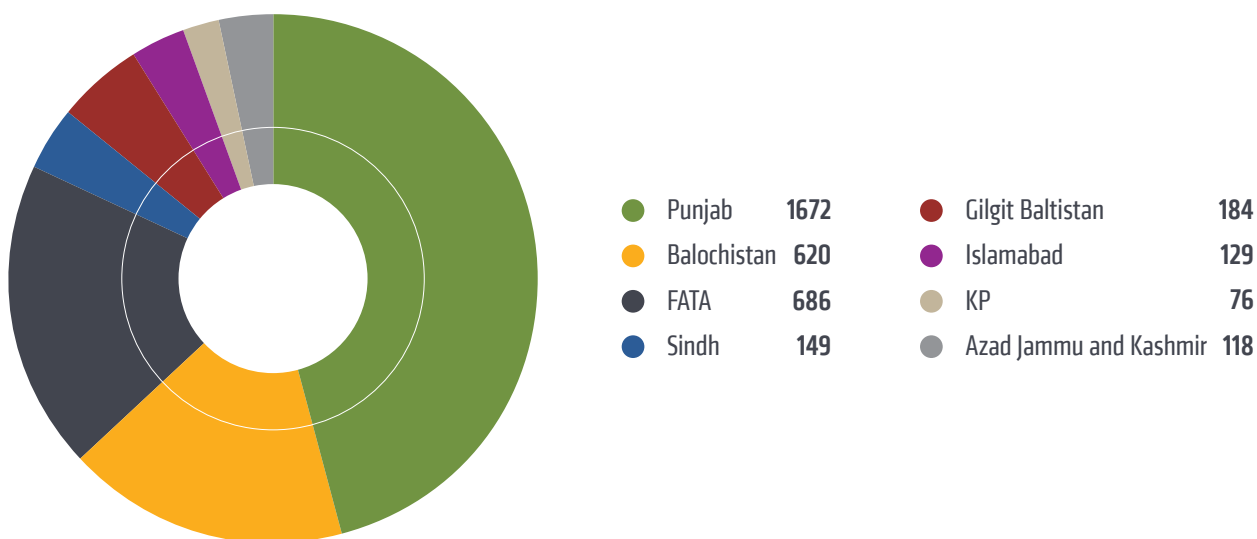
32 NAVTTC, “TVET Sector- Statistical Overview,” 2017, <http://skillingpakistan.org/tvet-landscape>.

33 *ibid.*

34 UNDP Pakistan, “Unleashing the Potential of a Young Pakistan: National Human Development Report.”

there are more than 1000 private TVET institutes in Pakistan.³⁵ These institutes offer different courses, varying in duration from three-months certificate courses to three year diploma courses (for example in engineering).³⁶

Figure 1 TVET Institutes in Pakistan



Source: NAVTTC, 2020

There are over 1000 trade courses, with varying entry requirements.³⁷ They range from short courses (3 months courses) to long courses leading to a diploma (3 years). A 2017 study offers province-wise distribution of popular vocational and technical courses in the TVET sector in Pakistan, mentioned in order of popularity in the region.³⁸

Table 2 Overview of the most popular vocational and technical courses per province as of 2017

PROVINCE	MOST POPULAR VOCATIONAL COURSES	MOST POPULAR TECHNICAL COURSES
Punjab	Beautician, basic computer course, and driving	Electrical technology, mechanical and civil technology, and chemical technology
Sindh	Basic computer course, dress-making and tailoring, and Auto-CAD	Civil technology, electrical technology, and mechanical technology

35 Sayed Asghar Shah and Mansoor Zaib Khan, "Comparative Analysis of TVET Sector in Pakistan," Comparative Analysis of TVET Sector in Pakistan 1 (2017): 1-57, [https://www.skillingpakistan.org/files/1/Comparative Analysis of TVET Sector in Pakistan.pdf](https://www.skillingpakistan.org/files/1/Comparative%20Analysis%20of%20TVET%20Sector%20in%20Pakistan.pdf).

36 Ibid.

37 World Bank, "Skills Assessment for Economic Growth" (Washington D.C., 2019), <https://openknowledge.worldbank.org/bitstream/handle/10986/32752/Pakistan-Skills-Assessment-for-Economic-Growth.pdf?sequence=1>.

38 Sayed Asghar Shah and Mansoor Zaib Khan, "Comparative Analysis of TVET Sector in Pakistan," Comparative Analysis of TVET Sector in Pakistan 1 (2017): 1-57, [https://www.skillingpakistan.org/files/1/Comparative Analysis of TVET Sector in Pakistan.pdf](https://www.skillingpakistan.org/files/1/Comparative%20Analysis%20of%20TVET%20Sector%20in%20Pakistan.pdf).



KP	Basic computer course, dress-making and tailoring, and rural poultry, and diploma in IT	Civil technology, electrical technology, and mechanical technology
Balochistan	Basic computer course, welding, auto-mechanic and motor winding	Electronics, electrical technology, computer and information technology
Gilgit-Baltistan	Tailoring, basic computer course and embroidery course	Civil technology, electrical technology, and computer and information technology
Azad Jammu and Kashmir	Basic computer course and Auto-CAD	Civil technology, electrical technology, and electronics.
FATA	English speaking course, tailoring and diploma in IT	Data not available.
Islamabad	Beautician course, tailoring and dress-making.	Civil technology, mechanical technology, and electronics.

Source: Shah and Khan (2017)³⁹

The Two Year Progress Report on Skills for All Programme shows that by 2021, PKR 6 billion (EUR 25.4 million) are allocated for skills scholarships to 170,000 youth to develop demand-driven skills. The remaining PKR 4 billion (EUR 17 million) are set for upgrading the TVET sector to meet international standards.⁴⁰ Amongst the skills scholarships, 36,369 scholarships have been awarded for high-tech skills, 41,136 scholarships for conventional skills, 19,279 RPL certificates awarded, and 1600 apprenticeships awarded in about 225 skills.

2.1.4 QUALIFICATIONS CRITERIA AND QUALITY ASSURANCE

As mentioned, the NVQF guides the qualifications criteria for skills and training in Pakistan. NVQF allows for the accreditation of skills received through both formal (institution-based training, work-based apprenticeships), and informal channels (recognition of prior learning or current competencies through direct skill benchmarks and competency standards). In principle, the NVQF is based on the European Qualifications Framework.⁴¹ The skills are assessed by provincial qualifications bodies, including the Boards of Technical Education (BTEs) and Trade Testing Boards (TTBs).

The determination of skills and qualifications is based on different levels of training received. For instance, level one to four lead to a certificate, level five leads to a diploma in a specific field, level six makes the candidate eligible for a Bachelors in Technology (B. Tech), level seven leads to a Masters in Technology (M. Tech), and level eight makes the candidate eligible for a PhD in Technology in the TVET system. Levels six to eight are offered by specified Government Colleges of Technologies. These levels are determined by a set of indicators (Level Descriptors) identifying the broad outcomes that trainees should achieve based on which they will be awarded the qualification (see figure 1). The Level Descriptors define the complexity of the skill and the knowledge base required for that skill for the specific level. Each qualification also receives a credit value, based on the number of hours of training. One credit is equivalent to 10 hours of

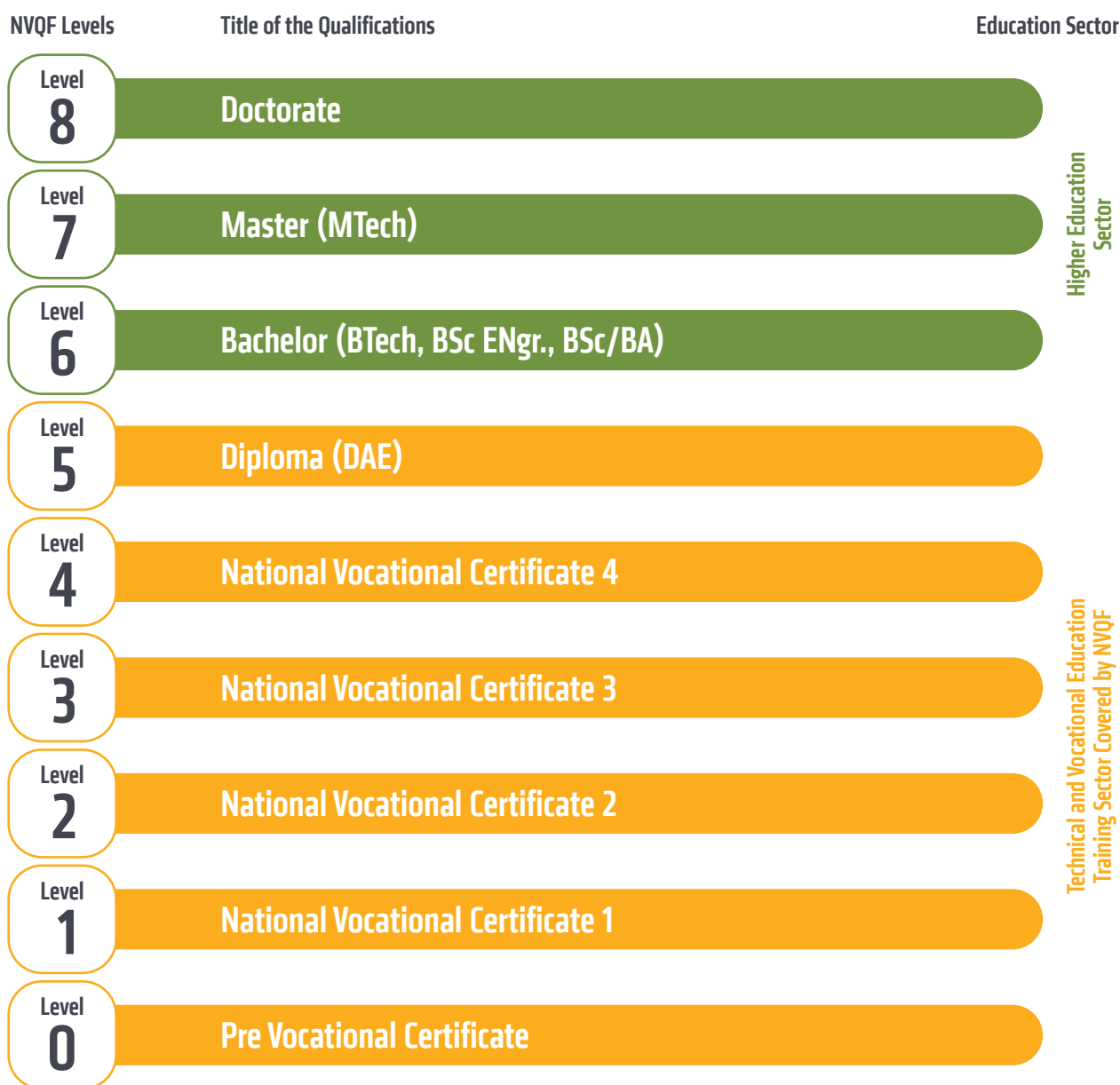
39 World Bank, "Skills Assessment for Economic Growth" (Washington D.C., 2019), <https://openknowledge.worldbank.org/bitstream/handle/10986/32752/Pakistan-Skills-Assessment-for-Economic-Growth.pdf?sequence=1>.

40 Government of Pakistan, "National Youth Development Programme Two Years Progress Report Oct 2019-Oct 2021."

41 NAVTTC, "Pakistan National Vocational Qualifications Framework," vol. 2 (Islamabad, 2015).

learning, and different courses have different credit scores. A certification is awarded after a competence-based assessment which involves an evaluation of skills, knowledge and attitudes, demonstrations, simulations, presentations, assignments, projects, creations, tests, examinations, etc. Assessment criteria and level descriptors for levels seven and eight were not in place until 2015, and there is no publicly available information on whether these have been developed more recently.⁴² For certifications between levels one to five, Qualifications Awarding Bodies (QABs) are the responsible bodies in the provinces, while certifications for higher levels are under the purview of degree awarding universities.

Figure 2 NVQF Qualifications Levels



Source: NAVTTC 2015.⁴³

42 *ibid.*

43 *ibid.*



NAVTTTC is the main authority responsible for quality assurance of NVQF qualifications, service delivery of trainings, management systems, and monitoring and evaluation of the system. It does so in close collaboration with the industry representatives, as well as relevant government bodies including the provincial TEVTAs, Provincial Vocational Training Councils (PVTTCs), Board of Technical Education (BTE) and Trade Testing Boards (TTBs).⁴⁴ PVTTCs, BTEs and TTBs are also certificate-awarding authorities following the NVQF national standardised format. The provinces have their own Boards of Technical Education that are responsible for conducting exams, aligned with the NVQF. The NVQF management committee is responsible for management and coordination between the provinces and the centre, and give policy directions on the implementation of the NVQF.⁴⁵ Quality assurance under the NVQF system is determined by the following four standards:

- i. Development and revision of qualifications as per the demand of the labour market and employer
- ii. Delivery of training and accreditation of training and training institute
- iii. Comprehensive assessment system
- iv. Continuous monitoring and evaluation of the NVQF framework.

Besides the national level TVET qualifications, the system also allows for foreign qualifications in Pakistan. However, NVQF explicitly states that these foreign qualifications are not equivalent to the NVQF-based qualifications. It also requires that these qualifications are officially recognised in the country that is offering this qualification and follows a quality assurance mechanism.⁴⁶

2.1.5 CHALLENGES IN THE TVET SECTOR

There are numerous challenges in the TVET sector in Pakistan which hold it back from optimally skilling young labour to find gainful employment and have their skills widely recognised. Despite the many institutional structures and policy directives, outcomes in terms of **quality of skills remains low among Pakistani youth**. One of the main issues, highlighted even in the policy documents themselves, is the issue of overlapping institutional setup and fragmented responsibilities.⁴⁷ Division of responsibilities across the different federal and provincial stakeholders is also unclear, especially in light of the 18th Amendment.⁴⁸ Even with the TVET Reforms Support Programme, a well-defined coordination mechanism between different public and private stakeholders is lacking. In terms of technical education, public sector providers dominate the market, while in case of vocational education, private providers outweigh the public sector.⁴⁹ Such a fragmented system also posits a challenge for international skills accreditation and recognition, especially if provinces have to separately seek out collaborations and solutions to skill recognition with international partners.

44 National Vocational and Technical Training Commission, “National Vocational Qualification Framework Version 2 NVQF” (Islamabad, 2017).

45 *ibid.*

46 *ibid.*

47 Ministry of Federal Education and Professional Training, “National Skills for All Strategy” (Islamabad, 2018).; NAVTTTC, “Pakistan National Vocational Qualifications Framework,” vol. 2 (Islamabad, 2015).

48 Ministry of Federal Education and Professional Training, “National Skills for All Strategy” (Islamabad, 2018)

49 UNICEF, “Developing Skills in Youth to Succeed in the Evolving South Asian Economy,” vol. 29, 2020, [https://www.unicef.org/rosa/media/4506/file/Nepal Country Report.pdf](https://www.unicef.org/rosa/media/4506/file/Nepal%20Country%20Report.pdf).



There is also a **mismatch between the type of skills that are popular in the market, and the skills that the TVET sector is producing**. The top three skills supplied by the TVET sector in 2017 were Diploma of Associate Engineering (DAE) in civil technology (18,727), DAE in electrical technology (15,532) and beautician (13,810) courses.⁵⁰ The same year, demand was highest for skills including data entry (9,701), security guard (5,170) and driving (5,055).⁵¹ This highlights the lack of linkages and coordination between the domestic industry and TVET sector in Pakistan. These statistics are also outdated and do not reflect the evolution of the labour market in a post-COVID-19 scenario. The limited involvement of the employers and industry in the planning and decision-making platforms translates into wide gaps in the skill demands and supply. Employer and industry participation in the design of curricula and competency standards is being improved under the new Support Programme, but there remains a large gap to be filled in terms of implementation. The Support Programme has developed a Private Sector Engagement Strategy for TVET, as part of which several handbooks have been developed relating to linking training in institutes with the workplace, for business and industry associations for promoting TVET and manuals for setting up coordination bodies at the district and local level with representation of employers and enterprises.

In addition to the general demand-supply gap in the TVET sector, there is also an **issue of perceptions and attitudes associated with the TVET sector**. Youth in Pakistan does not generally prefer the TVET pathway for career development and rather focuses on the conventional education route for qualification development. The TVET route is often considered 'second-class' to conventional education and thus leads to lower enrolment rates than regular academic programmes.⁵² There is also a dearth of linkages between the two streams of education – degree equivalence for TVET graduates are not quite straightforward and do not translate well into the regular educational qualifications despite the presence of a national qualifications framework. This often hinders TVET graduates' employability for mainstream job positions, thus, making TVET sector a "dead-end career choice".⁵³ This attitude is also reflective in the hiring of trainers for the TVET sector as training institutes prefer to hire trainers with higher education and academic qualifications than those with TVET certifications.⁵⁴ In practice, skills acquisition through informal apprenticeships arrangements tend to be more popular than acquiring skills through TVET sector.⁵⁵

While in principle, the NVQF allows for skill development and upgrade of current competencies, practical mechanisms are lacking to allow for the already employed semi-skilled workers to hone and upgrade their skills.⁵⁶ Curriculum of different technical and vocational courses is also often outdated and lacks a regular and periodic mechanism for updating and revision. **Technology integration is limited**, proving to be a major impediment in equipping the new labour force with skills in the latest technology used in industries. This is also one of the main factors hindering the recognition of Pakistani certifications in international labour markets.⁵⁷ Thus, the curriculum is not conducive to develop linkages between the industry and the

50 NAVTTC, "TVET Sector Statistics," 2017, <http://www.skillingpakistan.org/>.

51 *ibid*.

52 Fatima, Sehrish, "Pakistan Needs More Vocational Training," Dawn, accessed April 27, 2022, <https://www.dawn.com/news/1532054>.

53 *ibid*

54 *ibid*.

55 UNICEF, "Developing Skills in Youth to Succeed in the Evolving South Asian Economy," vol. 29, 2020, [https://www.unicef.org/rosa/media/4506/file/Nepal Country Report.pdf](https://www.unicef.org/rosa/media/4506/file/Nepal%20Country%20Report.pdf).

56 Rahim, Pervez. "Vocational Training." The News. Accessed April 27, 2022. <https://www.thenews.com.pk/print/854127-vocational-training>.

57 Hassan Mirza, "How to Implement Vocational Training Reforms in Pakistan," The Express Tribune, accessed April 27, 2022, <https://tribune.com.pk/article/95897/how-to-implement-vocational-training-reforms-in-pakistan>.



TVET institutes. Existing literature on the state of TVET largely mentions the infrastructural capacities of TVET institutes while there is limited evidence on quality of teaching and curricula.⁵⁸

In general, there is a **lack of good trainers in the TVET sector**. Trainers are often not trained in the latest practices in the industry and do not have the required resources to practice using the latest technology in the relevant field.⁵⁹ Low public funding for the TVET sector is also one of the reasons for the lack of investment in trainers' capacities and skill upgradation.

Pakistan and Saudi Arabia signed an agreement in 2021 related to skills verification of Pakistani migrant workers in Saudi Arabia. Besides this agreement, there is a lack of any skills qualifications agreements between Pakistan and the popular labour migration destinations. Pakistan is a signatory to the Abu Dhabi Dialogue (2008) that focuses on improving cooperation on labour migration governance among Asian countries of origin and destination. Among the Dialogue's critical pillars is the effort to develop a cooperation framework for the mutual recognition and certification of skills.⁶⁰ In addition, Pakistan is an active participant in the Budapest Process dialogue since 2010 which includes a priority area on improving legal mobility and labour migration. Very recently, in 2022, Pakistan published a call for expression of interest to international accreditation bodies for pre-qualification of international accreditations for certain TVET institutes in Pakistan.⁶¹ For any international collaborations in the TVET sector, NAVTTC is the focal entity in Pakistan, while provincial stakeholders and industry representatives can be engaged at relevant points.⁶²

2.2 BANGLADESH

With youth constituting a third of Bangladesh's population, it is currently in a prime phase of benefitting from a demographic dividend,⁶³ a phase that is expected to last until 2040.⁶⁴ Every year, about 2.3 million young people enter the Bangladeshi workforce, yet, two out of every five young people are out of employment, education or training.⁶⁵ Estimates suggest that about 10 million young Bangladeshis are unemployed or underemployed.⁶⁶ One major factor contributing to the high levels of unemployment and impeding productivity among youth is low levels of education, technical qualifications and competencies in employable skills.

58 Shah, Sayed Asghar, and Mansoor Zaib Khan. "Comparative Analysis of TVET Sector in Pakistan." *Comparative Analysis of TVET Sector in Pakistan 1* (2017): 1-57. [https://www.skillingpakistan.org/files/1/Comparative Analysis of TVET Sector in Pakistan.pdf](https://www.skillingpakistan.org/files/1/Comparative%20Analysis%20of%20TVET%20Sector%20in%20Pakistan.pdf).

59 Fatima, Sehrish. "Pakistan Needs More Vocational Training." *Dawn*. Accessed April 27, 2022. <https://www.dawn.com/news/1532054>.

60 Abu Dhabi Dialogue, "Submission to the International Migration Review Forum May 2022," 2022, [https://migrationnetwork.un.org/system/files/docs/Abu Dhabi Dialogue - GCM Report FINAL.PDF](https://migrationnetwork.un.org/system/files/docs/Abu%20Dhabi%20Dialogue%20-%20GCM%20Report%20FINAL.PDF).

61 NAVTTC, "Invitation for Pre-Qualification of International Accreditation Bodies," 2022.

62 National Vocational and Technical Training Commission, "National Vocational Qualification Framework Version 2 NVQF."

63 A demographic dividend is a period in which a proportionally large working-age population results from the rapid fall in birth rates

64 BRAC, "STAR Toolkit: Introducing a Successful Apprenticeship Programme" (Dhaka, 2019), <http://www.childnet.com/resources/star-toolkit>.

65 BRAC, "Skills Development," accessed June 7, 2022, <http://www.brac.net/program/skills-development/>.

66 *ibid*.



This section offers an overview of the TVET sector in Bangladesh, including the TVET qualification system, and highlights some challenges and opportunities in the sector.

2.2.1 HISTORICAL CONTEXT

Bangladesh inherited some institutional infrastructure related to TVET at the time of its independence in 1971. The Directorate of Technical Education was created in 1960 and the Bangladesh Technical Education Board was created in the 1969 when it was still East Pakistan. In 1967, the Technical Education Act was passed. There were only a few vocational training and polytechnics institutes, which were under the Ministry of Education.⁶⁷ After independence, the government established the National Council for Skills Development and Training (NCSDT) in 1979.

However, the TVET sector in Bangladesh has struggled to become a popular stream of education among Bangladeshi youth.⁶⁸ Enrolment levels in the TVET sector remained low, and even declined in the 1980s and 1990s. Even in 2001, the enrolment rate in the TVET sector was 0.4% which gradually increased to 3.30% in 2021.⁶⁹ One major reason for the low TVET enrolment rates was the rapid growth in mainstream education, due to the higher occupational mobility that regular education offered.⁷⁰

As the economy experienced structural shifts, growing from a primarily agricultural economy to one that was more reliant on industry and services, the government started to prioritise skills enhancement for improving the productivity of the workforce and integrate it with the general education stream. It introduced a new vocational stream in the upper secondary education, offering two year programmes to grades 9 and 10 for Senior Secondary Certificate Vocational, and another two-year programme for grades 11 and 12 leading to the Higher Secondary Certificate Vocational. Between 1999 and 2017, the TVET sector experienced a 700% growth in Bangladesh.⁷¹ Since 2008, Bangladesh has embarked on a reforms programme for its TVET sector, in collaboration with various international development partners, including the EU and ILO.

2.2.2 INSTITUTIONAL, POLICY AND LEGISLATIVE FRAMEWORKS IN BANGLADESH'S TVET SECTOR

Technical education and vocational training in Bangladesh is imparted through both formal and informal mechanisms. The entry to a formal TVET stream is after secondary education (grade eight) into mono-technic or polytechnic institutes. Informal TVET stream involves all certifications based on short courses (between one to twelve months) that are not affiliated with the Bangladesh Technical Education Board (BTEB).⁷²

67 Markus Maurer and Mohammad Mahboob Morshed, "Promoting the Recognition of Prior Learning in the Context of Development Cooperation: The Case of Bangladesh," *International Journal of Educational Development* 91, no. March (2022), <https://doi.org/10.1016/j.ijedudev.2022.102592>.

68 Amanullah Khan, "Situation Analysis of Bangladesh TVET Sector: A Background Work for a TVET SWAp," 2019.

69 UIS, "Sustainable Development Goals: Participation Rate in Technical and Vocational Programmes (15- to 24-Year-Olds), by Sex," 2022, <http://data.uis.unesco.org/>.

70 Maurer and Morshed, "Promoting the Recognition of Prior Learning in the Context of Development Cooperation: The Case of Bangladesh."

71 *ibid.*

72 ADB, "Innovative Strategies in Technical and Vocational Education and Training for Accelerated Human Resource Development In South Asia: Bangladesh," 2015.



The National Skills Development Authority (NSDA) is the apex authority on skills development in Bangladesh. Headed by the Prime Minister of Bangladesh, the Authority is mandated to set the national skills development agenda and implement the National Skills Development Policy (NSDP) of 2011. NSDA operates through a tripartite consultation forum between the relevant government departments, private employers, workers and civil society. The NSDA has an executive body that is co-chaired with a representative of the private sector, the Secretary of the Ministry of Education, and the Secretary of the Ministry of Labour and Employment. In addition, the Secretariat of the NSDA offers supports to the executive body and the NSDA. Its responsibilities include reviewing and monitoring of the National Skills Development Policy and Action Plan. In other words, the NSDA provides the policy vision, the executive committee provides the policy direction, and the Secretariat plays the management role at the national level.⁷³

At the operational level, TVET sector comprises of the **Directorate of Technical Education (DTE)**, and the **Bureau of Manpower Employment and Training (BMET)**. Bangladesh Technical Education Board (BTEB) is the main body responsible for quality assurance, academic control, designing training courses and curricula, certifying trainers, and development assessment criteria. DTE and BTEB fall under the jurisdiction of the Ministry of Education under the Technical and Madrassah Education Division, whereas BMET is under the Ministry of Expatriates' Welfare and Overseas Employment (MoEWOE). Other affiliated and relevant departments include the Department of Agriculture Extension, Department of Textile, Department of Women Affairs, Department of Social Services, and Department of Youth Development.⁷⁴

The National Skills Development Policy 2011⁷⁵ is the main strategic document that guides skills development in Bangladesh. It defines the role of various relevant entities in the TVET sector and calls for a demand-oriented approach to skills development. It was developed through a consultative process among 200 relevant stakeholders, and was expected to be revised in 2017, which is still awaited.⁷⁶ The need for reforming the skills sector was also highlighted in the **National Education Policy 2009**, the **National Strategy for Promotion of Gender Equality in TVET 2012**, **National Strategy for Inclusion of Persons with Disabilities in Skills Development, 2013** the **National Strategy for Accelerated Poverty Reduction 2009-11**, and the **Expatriates Welfare and Overseas Employment Policy 2011**. Goals and ambitions for improving the TVET sector also come out strongly in the successive Five Year Plans (currently 8th Five Year Plan 2020-2025) and the Vision 2021.⁷⁷ The National Technical and Vocational Qualifications Framework (NTVQF) guides the qualification mechanism of the TVET sector, under which the newly approved Bangladesh National Qualifications Framework 2021 offers an integrated approach to awarding qualifications that are comparable in different contexts. Suggestions for the TVET sector are also included in the Human Capacity Development Plan-21, funded by the EU and introduced in 2020.⁷⁸

On the legislative level, the skills development sector is governed by the National Skills Development Authority Act 2018, Bangladesh Technical Education Board Act 2019, the Non-formal Education Act 2014, and the Labour Act 2004.⁷⁹ Chapter XVIII under the Labour Act relates to Apprenticeship which guides

73 Government of Bangladesh and ILO, "National Skills Development System in Bangladesh 2015" (Dhaka, 2015).

74 ADB, "Innovative Strategies in Technical and Vocational Education and Training for Accelerated Human Resource Development In South Asia: Bangladesh."

75 Ministry of Education, "National Skills Development Policy-2011" (Dhaka, 2011).

76 Khan, Amanullah. "Situation Analysis of Bangladesh TVET Sector: A Background Work for a TVET SWAp," 2019.

77 *ibid*

78 *ibid*.

79 *ibid*.

the structure and legal stipulations of apprenticeship programmes in Bangladesh. It mandates that all enterprises operating in Bangladesh with 50 or more employees should have apprenticeship programmes as per the proportion of the employees. The Apprentice Regulations 2008 provide the regulation for employment, contract, and stipend of apprenticeship programmes. Traditionally, apprenticeship programmes in Bangladesh have been largely informal in nature where a skilled craftsman trains assistants as apprentices. These practices are without any written contracts or certifications.

The skills development system in Bangladesh is offered both at the public and private level. At the public level, skills development at various qualification levels is delivered by 20 ministries in a fragmented way due to lack of coordination. The main public providers of technical vocational education and training (TVET) are the Department of Technical Education (DTE) under the Ministry of Education (MOE); the Bureau of Manpower, Employment, and Training (BMET) under the Ministry of Expatriates' Welfare and Overseas Employment; the Ministry of Industries; the Ministry of Youth and Sports; and the Ministry of Women and Children Affairs. At the private level, there are two kinds of institutes, i) those that receive a government subsidy or a grant; and ii) commercial training institutes, also including madrassas (religious schools).

Additionally, industry-based institutions, including apprenticeships programmes are also part of the TVET system. In fact, the Bangladesh Garment Manufacturers' Export Association created self-financed training institutes of its own, called the BGMEA Institute of Fashion and Technology (BIFT), to prepare the skills the sector needs.⁸⁰ Non-governmental and non-profit sector also offers services for skills development.⁸¹ International development partners have supported the implementation of specific programmes such as Skills 21 – Empowering citizens for inclusive and sustainable growth' project (2017 – 2020), Skills Training and Enhancement Project (STEP) 2010-2019, Skills for Employment Investment Program (SEIP) 2014-2021, Skills for Employment Program in Bangladesh (SEP-B/Sudokkho) 2014-2021, Building Skills for Unemployed and Underemployed Labour (B-SkillFUL) project 2015-2020, TVET-Reform Project 2007-2015, Bangladesh Skills for Employment and Productivity (B-SEP) project etc. 2014-2019. Some important actors in the non-profit sector include the Asian Development Bank (ADB), European Union, Swiss Development Cooperation, the World Bank, UKAID, GIZ (Germany), AUSAID (Australia), Canadian Government, etc.

The TVET system also includes the Industry Skills Councils (ISCs) that are responsible for providing sector-specific advice on skills and qualifications in demand and identify skills gap that can be prioritised by the TVET sector. They serve as an integral link between the skills development sector and the industries by providing a platform to sector-specific enterprises and industrial bodies to discuss skills related issues in their sectors. They also work in close collaboration with the Centres of Excellence, that monitor industry skills development practices and provide suggestions for improving practices for a specific sector.

A more recent development is the creation of the National Skills Data System which is responsible for providing detailed information and data on skills development activities carried out by both public and private sectors. The data system was primarily developed to address skills matching needs for the country, better understanding the emerging employment prospects and state of existing skills in order to enable better planning. The specific beneficiaries of the data system are the training providers, employers and

80 World Bank Bangladesh, "Learning for Job Opportunities: An Assessment of the Vocational Education and Training in Bangladesh Bangladesh Development Series," no. 16 (2007).

81 Government of Bangladesh and ILO, "National Skills Development System in Bangladesh 2015."



policymakers in the sector. The Skills Data System is housed in the NSDA Secretariat. The Bangladesh Bureau of Statistics conducts the Labour Force Surveys to identify available human resources in the country.

2.2.3 STATUS OF TVET INSTITUTES

Overall, Bangladesh has about 6,865 TVET institutes with an enrolment of 1,067,484 trainees as of 2019.⁸² The TVET system comprises short, 360-hour courses and three levels of formal TVET—the secondary school certificate (SSC), vocational (2 years); the higher secondary certificate, vocational (2 years); and diploma (4 years). Entrance to the diploma level in single-skill and polytechnic institutes is from both the general and vocational SSC level.⁸³ These TTCs are managed by the Bureau of Manpower Employment and Training (BMET).

There are 70 Technical Training Centres (TTCs) affiliated with BMET that are responsible for skilling labour for the domestic and international labour markets. Among them, 64 are Technical Training Centres in the 64 districts of Bangladesh, while 4 are Institutes of Marine Technology, aimed at creating a human resource skilled at marine transport systems including marine vessel operation, maintenance and fabrication of local and seagoing ships.

In addition, there are numerous mono-technic and polytechnic institutes, both in the public and private sectors, offering 4-year diploma courses in post-secondary engineering. These are affiliated with BTEB. The public sector also includes the Technical Schools and Colleges present in all 64 districts offering short courses and certifications, accredited by the Directorate of Technical Education. More than 3000 private TVET institutes are registered with BTEB, and according to a study conducted in 2009, more than 95% of technical institutions are privately owned, enrolling about 75% of the total enrolment in technical education.

The following table enlists some key statistics on the number of TVET institutes:⁸⁴

Table 3 Number of TVET institutes in Bangladesh

	TYPE OF INSTITUTE	NUMBER OF INSTITUTES
1.	SSC Vocational (attached)	2711
2.	HSC Voc/B. Management (att.)	1942
3.	HSC Voc/B. Management (Independent)	675
4.	Polytechnic Institute	439
5.	Medical Assistant Training School (MATS)	209
6.	Agriculture Training Institute	183

82 Khan, Amanullah. "Situation Analysis of Bangladesh TVET Sector: A Background Work for a TVET SWAp," 2019.

83 ADB, "ADB Briefs: Skills Development in Bangladesh," 2016.

84 *ibid.*



7.	Technical School & College	174
8.	S.S.C Vocational (Independent)	169
9.	Technical Training Centre	164
10.	Medical Technology	108
11.	Textile Vocational	51
12.	Textile Institute	33
13.	Survey Institute	4
14.	Glass & Ceramic Institute	1
15.	Graphic Arts Institute	1
16.	Marine Technology	1

Source: Khan (2019).

In addition, there are about 411 RPL centres across Bangladesh, which have certified about 41,560 workers, including 15,000 migrant workers.⁸⁵

Formal training, as affiliated with BTEB, include short courses on basic trades (360 hours in 95 different occupations), competency-based training and assessments in 51 occupations, secondary level trade qualifications in 31 occupations, higher secondary vocational courses in 14 occupations, diplomas in commerce, engineering (34 technologies), textile engineering (3 technologies), medical (8 technologies) etc.⁸⁶

International organisations and development agencies are also partnering with Bangladeshi government departments as well as the private technical training institutes for imparting skills training for labour. For instance, the Bangladesh Skills for Employment and Productivity (B-SEP) Project is an initiative of the Government of Bangladesh (GoB) funded by the Government of Canada and executed by the International Labour Organization. The project ran for six years (2013-2019) and aimed at developing institutional capacity; training, assessment and certifications; imparting industry skills; ensuring equitable access to skills. Within the non-profit sector, non-governmental organisations are also important players in the skills development field. For instance, BRAC has been implementing a Skills Development Programme in Bangladesh since 2015 with the aim of skilling and increasing employment prospects of about 400,000 youth.⁸⁷ An ADB study found that skills training offered by public and private institutes have a higher proportion of male trainees, while NGOs focus more on targeting women.⁸⁸

85 ILO, "RPL for Migrant Workers in Asia, Webinar Report," 2020.

86 Khan, Amanullah. "Situation Analysis of Bangladesh TVET Sector: A Background Work for a TVET SWAp," 2019.

87 BRAC, STAR Toolkit: Introducing a Successful Apprenticeship Programme." Dhaka, 2019. <http://www.childnet.com/resources/star-toolkit>

88 ADB, "ADB Briefs: Skills Development in Bangladesh." 2016



2.2.4 QUALIFICATIONS CRITERIA AND QUALITY ASSURANCE

The Bangladesh Technical Education Board (BTEB) is the apex body responsible for quality assurance through accreditation of training providers, curriculum development, and certification. The National Training and Vocational Qualification Framework (NTVQF) guides technical and vocational education and training in Bangladesh by developing and monitoring a consistent skills qualifications system. The NTVQF defines qualifications in Bangladesh to better reflect the changing occupational and skill profiles in both domestic and international labour markets, and the National Skills Quality Assurance System is responsible for ensuring quality control of the qualifications.

In 2021, the government approved the Bangladesh National Qualification Framework (BNQF) which is aimed at developing qualifications for newer sectors such as green jobs, while also attempting to make qualifications comparable with international standards and introduce more flexibility into skills recognition mechanisms. One of its main objectives is also to comprehensively integrate the TVET sector into the wider higher education strategy of the country and aim for a common approach for all qualifications.⁸⁹

The skills qualification system for the TVET sector is divided into six levels:⁹⁰

1. Level 1 refers to basic skills acquired under direct supervision in a structured and formal context;
2. Level 2 refers to basic skills training under indirect supervision in a structured and formal context;
3. Level 3 refers to qualification for semi-skilled work under supervision with some autonomy;
4. Level 4 refers to skilled workers qualified to take responsibility within reason, for completion of certain tasks;
5. Level 5 refers to highly skilled workers/supervisors qualified to take overall responsibility for completion of tasks;
6. Level 6 refers to skills qualified for a middle level manager or sub-assistant engineer responsible for managing teams in a workplace under unpredictable circumstances.

In addition, the system also includes pre-vocational qualifications in order to ensure the entry of low-skilled and less-educated workers to enter the formal skills development system. This is particularly relevant for those who were previously ineligible to access the formal TVET stream because of the requirement of passing grade 8.⁹¹ Two levels of qualifications are offered for this: level 1 relates to basic language, numeracy, and literacy skills relating to specific occupations, while level 2 imparts sector and occupation specific skills. Under the new approach adopted in the BNQF, Bangladesh focuses on four main skills that define the Learning Outcome Domain. These four domains include the fundamental domain, social domain, thinking domain, and personal domain, and largely includes skills such as complex problem solving, critical thinking, creativity, people management, coordination, emotional intelligence, judgement, and decision-making.⁹²

89 Government of People's Republic of Bangladesh, "Bangladesh National Qualifications Framework (BNQF) Part B : Higher Education," no. January (2021).

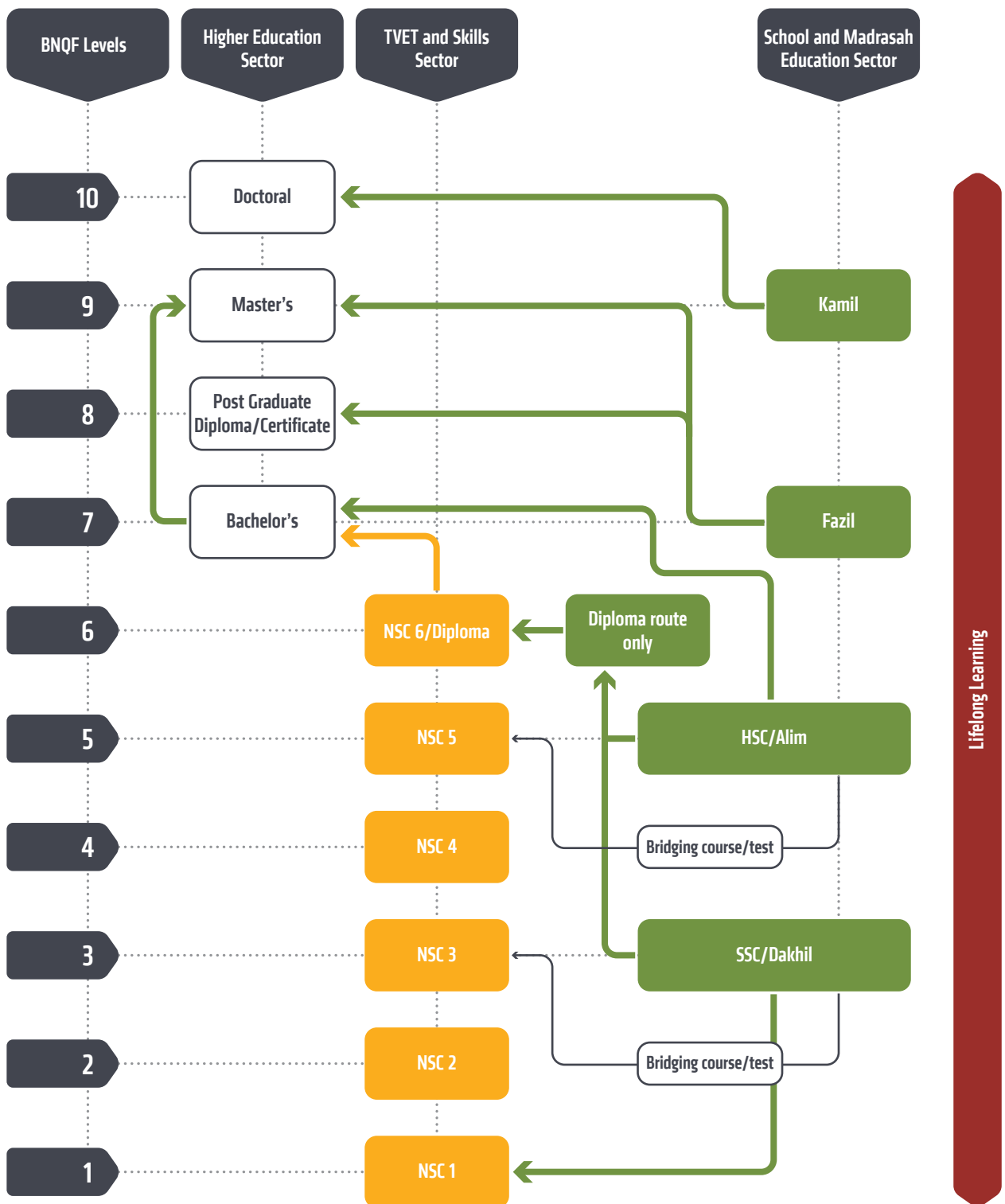
90 Government of Bangladesh and ILO, "National Skills Development System in Bangladesh 2015."

91 Maurer and Morshed, "Promoting the Recognition of Prior Learning in the Context of Development Cooperation: The Case of Bangladesh." 2022

92 Government of People's Republic of Bangladesh, "Bangladesh National Qualifications Framework (BNQF) Part B : Higher Education."

Moreover, according to the BNQF, the TVET qualifications then merge with the regular qualifications for higher qualifications from level 7 (bachelors') to level 10 (doctoral). Figure 3 gives an overview of the system:⁹³

Figure 3 Bangladesh National Qualifications Framework



93 Government of People's Republic of Bangladesh, "Bangladesh National Qualifications Framework (BNQF) Pathways," 2020, https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-dhaka/documents/publication/wcms_755967.pdf.

There are also provisions for recognition of prior learning (RPL) through either assessment pathway or a combination of a training and assessment pathway. The RPL scheme requires an approval of relevant documents such as samples of work, certificates, portfolios and referees, assessing which an equivalent qualification is awarded. Through this stream, those who have received training through informal channels, or through experience outside of the national qualification framework (e.g. migrant workers) can acquire qualifications according to the national framework.

Nationally-recognised competency standards are set recognition of prior learning to define the standard of skills required in specific industries. The competency standards are defined by the Standards and Curriculum Development Committees (SCDC) under sector-relevant Industry Skills Council. The SCDCs are headed by the relevant Industry Skills Council chair, and comprises representation from government organisations, private and public institutions and a representative from a quality assurance body. Based on that, Quality Assurance Manuals (QAMs) are developed for each skill and vocation. For specific courses, Course Accreditation Documents (CADs) are defined. The NTVQF also comprises Competency-based Training Delivery Systems, that is, a methodology focused on delivering practical knowledge and skills. The National Competency Assessment and Certification System (NCACS) is responsible for developing a consistent and harmonised approach to skill assessment, as per industry standards. Under the NTVQF, certifications are also offered for TVET trainers and assessors.

However, limited recognition of national qualifications in the international context is a major hurdle for Bangladesh's large migrant workforce. Bangladesh is also a member of the Abu Dhabi Dialogue, which emphasises on cooperation between the countries of origin and destination in Asia for mutual recognition and certification of skills.⁹⁴ It also has an Observer Status in the Budapest Process Dialogue, which, as part of its priority goal 2, focuses on improved labour migration governance through cooperation between the sending countries and the EU. Currently, Bangladesh is in the process of exploring the potential of Mutual Recognition Agreements (MRAs) with countries of destination for international acceptance of migrants' qualifications.⁹⁵ Bangladesh through its Mission in Saudi Arabia is negotiating for skills recognition with the Technical and Vocational Corporation (TVTC) and a state-owned company called Takamol which is responsible for improving Saudi labour market on behalf of the state.⁹⁶ On the other hand, Singapore recruits semi-skilled or skilled labour from Bangladesh through its training centres set up in Bangladesh via joint-ventures with the Government of Bangladesh. Private companies from Singapore impart occupation-focused training to them in Singapore and successful candidates are offered employment in those companies in Singapore on completion of training.⁹⁷

94 Abu Dhabi Dialogue, "Submission to the International Migration Review Forum May 2022."

95 The Daily Star, "Govt Working for Recognition of Skills Certification: Officials," February 21, 2021, <https://www.thedailystar.net/backpage/news/migrant-workers-govt-working-recognition-skills-certification-officials-2048337>.

96 ILO, "RPL for Migrant Workers in Asia, Webinar Report." 2016

97 ILO, "Skilling the Workforce Labour Migration and Skills Recognition and Certification in Bangladesh," 2014.

Promising practice: Singaporean private companies run training centres in Bangladesh

Singapore is a popular destination for labour migrants from Bangladesh. Most of the migrants work in the construction, manufacturing and the shipbuilding industries of Singapore. According to BMET data, on average, about 50,000 Bangladeshi workers migrate to Singapore for labour annually. This rate slowed down post COVID-19 and is yet to gain momentum to pre-COVID levels. In 2021, almost 28,000 Bangladeshis migrated to Singapore for work.⁹⁸

Singapore follows a demand-driven model for labour migration. This means that it does not have any government-to-government labour migration agreements, rather recruitment of foreign labour is up to the employers and private companies as per their needs. While labour demand is driven by the employers, the government actively manages immigration through measures that affect the costs to employers of employing foreigners as opposed to local labour.⁹⁹

2.2.5 CHALLENGES IN THE TVET SECTOR

The skills development sector in Bangladesh faces numerous challenges. Traditionally, training and apprenticeship programmes have often been rather informal, constituting no formal contracts, inadequately monitored, and lacking any assessment criteria. The Government of Bangladesh has made serious efforts now to recognise the skills of the informally trained workers through programmes aimed at recognition of prior learning. However, such programmes also have challenges. While the government has opened this avenue for the recognition of skills of those who received informal training, **the qualification received often does not meet the entry requirements for further advanced training or employment opportunities due to the lack of its social recognition.**¹⁰⁰

There are both **supply and demand issues that act as barriers towards skills development of youth** in Bangladesh. In terms of supply, the capacities of the training centres are of prime concern. While the government have increased the number of technical training centres and strengthened the capacities of existing ones, a number of challenges remain. One issue is that the curriculum and training modules taught at these institutions are often quite outdated compared to the technical skill requirements of the changing job market. This leads to the issue of skills mismatch. Training institutes often face difficulties in ensuring industrial placements for their trainees, one of the main reasons for which is the skills mismatch between the kind and quality of skills in demand and those that are imparted by the training institutes.¹⁰¹ The employment rates of technical-vocational graduates are lower than those graduating with academic qualifications, which is a discouraging indicator for further enrolment in this sector.¹⁰² Moreover, even apprenticeship programmes, and on the job training opportunities are not adequately provided by different enterprises.

98 Bureau of Manpower Employment and Training, "Overseas Employment and Remittances 1976-2022," 2022, <http://www.old.bmet.gov.bd/BMET/viewStatReport.action?reportnumber=24>.

99 Ministry of Manpower, "What Is the Foreign Worker Levy," accessed July 22, 2022, <https://www.mom.gov.sg/passes-and-permits/work-permit-for-foreign-worker/foreign-worker-levy/what-is-the-foreign-worker-levy>.

100 Maurer and Morshed, "Promoting the Recognition of Prior Learning in the Context of Development Cooperation: The Case of Bangladesh." 2022

101 Government of Bangladesh and ILO, "National Skills Development System in Bangladesh 2015."

102 ADB, "Innovative Strategies in Technical and Vocational Education and Training for Accelerated Human Resource Development In South Asia: Bangladesh."



Secondly, a significant proportion of the funds allocated for TTCs are dedicated towards infrastructural improvements and salaries of teachers and trainers rather than capacity building and improvements in training modules and curriculum. TVET institutions spend about 85%–90% of their government subsidies on teacher salaries and allowances.¹⁰³ In comparison with general education, **per student expenses of TVET are quite expensive** because of less demand combined with the need for provision of equipment and tools.

Institutional governance is also a major challenge in the TVET sector. There is a general **lack of coordination among the training institutes**, with multiple institutes delivering the same kind of skills, and numerous government departments involved in the process of offering input in skills development initiatives.¹⁰⁴ Relatedly, quality assurance is a challenge, with complicated and rigid procedures to get a new course or training approved.¹⁰⁵

In addition, while on paper the private sector and employers are involved in policy-planning related to skills development, in practice mechanisms for their operational involvement in terms of curricula development, provision of trainers, and assessment criteria is quite limited. **Private sector input is often sought to comment and provide feedback on planning done at the government level, but their involvement is often not incorporated in the initial processes.**¹⁰⁶

There are regional disparities in the type, quality and access to skills training within Bangladesh. Districts such as Dhaka and Chittagong have more proportion of youth in training institutes than other districts. Moreover, there are also urban-rural inequalities in access to skills training as well, with urban areas having higher number of training institutes than rural areas.¹⁰⁷

Teacher training and upgradation of trainers' competencies is a major challenge in the TVET sector as well. Poor incentives and lack of opportunities have translated to high vacancy rates for trainers in the public TVET sector. As per one estimate, about 50% of positions for trainers are vacant in the public TVET sector, and there are only 51,000 trainers for an enrolled student population of about one million youth.¹⁰⁸

On the other hand, there are a number of demand-related issues that shape the skill composition of workers. Vocational skills training, although part of the formal education system in Bangladesh, is considered 'second class' education in Bangladesh and is quite under-valued, compared to school and college education.¹⁰⁹ As mentioned previously, the low employment rates among technical-vocational graduates is also a factor contributing to the lower popularity of this stream of education. Often times, it is a popular stream for those who could not progress well academically and drop out after grade eight,

103 ILO, "Skilling the Workforce Labour Migration and Skills Recognition and Certification in Bangladesh," 2014.

104 Ibid.

105 ADB, "Innovative Strategies in Technical and Vocational Education and Training for Accelerated Human Resource Development In South Asia: Bangladesh."

106 Ibid

107 ADB, "ADB Briefs: Skills Development in Bangladesh." 2016

108 Khan, "Situation Analysis of Bangladesh TVET Sector: A Background Work for a TVET SWAp."

109 UNICEF, "Developing Skills in Youth to Succeed in the Evolving South Asian Economy," vol. 29, 2020, [https://www.unicef.org/rosa/media/4506/file/Nepal Country Report.pdf](https://www.unicef.org/rosa/media/4506/file/Nepal%20Country%20Report.pdf).

or those who could not afford higher education.¹¹⁰ Yet for some, the entry requirements of secondary education may also act as a barrier to access TVET sector, especially for those who could not afford education until grade eight.

To address some of the dire issues in the TVET sector, the Government of Bangladesh is in the process of implementing a sector-wide approach to reform the sector. This process constitutes a 15-member committee and a taskforce which is mandated with the responsibility to assess the systematic challenges in the sector and address these through a holistic, sector-wide approach.¹¹¹

110 ADB, “Innovative Strategies in Technical and Vocational Education and Training for Accelerated Human Resource Development In South Asia: Bangladesh.”

111 The Daily Star, “Way to Technical and Vocational Education and Training (TVET) Sector Wide Approach (SWAp): Opportunities and Challenges,” June 16, 2019, <https://www.thedailystar.net/round-tables/news/way-technical-and-vocational-education-and-training-tvet-sector-wide-approach-swap-opportunities-and-1757722>.



3. TECHNICAL AND VOCATIONAL EDUCATION IN THE EU

3.1 VET SYSTEMS IN THE EU

The European Union neither has a common immigration framework, nor a unified VET system.¹¹² There are wide differences in the VET systems across the member states of the European Union. Although lengthy and bureaucratic, there are procedures in place for recognition of academic degrees for those who have studied outside of the EU, however, recognition of vocational education and training achieved in other regions and countries is not well-regulated, translating to undervaluing or failure to recognise the foreign qualifications.¹¹³

With increased mobility across the EU, there was a realisation about the need for having a transparent framework to facilitate the comprehension and comparability of different national level qualifications. In 1999, the Council of Europe and UNESCO signed the Convention on the Recognition of Qualifications concerning Higher Education in the European Region, also known as the Lisbon Convention. This paved the way for the Bologna system, which guides the comparability of higher education across Europe. However, as reported in an earlier study conducted under the Budapest Process, the Bologna system only streamlines higher education grading structures in higher/tertiary education received in the EU, not in countries outside of it.¹¹⁴ Recognition of qualifications and degrees received outside of the EU are within the mandate of the individual member states.

Moreover, the Copenhagen Process, signed in 2002, encourages cooperation among European states on matters related to VET, especially in terms of comparability, recognition, and transferability of qualifications. Following the Copenhagen Process, in 2008, the EU launched the European Qualifications Framework (EQF) (revised in 2017) which acts as a common reference framework for member states to ensure comparability, transferability and transparency of qualifications based on learning outcomes across the European countries. It offers guidance to countries to develop their own National Qualifications Frameworks and promotes cross-border movement of learners and workers, and encourages lifelong learning.¹¹⁵ The framework covers all types of qualifications, and offers an eight-level framework to assess the skill level of an individual in a specific field, with level 1 describing the lowest proficiency and level 8 indicating the highest.¹¹⁶ It also encourages the validation of informal and non-formal training within national contexts. The Framework is governed by the EQF Advisory Group which comprises the European Commission, country representatives (EU+) and other private

112 Bernhard Perchinig, "On the Way to Skills Partnerships," 2020.

113 *ibid.*

114 *ibid.*

115 Cedefop, "European Qualifications Framework (EQF)," accessed July 11, 2022, <https://www.cedefop.europa.eu/en/projects/european-qualifications-framework-eqf>.

116 Europass, "The European Qualifications Framework," 2017, <https://europa.eu/europass/en/european-qualifications-framework-eqf>.

and non-governmental stakeholders. The three countries discussed here have formally referenced their National Qualifications Framework to the EQF.¹¹⁷

In addition to the EQF, there are two other instruments in place that relate to VET, emerging from the Copenhagen Process and the New Skills Agenda (2016), aimed at improving and updating the VET frameworks for Europe: The European Quality Assurance Reference Framework for Vocational Education and Training (EQAVET), and the European Credit System for Vocational Education and Training (ECVET) to offer guidance for the development and streamlining of VET systems in member states and promote quality assurance in the VET sector. In 2018, as part of the New Skills Agenda (2016), the European Council adopted the recommendation for a European framework for quality and effective apprenticeships (EFQEA), aimed at improving the learning outcomes and employability of apprentices.¹¹⁸ Upskilling Pathways, presented as part of the New Skills Agenda, aims at improving adult learning and skills across Europe through skills assessment, learning opportunities, and validation and recognition.¹¹⁹

In September 2020, the EU launched the New Pact on Migration and Asylum, as part of which, mutually beneficial partnerships with third countries, and cooperation on skills development and transfer are important objectives. In 2020, the European Commission put forth the European Skills Agenda (2020) as a new five-year strategy aimed at upskilling and reskilling the workforce, with a key focus on new skills required for digitisation and the green economy. Among other aspects, the Agenda focuses on VET as a core subject.¹²⁰

However, these frameworks do not reflect a common systematic approach to the VET system in European countries, nor a convergence or standardisation of the systems.¹²¹ These are voluntary commitments, and the governance, institutional structures, and legislation on qualifications and recognition of skills still vary across countries, as per their own respective discretion. The European Centre for the Development of Vocational Training (CEDEFOP), has been operating since 1975 with the mandate of supporting EU member states in developing and harmonising their VET sectors. It offers research, analysis, and policy recommendations to the European Commission, the EU countries and social partners.

3.2 THE DUAL VET SYSTEMS IN GERMANY AND AUSTRIA

The VET sectors in the German-speaking regions, including Germany, Austria, the German cantons of Switzerland and the South Tyrol region in Italy follow a similar structure. VET is a popular choice among youth in Austria and Germany, with at least 70% of youth opting for the VET path in Austria on completion

117 Cedefop, "European Qualifications Framework (EQF)." accessed July 11, 2022, <https://www.cedefop.europa.eu/en/projects/european-qualifications-framework-eqf>

118 Cedefop, *Globalisation Opportunities for VET: How European and International Initiatives Help in Renewing Vocational Education and Training in European Countries*. Cedefop Research Paper. No 71, 2018.

119 European Association for Education of Adults, "New Skills Agenda for Europe," accessed July 12, 2022, <https://eaea.org/our-work/influencing-policy/monitoring-policies/new-skills-agenda-for-europe/#:~:text=The New Skills Agenda for,in their national policy reforms.>

120 European University Association, "European Commission Launches a New Skills Agenda," 2020, <https://eua.eu/news/538:european-commission-launches-a-new-skills-agenda.html#:~:text=On 1 July%2C the European,competitiveness%2C social fairness and resilience.>

121 Cedefop, *Globalisation Opportunities for VET: How European and International Initiatives Help in Renewing Vocational Education and Training in European Countries*. Cedefop Research Paper. No 71.



of compulsory education,¹²² and about 1.3 million apprentices training every year in Germany.¹²³ Austria and Germany have a dual VET system in place comprising of both, school-based VET as well as well-designed apprenticeship programmes (dual track training). As a result, there is close cooperation between the ministries of education and the ministries of the respective sectors in both countries, along with social partners (the employers and trade unions) and the sub-national governments of federal states, called *Länder*. Austria has nine federal sub-divisions, while Germany has sixteen.

In both countries, upper-secondary level education offers a combination of school-based or dual-track training with general education, offering a range of theory and practice oriented courses. Detailed attention is given to imparting competency-based learning opportunities in the VET sector in Austria and Germany.

Austria and Germany also have an agreement of cooperation in the field of VET and also have a system for mutual recognition of skills and qualifications. About 270 skills qualifications in Austria are recognised corresponding to about 370 qualifications in Germany. About 26 master craftsperson examinations are also mutually recognised in both countries.¹²⁴

3.2.1 THE DUAL VET SYSTEM IN AUSTRIA

High engagement of youth in the VET sector is one of the main reasons for the low youth unemployment rates in Austria. As of 2018, 68.4% of upper secondary students participated in VET and youth employment rates among the graduates of VET are 88%.¹²⁵ More recent statistics by the Federal Ministry of Digital and Economic Affairs reflect that about 76.5% of the students opt for VET stream after the completion of their compulsory education.¹²⁶

Governance

In Austria, the system is governed in coordination between the Federal Ministry of Digital and Economic Affairs (BMDW), which is responsible for the company-based track of the VET system, and the Federal Ministry of Education, Science and Research, which is responsible for the aspects concerning the part-time vocational schools, along with the governments of the *Länder*, responsible for the school-based VET, and the social partners (trade unions and employers' organisations). The Ministry of Agriculture is responsible for managing the five-year VET programmes offered in the fields of agriculture and forestry. There is a country-wide training regulation for every occupation that sets the minimum competency requirements for each apprenticeship.¹²⁷ In BMDW, the Federal Advisory Board on Apprenticeship (BBAB) is responsible for updating occupation-based regulations for modernising the skillset. The BBAB comprises of a 12-member team, including social partners (six from the Economic Chamber, six from the Chamber

122 Cedefop, "Spotlight on VET – 2018 Compilation: Vocational Education and Training Systems in Europe" (Luxembourg, 2019).

123 Paul Hockens, "How Germany's Vocational Education and Training System Works," Clean Energy Wire, 2018, <https://www.cleanenergywire.org/factsheets/how-germanys-vocational-education-and-training-system-works>.

124 Federal Ministry of Digital and Economic Affairs, "Apprenticeship System: The Dual System of Vocational Education and Training in Austria" (Vienna, 2020), <https://www.apprenticeship-toolbox.eu/germany/apprenticeship-system-in-germany>.

125 Cedefop, "European Inventory on NQF 2020 - Austria," 2020.

126 Federal Ministry of Digital and Economic Affairs, "Apprenticeship System: The Dual System of Vocational Education and Training in Austria."

127 Cedefop, "Vocational Education and Training in Europe," 2019.



of Labour and the Trade Union Federation) and two part-time vocational school teachers as advisory members. At the regional level (*Länder*) the Apprenticeship Offices (*Lehrlingsstellen*), housed within the Economic Chambers, serve as the main vocational training authorities. Along with the Chambers of Labour, the Apprenticeship Offices examine the suitability of companies providing apprenticeships, oversee the apprenticeship contracts, and regulate the final apprenticeship examinations for various occupations. State governments at the regional level supervise the apprenticeship training, and the state administered courts serve as the focal point for legal aspects related to apprenticeship training.¹²⁸ Every state has one Regional Advisory Board on Apprenticeship (*Landes-Berufsausbildungsbeiräte*, LBAB), comprising of social partners, which offer advice, and proposals for the apprenticeship training system at the regional level. The Regional Educational Directorates (*Bildungsdirektionen*) offer quality assurance and ensure implementation of the federal framework curricula.

Policy and legislation

Policy and strategy documents guiding the VET sector in Austria include the National Validation Strategy, and the Austrian National Strategy for Validating Non-formal and Informal Learning. The Vocational Training Act offers the legal framework (Berufsausbildungsgesetz [BAG]) for the VET system.¹²⁹ The “Vocational training according to § 8b Vocational Training Act” (formerly: inclusive initial vocational education and training) supports the inclusion of disadvantaged individuals in the labour market through vocational training.¹³⁰

The Ministry of Digital and Economic Affairs is responsible for devising occupation-based regulations (*Ausbildungsordnung*), which are legally binding for the companies that offer apprenticeship.¹³¹ Apprenticeships in agriculture and forestry are regulated by a separate set of legal provisions (Vocational Training Act for Agriculture and Forestry / Land- und forstwirtschaftliches Berufsausbildungsgesetz [LFBAG]). Competence profiles for each of the occupations are detailed in these regulations, which are often updated based on the latest developments in the occupation and corresponding to the skills required, that the Federal Vocational Training Advisory Board draws from experts in the field.¹³²

VET structure

*Apprenticeship-based VET*¹³³

Education is compulsory up until year 9, which aligns with the first year of upper secondary education. Both streams, i.e., school-based VET and apprenticeships, cover different vocations across almost all economic sectors and lead to different qualification levels (EQF 4 or 5). The VET program centres around 240 trained vocations, which are formally offered under the VET system in Austria, eligible for students from the age

128 Federal Ministry of Digital and Economic Affairs, “Apprenticeship System: The Dual System of Vocational Education and Training in Austria” (Vienna, 2020), <https://www.apprenticeship-toolbox.eu/germany/apprenticeship-system-in-germany>

129 *ibid.*

130 *ibid.*

131 *ibid.*

132 *ibid.*

133 Cedefop, “Spotlight on VET – 2018 Compilation: Vocational Education and Training Systems in Europe.”



of 15 years, who have completed their compulsory education (year 9)¹³⁴. Each trained vocation is linked to a specific occupational competence profile defined by law. Currently, about 29,000 enterprises in Austria are part of the apprenticeship system¹³⁵. Companies offering apprenticeship training have to fulfil certain standards regarding the qualification of staff and the technical infrastructure; supervisors of apprentices have to undergo a specific training programme.

Apprenticeship training is delivered as a combination of in-company training and education in vocational schools. The focus is on practical training within the company. Usually some 80% of the training is delivered within the company and some 20% at the part-time vocational school – either on a weekly base or per term. The in-company training is focused on practical skills; theoretical knowledge aspects are taught in school. Depending on the vocation, apprenticeship trainings last between two and four years, mostly three years and ends with final examination before of an external examination board. This track leads to the qualification of EQF 4, which translates to medium level competency, after passing an occupation specific examination. After this qualification, trainees can proceed to become master craftsman or take the exam to enter tertiary level training in a similar field. The trainees can also take the exam *Berufsaufnahmeprüfung* to access the general stream of higher education¹³⁶.

For those not able to find a training company, but interested in vocational training, specialised vocational training institutes (“Lehrwerkstätten”) managed by e.g. the Chamber of Commerce or the Trade Unions Federation offer a substitute for the in-company training. As the majority of TVET training is delivered by private companies, apprenticeship training is accessible all over the country; vocational training institutes are mainly situated in larger cities.

In legal terms, apprenticeship is a specific type of employment contract – apprentices are paid a defined salary, the “Lehrlingsentschädigung”, usually rather below the salaries of trained employees in the first year, and later rising up to some 70% of the salary of trained staff. Passing the final exam leads to a number of entitlements, both with regard to employment conditions and entrepreneurship.

Minimum salary levels in Austria are regulated sector wise by “Collective Agreements” between the Chamber of Commerce and the Industrialists’ Association on the one side and the Chamber of Labour and the Trade Union Federation on the other side. The “Collective Agreements” contain detailed tables of minimum salaries for different levels of training, passing the final examination entitles workers to a higher salary and the possibility to continue their training to a further professional degree (“Meister”), which is equivalent to a professional B.A. degree. As a large number of professions, particularly in technical professions, are regulated by specific legal regulations, only those having successfully finalised apprenticeship training will be allowed to start a business in their sector, or to act as the manager of an existing business. These strong interlinkages of the vocational training system with the sector wise collective bargaining of salary levels and access to regulated economic sectors has strongly supported the positive image of apprenticeship training in Austria.

134 Federal Ministry of Digital and Economic Affairs, “Apprenticeship System: The Dual System of Vocational Education and Training in Austria.”

135 Federal Ministry of Digital and Economic Affairs, “Apprenticeship System: The Dual System of Vocational Education and Training in Austria” (Vienna, 2020), <https://www.apprenticeship-toolbox.eu/germany/apprenticeship-system-in-germany>

136 *ibid.*



VET programmes are also offered for adult learners at the tertiary level. To help youth make informed decisions about the course to choose, there is a career guidance tool called *Berufsinformationscomputer BIC* (www.bic.at) of the Austrian Federal Economic Chamber which can suggest options for courses based on individual interests and aptitudes.¹³⁷ Offices such as the Public Employment Service Austria (*Arbeitsmarktservice [AMS]*), Apprenticeship Offices of the Economic Chambers in the individual states, etc. also support in finding company placements for apprenticeships.

Along with the compulsory education journey in general education programmes, students can opt for various pre-VET and VET options in different occupations. In pre-VET courses, students can choose between one or two-year courses which allow them to acquire general education, but also basic competencies and vocational skills that prepares them for VET, including the school-based and apprenticeships. These skills also enable them to be prepared for simple jobs in the labour market.¹³⁸

As of 2019, the top five occupational fields in the VET sector in Austria, based on number of total apprentices are as follows:¹³⁹ The declining growth ratio are a reflection of the demographic changes as the share of young population is declining, as reflected in the table below.¹⁴⁰

Table 4 Top occupational fields in the VET sector in Austria, based on number of total apprentices

OCCUPATIONAL FIELD/SECTOR	ABSOLUTE VALUE			GROWTH 2015-2019
	Male	Female	Total	
Machinery / vehicles / metal-technology	23,066	2,006	25,072	-0,3%
Office/commercial/finance	7,559	14,349	21,908	-9.6%
Construction / Architecture / Building-technology	11,986	1,092	13,078	-0.4%
Electrical engineering/ electronics	9,582	570	10,152	-10.6%
Tourism / Hospitality / Hotellery	4,774	4,317	9,091	-4.2%

137 *ibid.*

138 Cedefop, "Spotlight on VET – 2018 Compilation: Vocational Education and Training Systems in Europe."

139 Federal Ministry of Digital and Economic Affairs, "Apprenticeship System: The Dual System of Vocational Education and Training in Austria." 2020

140 Cedefop, "Vocational Education and Training in Europe." 2019



Moreover, the top five occupations among females and males, as of 2019 are listed below:¹⁴¹

Table 5 Top occupations among females and males in Austria, 2019

OCCUPATION	NUMBER OF APPRENTICES (FEMALE)	% OF APPRENTICES (FEMALE)	OCCUPATION	NUMBER OF APPRENTICES (MALE)	% OF APPRENTICES (MALE)
Retail trade overall	8,275	22.3%	Metal technology	9,807	13.3%
Office assistant	4,025	10.6%	Electrical engineering	8,383	12.0%
Hairdresser and wigmaker (stylist)	3,334	8.5%	Motor vehicle engineering	6,820	10.0%
Administrative assistant	1,221	3.5%	Retail trade overall	5,019	6.7%
Cook	1,161	3.4%	Installation and building technology	3,845	5.5%

School-based VET

For school-based VET, three to four-years programmes are offered alongside general education, which allow students to acquire key occupational competencies in different occupations preparing them for medium-level jobs. These programmes offer about 40% of work-based learning delivered in workshops run by the schools. There is also an option to take on an additional programme or take the exam called *Berufsreifeprüfung* which allows access to general higher education stream to those who took the school-based VET route. Generally, VET schools are offered at two levels:¹⁴²

- Schools for intermediate vocational education (Berufsbildende Mittlere Schule [BMS]), usually three years, e.g. schools offering specialised courses in engineering, arts and crafts, business, management, or service industry. This VET stream leads to the qualification level of EQF 4 and does not allow university access.
- Colleges for higher vocational education (Berufsbildende Höhere Schule [BHS]), usually five years, leading to the qualification level of EQF 5, e.g. colleges of engineering, arts and crafts, colleges for business, management or services etc. The final exam of these schools (“Matura”) allow university access.

There are also specific schools for healthcare and nursing and for agriculture and forestry (Land- und forstwirtschaftliche Fachschulen [LFS]) at both levels, which, due to federal structure of Austria, are governed by the federal states, but are also offered at the intermediate or the college level.

¹⁴¹ Federal Ministry of Digital and Economic Affairs, “Apprenticeship System: The Dual System of Vocational Education and Training in Austria.” 2020

¹⁴² *ibid.*



Health sector

Training for the health sector at the upper secondary level is slightly different. VET programmes related to the health sector, including the medical assistant professions, require students to have completed compulsory education, qualify for the minimum age requirement, and/or a specific qualification. From 2023 onwards, training to become a specialist or a general care nurse would be equivalent to a bachelor degree (EQF 6).¹⁴³ In addition, beginning with the winter term 2023, new colleges for higher vocational education for care leading to the qualification level EQF5 will be established.

Qualifications above EQF 5, including EQF 6 and 7 relate to tertiary level training, and are offered in universities of applied sciences (FH), leading to master craftsperson qualifications. EQF 6 relates to practice-based bachelor degree, while EQF 7 translates to a master degree in a specific field. These courses are open to people who already are in employment. In fact, many courses also require a mandatory work placement as part of the qualification. Occupations such as medicine, law, engineering and technology have a higher vocational orientation.

For adults, various options exist for continuing education and training. Many programmes geared at adults focus on preparing them for tertiary or post-secondary vocational qualifications. Active labour market measures also enable adults to develop their skills further. These programmes are generally offered by the universities of applied sciences or by the adult learning centres, leading to the same qualifications as the five-year school-based VET programme at the secondary level.¹⁴⁴

Skills and qualifications accreditation system in Austria

Austria's National Qualifications Framework (NQF) is aligned with the European Qualifications Framework (EQF), so that a NQF level Austrian corresponds to a qualification level of the EQF.¹⁴⁵ The NQF is backed by the legal stipulations of the Federal Act on the National Qualifications Framework 2016. It is a comprehensive reference framework for describing what kinds of qualifications can lead to what kind of education pathways and occupations, based on the principles of transparency and comparability. However, the NQF does not have any regulatory responsibilities.¹⁴⁶

The main institutional body mandated with the development and implementation of the NQF is the Federal Ministry of Education, Science and Research, while the National Coordination Point (NCP) for the NQF/EQF under the auspices of the Austrian Agency for International Cooperation in Education and Research (Österreichischer Austauschdienst, OeAD) is an independent body responsible for administration and coordination related to the EQF/NQF. Those qualifications that are regulated by separate legal provisions are mapped through direct requests by the relevant ministry to the OeAD.¹⁴⁷

¹⁴³ Cedefop, "Spotlight on VET – 2018 Compilation: Vocational Education and Training Systems in Europe."

¹⁴⁴ Cedefop, "Vocational Education and Training in Europe." 2019

¹⁴⁵ Federal Ministry of Digital and Economic Affairs, "Apprenticeship System: The Dual System of Vocational Education and Training in Austria." 2020

¹⁴⁶ Cedefop, "European Inventory on NQF 2020 - Austria."

¹⁴⁷ Qualifikationsregister, "Mapping Process," OeAD, accessed July 5, 2022, <https://www.qualifikationsregister.at/en/nqr-register/zuordnungsprozess/>.



NQF implementation follows a coordinated approach between the OeAD, the Ministry of Education, Science and Research (BMBWF) and the Ministry of Digital and Economic Affairs (BMDW). The NQF steering committee, comprising of relevant stakeholders across the fields, and the NQF advisory board, direct the coordination between these stakeholders and set the agenda.

The NQF follows an eight-level model, and is inclusive of both formal and non-formal sectors, while informal learning is still in the process of being included.¹⁴⁸ From qualification levels 6 to 8, qualifications have been streamlined between the academic and VET sectors, and in large part are oriented towards learning outcomes. In school-based VET, learning outcomes are described in terms of VET educational standards, covering aspects such as subject knowledge, cognitive achievements in specific field, and personal and social competencies. Competence-based assessments are gradually being introduced for upper secondary school-leaving examinations for accessing higher education. In apprenticeship or dual system, each course is assigned a training regulation by the Federal Ministry for Digital and Economic Affairs. The training regulation comprises of an occupational competence profile (Berufsprofil), which describes the relevant type of activities, and the job profile (Berufsbild), which relates to the knowledge and skills relevant to the field.¹⁴⁹ As of 2020, 44 vocational and professional qualifications are offered under the levels 4, 5, 6 and 8. The master craftsman is allocated a NQF level 6.

The path to recognition of foreign qualifications is through an assessment of foreign examination certificates.¹⁵⁰ Foreign certificates are validated after an assessment made to compare the examinations passed and the courses attended with the Austrian system. Vocational qualifications and apprenticeship certificates are generally considered equivalent to relevant Austrian certifications (final apprenticeship examination), after review of documents. In case of insufficient documents proving competence, additional examinations or assessments may be required. This is usually done making use of the 'portfolio-method', where the person is asked to fulfil one or more typical tasks of the profession in a workshop equipped with all necessary means, which is then judged by professional trainers for this sector. In case the relevant profession is not regulated in Austria, the certification can be voluntarily evaluated, upon which the applicant receives an "expert report" which can then be presented to the employer or the Austrian Public Employment Service.¹⁵¹ However, this is not equivalent to an official certificate recognition.

3.2.2 THE DUAL VET SYSTEM IN GERMANY

Germany has one of the highest employment rates for VET graduates in the EU-27 countries. In 2019, the employment rate of VET graduates was about 90%.¹⁵² In 2019, almost 50% students chose a vocational education programme at upper secondary level. While the proportion of VET learners is rising in Germany at the rate of 0.9%, there has been a slight drop in the number of apprenticeship contracts in the

148 Cedefop, "European Inventory on NQF 2020 - Austria."

149 Ibid.

150 The Federal Ministry of Education Science and Research, "Assessment of Foreign Qualifications," 2021, <https://www.bmbwf.gv.at/en/Topics/school/legislation/validations.html>.

151 ABA, "Recognition of Qualifications," accessed July 11, 2022, <https://www.workinaustria.com/en/living-working/recognition-of-qualifications-1>.

152 Cedefop, "Vocational Education and Training in Germany Short Description," 2020, https://www.cedefop.europa.eu/files/4184_en.pdf.

recent years (2019 observed a decline of 1.2%).¹⁵³ In light of these changes, Germany is in the process of modernising the VET sector to align with the evolving labour market needs.

Governance

In Germany, the relevant ministry is the Federal Ministry of Education and Research (BMBF), which leads the governance of the VET sector in collaboration with the respective ministries of different economic sectors. The federal ministries respective to occupational fields and economic sectors are responsible for identifying training needs. Most relevant ministry in this case is the Federal Ministry for Economic Affairs and Energy (*Bundesministerium für Wirtschaft und Energie, BMWK*).

Other relevant institutes include the Federal Institute for Vocational Education and Training (BIBB), which is responsible for undertaking market research to identify skills needs for advising the federal government and the VET providers. BIBB regularly publishes a list of occupations along with the respective salary rates for apprentices under each occupation.¹⁵⁴ The Institute for Employment Research (*Institut für Arbeitsmarkt und Berufsforschung, IAB*) supports the BIBB in producing this data.

School-based VET programmes are governed by the federal states (*Länder*) in close collaboration with trade unions, employers and employee representatives through dedicated committees. Representatives of relevant chambers are part of the tripartite “competent bodies” (*Zuständige Stellen*) which also include representatives of employers, trade unions and teachers. Committees within the competent bodies are consulted on issues related to regulation and implementation of the VET sector. They monitor training in enterprises, organise and hold exams, regulate the training centres and training contracts etc.¹⁵⁵

Employer organisations and trade unions play an important role in quality assurance by identifying minimum standards for enterprise-based VET. Each of the *Länder* has its own quality assurance programme for the schools, which is overseen by the local school authorities. The framework of training curricula for the VET courses are designed in collaboration with the employer organisations and vocational schools. The need for new training regulations can be initiated by trade associations, trade unions, employers’ organisations or the BIBB. Then, the respective Federal Ministry for Employment consults the *Länder* governments and other relevant bodies. Coordination of this process is managed by the BIBB until a consensus is reached.

Legislation

The VET sector is regulated by the Vocational Training Act, passed in 1969, and most recently amended in 2020.¹⁵⁶ The new amendment has introduced a new minimum wage rate for apprentices and improved mechanisms for making academic and VET qualifications comparable, introduced part-time apprenticeship programmes and broadened the opportunities of recognition of prior learning. However, the apprenticeship

153 Cedefop, “European Inventory on NQF 2020 - Germany,” 2020, https://www.cedefop.europa.eu/files/germany_-_european_inventory_on_nqf_2020.pdf.

154 Hockens, Paul. “How Germany’s Vocational Education and Training System Works.” Clean Energy Wire, 2018. <https://www.cleanenergywire.org/factsheets/how-germanys-vocational-education-and-training-system-works>.

155 Cedefop, “Vocational Education and Training in Germany Short Description.” 2020

156 Federal Ministry of Education and Research, “The German Vocational Training System,” accessed June 20, 2022, https://www.bmbf.de/bmbf/en/education/the-german-vocational-training-system/the-german-vocational-training-system_node.html.



based model existed even before the Act and was operational under the rules defined by the chambers of specific economic sectors. The Act does not apply to vocational training schools, which are governed under the specific regulations of the *Länder* governments. Because of the close engagement with enterprises and companies, the VET sector also takes guidance from the Trade and Crafts Code. The contracts between the trainee and the company is as a specific type of employment contract under civil law.¹⁵⁷

Other relevant legislative provisions include the Recognition Act (BQFG), the Legislation Promoting Further Training (*Arbeitslosenversicherungsschutz- und Weiterbildungsstärkungsgesetz, AWStG*), the Qualification Opportunities Act (2019), the Upgrading Training Assistance Act (*Aufstiegsfortbildungsförderungsgesetz, AFBG*).

VET Structure

Within the German education system, orientation to vocational skills is already initiated within the compulsory education years (year 7 and 8). In 2008, the BMBF launched the Vocational Orientation Programme with the aim of developing a vocational orientation process that gives young pupils a realistic understanding of their abilities and interests in a range of occupations. The programme, adopted in 2010, also organises two-week workshops (*Werkstatttage*) to familiarise students with a range of different occupational fields.¹⁵⁸ Compulsory education lasts for 9 years in most *Länder*, while in five *Länder* it lasts for 10 years.¹⁵⁹ Following the compulsory education years, students have a choice to follow general education, or one of the two options in vocational education.

School-based VET courses comprise of class-room learning in specialised trade schools. The VET sector offers almost 330 training courses in different skills, with a duration ranging from two to three years, depending on the course. About one third of students opt for this single track VET. In Germany, these courses start after completion of secondary school, offering qualification from EQF 2 to 4. Courses may differ in lengths and the level of qualification they lead to. In the school-based system, there are two types of settings. In the first, programmes are offered at the full-time vocational school called *Berufsfachschule*, which includes courses of lengths varying between one to three years for a specific occupation. Eligibility criteria for this track is the lower secondary general school certificate called, *Hauptschulabschluss*.¹⁶⁰

The second stream is the dual vocational education and training which offers a mix of general education and apprenticeship over the course of two or three years, enabling the student to enter the general higher education, called *Berufliches Gymnasium/Fachgymnasium*. Learning is divided between class-room based education in vocational schools for theoretical knowledge on a specific occupation, and company or public-sector institution where they acquire practical experience, training and are remunerated as employees of the company. Remuneration increases with additional years of training and varies across different occupations.¹⁶¹ About 430,000 companies in Germany are registered to partner with the government

157 Hamburg, "Vocational Training in Germany - The Dual System," accessed June 20, 2022, <https://www.ihk.de/hamburg/en/produktmarken/training/vocational-training-dual-system-1147578#:~:text=The Vocational Training Act regulates,further training and vocational retraining.>

158 Federal Institute for Vocational Education and Training, "How Young People Are Guided to the World of Work," accessed June 20, 2022, <https://www.bibb.de/en/46.php>.

159 Cedefop, "Vocational Education and Training in Germany Short Description." 2020

160 Cedefop, "Spotlight on VET – 2018 Compilation: Vocational Education and Training Systems in Europe."

161 Cedefop, "Vocational Education and Training in Germany Short Description."2020

for apprenticeships as of 2018, many of which are Small and Medium Enterprises (SMEs).¹⁶² Usually the ratio of time division is 60% in the company and 40% in the classroom. For this track, the entrance requirement is the intermediate level certificate, *Mittlerer Schulabschluss*. The Chambers of Commerce for specific occupational sectors conduct a final exam at the end of the apprenticeship, leading to a chamber certificate which qualifies them for employment or practice as entrepreneur in the respective sector.

There are also options for transitioning into these programmes for those who have not been able to join these programmes in the beginning. This is especially relevant for those who have social disadvantages, learning difficulties, or limited language skills (relevant to migrants). Such population groups can access the upper secondary vocational education through pre-vocational training which equips them with a secondary school leaving certificate, or through a basic vocational training year. The qualifications are then further developed through specialised programmes called *Berufsoberschulen* and *Fachoberschulen* at the post-secondary level. With durations ranging from one to three years, they prepare students for matching the eligibility criteria for universities of applied sciences or general education universities. Another programme called *Einstiegsqualifizierung* (EQ), also offers training for about six months to one year with components taught in an enterprise and in a vocational education school.

At the tertiary level, those who have received vocational education in the upper secondary level can access the advanced vocational training (AVT) stream, equipping students with qualifications between EQF 5 to 7. EQF 5 translates to a professional specialist, EQF 6 is equivalent to a bachelor professional or master craftsperson or specialist, and EQF 7 is equivalent to master professional as management and expert.¹⁶³ With EQF 6 and 7, the individual has the right to practice a skill professionally and independently, can also hire and train other apprentices, and allows eligibility for middle management qualifications in companies. It also allows the individual to access bachelor programmes in general education. AVT qualifications can be acquired through specialised courses offered by chambers or schools called *Fachoberschulen* or master craftsperson schools. Usually a few years of practices in the relevant occupation is required to take the AVT assessment for a specific skill.

There are some dual study programmes, such as *Praxisintegrierender, kooperativer dualer Studiengang*, that comprise a work experience component, and combine general education with work placements in a traineeship or in the form of employment. Eligibility requires a higher education entrance qualification (*Allgemeine Hochschulreife* or *Fachhochschulreife*).¹⁶⁴ These programmes award a university degree, but not a vocational qualification. Similarly, another track includes dual work-study programme, which incorporates a career component, aimed mainly as a track for further professional development in a specific field. Learners attend this alongside their employments.

'Adult learning' and 'continuing training' is also becoming very popular mode to improve employability. A number of training providers offer adult learning, in a rather decentralised manner, with low degree of state regulation.

¹⁶² Hockens, Paul. "How Germany's Vocational Education and Training System Works." Clean Energy Wire, 2018. <https://www.cleanenergywire.org/factsheets/how-germanys-vocational-education-and-training-system-works>.

¹⁶³ Cedefop, "Vocational Education and Training in Germany Short Description." 2020

¹⁶⁴ *ibid*



Moreover, at each level and across all VET tracks, learners are offered incentives to opt for and continue VET. Initial VET learners receive the vocational training grant, Berufsausbildungshilf (BAB), school-based IVET learners receive the Bundesausbildungsförderungsgesetz (BAföG) grant, and the Vocational Training Worldwide Programme offers financial assistance to apprentices who opt to perform the practical part of their training out of Germany.¹⁶⁵ As part of the Integration Act of 2016, migrants and refugees receive integration support to enter the VET sector and labour market. Importantly, migrants and refugees are introduced to German language courses to enable them to participate in the labour market more efficiently. Courses with durations ranging from 13 to 26 weeks are offered to learn occupation-specific technical language.

Skills and qualifications accreditation system in Germany

Deutscher Qualifikationsrahmen für lebenslanges Lernen (DQR), launched in 2013, provides overall guidance as the National Qualifications Framework of Germany, including for general education and VET. It mirrors the European Qualification Framework and comprises of eight NQF levels that are awarded based on learning outcomes. The DQR is designed to ensure that each qualification level for VET is accessible through various education pathways. Each qualification level is further divided into professional (including knowledge and skills), and personal (including social competence and autonomy) criteria. The framework is based on a competence-based learning model.¹⁶⁶ The number of qualifications offered are increasingly growing, and as of 2020, about 1,225 qualifications are listed on the DQR database, with level 4 having the most number of qualifications, followed by level 6.¹⁶⁷ Important to note is that in Germany, there are no state-authorized licensing certificates for an IT professional.

The DQR aims to ensure transparency and standardisation across different qualifications, allowing for comparability, while at the same time, creating space for the validation of skills acquired through informal tracks. A number of initiatives have been introduced to recognise non-formal or informal learnings in partial and full form, such as the *Valikom* project.¹⁶⁸ Those who have received informal training can get access to the system by passing the final examinations of the specific occupation they are skilled in and by showing proof of experience, as per the Vocational Training Act and the Crafts Code.

The implementation of the DQR is coordinated by the *Bund-Länder-Koordinierungsstelle DQR (B-L-KS)*, which is a joint initiative of the federal government and the sub-national *Länder*. The B-L-KS is also the national focal point in the European Qualifications Framework. The Standing Conference of the Ministers for Education and Cultural Affairs of the *Länder*, the Federal Ministry of Education and Research, the Conference of Ministers for Economics of the *Länder*, and the Federal Ministry of Economics and Technology oversee the DQR. The preparation of the DQR was a consultative process, engaging stakeholders from the education and training systems, social partners and labour market organisations through a joint working group called *Arbeitskreis DQR*.

In Germany, training regulations under each skill are constantly updated through a network of employer organisations and trade unions, and testing and certificates are standardised in all industries throughout

¹⁶⁵ Cedefop, "Vocational Education and Training in Germany Short Description." 2020

¹⁶⁶ Cedefop, "European Inventory on NQF 2020 - Germany."

¹⁶⁷ *ibid.*

¹⁶⁸ *ibid.*

the country.¹⁶⁹ This ensures that the quality of the training is same across the country. For IT-related skills, the German Public Employment Service along with the Bertelsmann Stiftung are in the process of designing digital assessment mechanisms for about 30 occupations, initially in a range of languages, hence targeting refugees and migrants.¹⁷⁰

For migrants, the Professional Qualifications Assessment Act, otherwise known as the Recognition Act (BQFG), guides the recognition of international qualifications in Germany by a relevant competent authority. For those without formal qualifications, it also offers, in principle, the qualification analysis instrument (*Qualifikationsanalyse*) as a means to assess the practical knowledge and skills of those individuals whose skills were acquired through informal or non-formal learnings. This allows individuals with foreign qualifications to get them recognised, validated and translated to an equivalent German qualification. Currently, about 600 occupations are covered under this Act. Exams and assessments are carried out by competent bodies. The process is coordinated by the Chamber of Industry and Commerce (*Industrie- und Handelskammer, IHK*), Foreign Skills Approval (IHK FOSA) and the central advisory body for occupation in the healthcare sector.¹⁷¹

Of specific relevance to foreign job-seekers in Germany is to note that according to Section 19c (2) *AufenthG* (German Residence Act), those wishing to enter the IT sector can seek employment regardless of the degree or qualification.¹⁷² In other words, there are no official, state-set qualification requirements for IT-related jobs. However, other conditions may apply for acquiring a visa, such as: a job offer, at least three years of experience in the IT sector, proof of relevant training or courses, a specific salary benchmark per year, and minimum B1 language skills.

3.3 VET SYSTEM IN ITALY

While in principle Italy also follows a dual model for VET, with some similarities to the Austrian and German model, especially in its South Tyrol region, at the national level however, the dual system is still in infancy and the outcomes are lower than the European average, especially in terms of employment rates of youth, including those that are highly skilled.¹⁷³ The shift to a dual education system in Italy was founded through a legislation passed in 2003, and more recently developed further through an agreement signed in 2015 for a trial project for the dual system.¹⁷⁴

Governance

In Italy, the VET sector comes under the jurisdiction of the regions. The Regional Law no. 5/2011, is the legislative foundation of the Vocational Education and Training system. Other legislative provisions related to the area of VET include Law no. 92/2012 (Fornero Law) establishing the right to lifelong learning,

169 Federal Ministry of Education and Research, "The German Vocational Training System." 2022

170 Cedefop, "European Inventory on NQF 2020 - Germany."

171 Cedefop, "Vocational Education and Training in Germany Short Description." 2020

172 The Federal Government, "Working in Germany as an IT Specialist," Make it in Germany, accessed July 11, 2022, <https://www.make-it-in-germany.com/en/visa-residence/types/other/it-specialists>.

173 Cedefop, "Spotlight on VET Italy," 2017, https://www.cedefop.europa.eu/files/8123_en.pdf.

174 Cedefop, "Vocational Education and Training in Europe - Italy 2019," 2019, <https://www.cedefop.europa.eu/en/tools/vet-in-europe/systems/italy-2019>.



the Jobs Reforms Act including the legislative Decree no. 150 (2011) aimed at reorganising the legislative framework related to services for employment and active policies; and the Decree no. 181 (2015) related to the development of employment contracts, including apprenticeship contracts.

The VET sector is coordinated between national and regional institutions, with an active role of social partners. The State (national/central government) level is responsible for devising the rules and regulations that govern the VET programmes, while the regional bodies have legislative authority over VET matters, and the social partners define employment policies. Social partners also contribute by playing an advisory role in designing the VET policies. VET is also provided by private partners, either in cooperation with the state and regional governments or independently.¹⁷⁵ These private VET centres come under the domain of the regional authorities.

At the state level, the Ministry of Education, University, and Research (MIUR) in consultation with the Ministry of Labour and Social Welfare (MLPS), frame the regional VET programmes, called *istruzione e formazione professionale* (IeFP), which are offered through a school-based programme. MIUR is also responsible for defining and updating occupational profiles for higher technical institutes, according to which training courses are designed. The MLPS designs the VET framework for VET programmes.

Implementation, regulation, and coordination is carried out by the regional/autonomous provincial authorities. They also design three year strategies for the higher technical education and training sector. The regions and autonomous provinces are also responsible for providing different technical education programmes at the upper secondary and post-secondary level, and offer the majority of the apprenticeship courses.¹⁷⁶ The National Institute for Documentation, Innovation and Educational Research (INDIRE) serves as the State monitoring body for the higher technical institute courses, while the National Institute of Public Policy (INAPP) is responsible for monitoring vocational and training pathways at the national level.

Structure

In Italy, VET is accessible after completion of compulsory education of 10 years. At the upper secondary level of education, students have to choose between general education and VET. At this level, the system comprises of technical and vocational schools that offer five-year programmes, regional VET (also called IeFP) offering three to four year courses, and the track of apprenticeships leading to professional qualifications and diploma. These programmes are further explained below:¹⁷⁷

- Five year programmes equivalent to EQF 4, are either offered at i) technical schools (*istituti tecnici*) leading to a technical education diploma; or ii) vocational schools (*istituti professionali*), leading to professional education diplomas. Students can choose between an economic programme or a technical programme. These programmes comprise both general educational characteristics and technical training. Graduates of these five year programmes have access to higher education.

175 Paulo Di Rienzo et al., "VET in Italy - An Overview on the Governance of Vocational Education and Training in the Upper Secondary General Education," n.d.

176 *ibid.*

177 Cedefop, "Spotlight on VET Italy," 2017, https://www.cedefop.europa.eu/files/8123_en.pdf.

- Three year programmes (*istruzione e formazione professionale, leFP*), equivalent to EQF 3 lead to a vocational qualification called *attestato di qualifica di operatore professionale*
- Four year programmes, offer a path to technician professional diploma (*diploma professionale di tecnico*) equivalent to EQF level 4.

Training for these programmes delivered through apprenticeships refers to the **Type 1** of the apprenticeship tracks. At the end of the five-year course, learners have to take a state exam to qualify for the secondary school diploma. There are opportunities for learners to change the programmes for advanced certifications. For instance, a graduate of the three-year programme can take an additional year to graduate with a four-year vocational diploma, after which they can enter the fifth-year of the state education programme, and take an exam to acquire either a general, technical or professional education diploma, which grants them access to higher education.

Type 2 of the apprenticeship programmes offer professional training, specifically for youth between the ages of 18-29 years, leading to a qualification defined in collective bargaining agreements aimed at reducing the number of atypical and temporary employment contracts. However, no education qualification, and hence no access to higher education, is linked to this type of qualification. This programme is also managed by the region and the autonomous provinces. Training is provided at both, training centres focusing on acquisition of key general skills, and in companies for specific occupation-oriented vocational skills. The curricula are defined by collective bargaining agreements for specific occupations. The duration for the majority of programmes is three years, while for the crafts sector, it is for five years.¹⁷⁸

On completion of the secondary level of VET (through either a five-year programme or a four-year programme with entrance exam), graduates can access higher technical education. This relates to the **Type 3** of the apprenticeship system, leading to qualification levels equivalent to EQF 4- 8. There are two main programmes at this level:

- higher technical education and training courses (*istruzione e formazione tecnica superiore, IFTS*) comprising one year programmes, that are practice-oriented and lead to a high technical specialisation certificate (*certificato di specializzazione tecnica superiore, EQF level 4*);
- higher technical institute programmes (*istituti tecnici superiori, ITS*), which are non-academic programmes ranging from two to three years, leading to a high-level technical diploma (*diploma di tecnico superiore, EQF level 5*).

There are also programmes for engaging apprentices in research activities in companies. The VET courses offered at upper-secondary levels are organised by region and autonomous provinces in consultation with foundations that have representation from schools, universities, training centres, local bodies, and companies. They decide the duration and the curricula of these programmes.

¹⁷⁸ Cedefop, "Vocational Education and Training in Europe - Italy 2019."



Company-based apprenticeship schemes are formalised through a written contract that is different from other work-based learning contracts.¹⁷⁹ Companies with up to 50 employees are eligible to hire apprentices, under certain conditions.¹⁸⁰

There is also scope for adult learning and life-long learning programmes. Adult learning programmes are offered by sub-national regions through post-secondary and post-higher education VET courses, as well as opportunities to acquire qualifications and certifications promoted by Provincial Centres for Adult Education (*Centri provinciali di istruzione degli adulti*, CPIA). Lifelong learning programmes (or CVT – Continuing Vocational Training) are offered by private partners and target those who are already in employment.¹⁸¹ Moreover, the Legislative Decree 13/2013 offers scope for recognition of prior learning, which is complemented by the inter-ministerial decree of 2015 which provides a practical framework for the recognition of regional qualification at the national level.

As the Italian VET sector is managed and implemented by the regions, there is vast diversity in the programmes across the different regions. An analysis by Rustico et al. (2020)¹⁸² concludes that despite legislative reforms supporting the dual VET system in Italy, the VET system, specifically in relation to the Type 1 apprenticeship system, continues to be largely school-based with limited linkages with the labour market. They have highlighted a number of challenges that pose hindrance to an effective integration of the dual apprenticeship model, including: coordination issues among the national and regional sub-systems relating not only to labour market, but also the educational sector, and too high expectations from enterprises to provide training through open-ended employment contracts as well as formal education. Since apprenticeships are largely treated as employment contracts, the training aspect of these placements is often neglected. They also highlight the need for a permanent coordination body for managing Type 1 apprenticeships since the distribution of responsibility for this dual system is not very clear.

More recently, the education ministry (MIUR) formulated an action plan in 2020 to reduce the disparities and harmonise the system.¹⁸³ Updates have also been made to the National Repository for Regional Vocational Qualifications (*Repertorio nazionale delle figure nazionali di riferimento per le qualifiche e i diplomi professionali*), aligned the minimum requirements and training needs with the latest labour market needs.

Skills and qualifications accreditation system in Italy

Italy developed its National Qualifications Framework in 2018. The NQF follows the EQF and has eight levels, reflecting knowledge descriptors and learning outcomes including knowledge, skills, autonomy, and responsibility. In practice, due to the complex, multi-level governance system of the sector, the EQF is generally used as a point of reference for qualifications, as the NQF implementation is still in

179 Ibid.

180 Ibid.

181 Rienzo et al., “VET in Italy - An Overview on the Governance of Vocational Education and Training in the Upper Secondary General Education.”

182 Lisa Rustico, Ramona David, and Antonio Ranieri, “‘Apprenticeship’ in the Italian Approach to the Dual System,” *Transfer* 26, no. 1 (2020): 91–103, <https://doi.org/10.1177/1024258919896902>.

183 Cedefop, “VET in Italy,” 2020, https://www.cedefop.europa.eu/files/vet_in_italy.pdf.

its infancy.¹⁸⁴ The post of the EQF National Coordination Point was created in 2015 and is housed in the technical body of MLPS called the National Institute for Public Policy Analysis (INAPP), .

The Italian Qualifications Framework for Higher Education (QTI) was published in 2010, designed in compliance with the European Qualifications Framework. Title V of the Italian Constitution (Constitutional Law 1/2001) offers the basis for the development of a national system for qualification of competencies and certifications.¹⁸⁵ Legislative Decree no. 13/2013 stipulates recognition of non-formal and informal learning through establishing essential performance levels.¹⁸⁶

In Italy, the mechanism for recognition of skills and qualifications differs across different economic sectors, and the responsibility is divided between the state and regional level.¹⁸⁷ The main entities comprising the institutional landscape with respect to qualifications include the MIUR, MLPS, regions and autonomous provinces, as well as social partners, trade unions, sector representatives, along with the technical bodies of MIUR (Cimea), MLPS (INAPP) and the regions (Tecnostruttura).¹⁸⁸

Since the vocational education and training sector comes under the jurisdiction of the regions and autonomous provinces, the recognition procedure is also the responsibility of the individual regions. Once the degree/qualification is given by a specific region, it is valid throughout the country. Vocational training courses that are of varying duration, offering certificates for occupational profiles defined by the regions are only valid in those specific regions.

In 2015, all the relevant bodies agreed on an Operative Framework for the national recognition framework and harmonisation mechanism for regional qualifications as part of the National Repertory of Qualifications (established in 2013). The National Repertory of Qualifications was designed to offer homogenous descriptions of qualifications and associated skills descriptors based on the regional qualifications. An online tool was developed, called the *Atlas of Labour and Qualifications*, to allow for harmonised policymaking and to design training programmes as per the labour market demand and supply situation.

Scope for recognition of international qualifications is somewhat narrow. In 2012, Qualifications equivalent to upper secondary education (NQF /EQF level 4) are only recognised for i) EU citizens; ii) holders of international protection; iii) Italian nationals who have obtained the degree abroad; iv) Italian citizens who have naturalised abroad.¹⁸⁹ Under certain conditions, third country nationals may be eligible for recognition of qualifications if they have a long term resident permit in the EU.

184 Cedefop, "Italy European Inventory on NQF 2016," 2017, 1–13.

185 Cedefop, "Italy: National Qualifications Framework Finalised," accessed July 7, 2022, <https://www.cedefop.europa.eu/en/news/italy-national-qualifications-framework-finalised>.

186 Manuela Bonacci, "The Italian Qualifications System," 2020.

187 MIUR, "How to Have a Professional Qualification, Including Vocational Education and Training, Recognised in Italy," 2020, <https://www.miur.gov.it/how-to-have-a-professional-qualification-recognised-in-italy>.

188 Bonacci, Manuela "The Italian Qualifications System," 2020

189 MIUR, "How to Have a Professional Qualification, Including Vocational Education and Training, Recognised in Italy," 2020



4. CONCLUSIONS AND NEXT STEPS

4.1 CONCLUSIONS AND RECOMMENDATIONS

Drawing on the illustrations of the VET systems in the five countries, the following conclusions can be made for potential areas of cooperation for skills partnerships:

A) GOVERNANCE STRUCTURES AND INSTITUTIONAL LANDSCAPE

All five countries discussed in this chapter have a strong institutional landscape in the area of (T)VET. Therefore, for creating cooperation pathways, the focus should rather be on institutional strengthening, rather than institutional development. The varying governance structures (national, sub-national, or a combination of both) as well as a lack of a standardised VET system within and between the European countries and Pakistan and Bangladesh may pose some challenges in developing multilateral agreements. The extent of private sector (employers and social partners) involvement in planning, decision-making, curricula-development, delivering trainings and conducting assessments is also varied across the countries. While social partners (including Chambers of Commerce, Association of Industrialists, Chamber of Labour and Trade Unions) are key actors in the VET system in Germany and Austria, institutionalised involvement of social partners and private actors in the VET systems in Italy, Bangladesh and Pakistan experiences challenges on practical levels. Nevertheless, there is scope for developing sector-focused, and where relevant, bilateral cooperation agreements. Presence of strong coordinating bodies at the relevant governance level would be important, in participating countries.

Recommendation: Potential partners for skill and talent partnerships should focus on developing sector-focused bilateral cooperation agreements and ensure the highest standards of coordination to mutually benefit from the partnerships.

B) (T)VET MODELS

The type of service providers also differs across the five countries included in this study. Although in principle, apprenticeship systems exist in all five countries, the apprenticeship model is much stronger and more developed in Austria and Germany, as compared to Italy, Pakistan and Bangladesh. In all five countries, the apprenticeship model has its roots in the informal “master-pupil” or “ustaad-shagird” model prevalent up until the 1960s. In the 1960s, a drive to formalise these apprenticeships systems can be observed across the countries. While initially the formalised apprenticeship system witnessed success in both Pakistan and Bangladesh, offering certain rights to apprentices as employees, such as stipends as a percentage of skilled worker wages, regulations for working hours, holidays and leaves, today, skills development and training programmes and certifications are more popularly imparted by training institutes and specialised skill development schools, rather than companies.

By defining apprenticeship as employment, the apprenticeship system implemented in Austria and Germany developed more formally. Most of the training in Austria and Germany takes place in companies through institutionalised employment contracts, providing access to a regulated profession. The number of trained professions offered through apprenticeship programmes have gradually increased since the initial 15 professions offered in the 1970s. The system in Austria and Germany is also distinct in terms of offering dual - in-company and school-based training – that covers general as well as vocational education.

Such a system is not as strongly incorporated in the other countries. But, school-based (T)VET is available across all five countries... Thus, in the short term, it might be more effective to develop skills partnerships based on school-based models, with more focus on practical learnings. In the medium to long run, apprenticeship systems in Pakistan, Bangladesh and even in Italy, may be focused on for improvements and strengthening by creating more coordination mechanisms between the government departments and private enterprises, as well as the inclusion of in-company training modules since companies have the latest and most relevant technology used in the market, rather than training institutes.

Recommendation: Adopt a phased approach to creating partnership mechanisms with short-term and long-term targets, focusing on existing common practices in the short-term, and combining them with capacity building for the VET systems in the medium to long term.

C) (T)VET ENROLMENTS

As discussed above, in both Pakistan and Bangladesh, TVET sectors are not very popular among youth. Preference for general academic education over TVET is primarily because of low employability rates of TVET graduates and hence low enrolments. There are also a number of systematic challenges as highlighted above in terms of teachers' training, availability of modern technologies, and the ratio of practical and theoretical teachings in the TVET institutes in Pakistan and Bangladesh. However, the governments of both Pakistan and Bangladesh are devising strategies to address these challenges and revive the TVET sector for producing modern and employable skills. In contrast, VET is a popular education stream in Austria and Germany. Successfully passed exams after apprenticeship training in Austria and Germany lead to a number of entitlements with regard to minimum salary levels and the right to set up a company or act as the manager of an existing company in the respective sector, making apprenticeship training a widely accepted pathway into employment and entrepreneurship.

Recommendation: Create improved linkages between (T)VET systems and labour markets in Pakistan and Bangladesh by improving the employability rate of (T)VET graduates. Improved mechanisms for apprenticeships are one avenue of ensuring trainees have access to the latest technologies and practical learning in the specific field.



D) LEARNING OUTCOMES

Quality of learning outcomes may also not be comparable across the different countries. The low uptake of formal apprenticeships in Pakistan and Bangladesh also mean that TVET is largely class-room based, with limited availability of modern technologies to practice on. While industry standards are defined in Pakistan and Bangladesh, it is challenging to assess whether they are systematically regulated. This impedes developing competencies in the state-of-the-art methods and technologies in a specific field. In this case, focusing on specific sectors in Pakistan and Bangladesh (e.g. hospitality sector as a case in point), and developing standardised modules, improving technological capabilities and learning outcomes between the participating countries would be beneficial. On the other hand, in Austria and Germany, the majority of training time is spent in the company, due to which issues of quality control arise. While companies training apprentices have to fulfil defined criteria regarding qualification of staff, infrastructural equipment and training of trainers, nevertheless the quality of training differs between companies. Thus, usually trainings in larger industrial companies will lead to better employment prospects and higher incomes than apprenticeship training in smaller companies. In order to mitigate these differences, the chambers of commerce of several federal states are now discussing multi-company apprenticeship programmes, whereby practical training is delivered in two or more companies in the same sector.

Recommendation: improve the uptake and implementation of apprenticeships in Pakistan, Bangladesh and Italy. One way to do so could be offering some incentives to the companies participating in apprenticeship programmes. Moreover, for Germany and Austria, multi-company apprenticeships should be piloted to check the efficacy for improved learning and employment outcomes.

E) ACCREDITATION AND RECOGNITION MECHANISMS

A major challenge to overcome for facilitating a smooth Talent Partnerships programme would be to ensure the presence of qualification recognition and accreditation system within the EU Member States for foreign qualifications and the presence of a system of recognition of informally acquired skills leading to accreditation. In light of the differences mentioned in the discussion above about the different TVET models, entry levels, qualifications, and industry regulations, this is the area that requires the most efforts for ensuring safe and legal pathways to migration in a mutually beneficial way for the participating countries. There is potential to overcome this issue by establishing standardised examination or evaluation systems for assessing competence levels in skills relating to specific sectors at the end of a TVET course.

Recommendation: Streamline accreditation systems in the EU Member States through standardised examination or evaluation systems for competence levels for specific skills.



4.2 AREAS FOR FURTHER RESEARCH

This report is based on desk research and relies on available information published online. Thus, there is much room for inclusion of updated information and input from relevant stakeholders. In addition to highlighting specific challenges and scope for partnerships, more research is required to understand the specific sectors for cooperation. This would require discussions with relevant stakeholders in participating countries and assessment of curricula, examination and quality assurance mechanisms, learning outcomes, and specific accreditation options available for that sector. Specifically, to contribute to the development of a potential skills partnership programme, the following research steps can be taken to inform the process:

1. For designing sector-focused initiatives for skills partnerships, further research should be conducted to understand good practices in the field of skills development cooperation in the IT and hospitality sectors. The analysis should highlight the key challenges and lessons learned from those examples, and propose a contextualised way forward for the five countries being studied under this report.
2. Skills partnerships need not only take into account the degree of universalisation of knowledge, but also the labour market situation in potential target countries and the educational and training facilities and the demand for these professions in participating countries. In addition, training in the languages of the countries of destination is a relevant factor. Further in order to carry out sector-specific analysis, it is important to have detailed overview about the labour market situation and training facilities and programmes available in the identified sectors in the selected EU and Silk Routes countries. This analysis would also highlight the existing training facilities, curricula, and regulations in the identified sectors in the selected EU Member States and the Silk Routes countries.
3. Skills partnership projects need the cooperation between training institutions and the private sector in both sending and receiving countries. In this regard, for future research, it would be relevant to identify key stakeholders in administration, private sector and among employers' organisations of the selected industries who are potentially interested in cooperation.



4.3 COMPARATIVE SUMMARY

	Bangladesh	Pakistan	Austria	Germany	Italy
General Aspects					
System of vocational qualifications exists	At national level	At provincial level	At national and regional level	At national and regional level	At Sub-national (regions and autonomous provinces)
Number of legally defined vocational qualifications	236	Varied at provincial level (number not publicly available)	240	330	Information not available online
Type of training	Either school-based or apprenticeship based. In practice, majority of training programmes are offered in training institutes	Either school-based or apprenticeship based. In practice, majority of training programmes are offered in training institutes	School-based and dual track apprenticeship system	School-based and dual track apprenticeship system	In principle, dual track apprenticeship system, but in practice, implementation of dual track system experiences challenges.
Location of Training with percentage of time spent	Mostly training institutes	Mostly training institutes	Mostly in companies and vocational schools	Mostly in companies and vocational schools	Mostly in TVET schools, but also in companies
Apprentice is legally entitled to salary	Yes (as per Labour Law 2006)	Yes (as per Apprenticeship Rules 1966)	Yes	Yes	Yes
Duration of programme	Up to 4 years	Up to 3 years	Between 2-4 years	Between 2-3 years	Between 3-5 years
Access to further education after examination	Yes	Yes	Yes	Yes	Yes
Linkage to employment conditions	Weak industry-TVET linkage (going through reforms)	Weak industry-TVET linkage (going through reforms)	Strong industry-TVET linkage (qualification tied to minimum salary scales)	Strong industry-TVET linkage (qualification tied to minimum salary scales)	Medium-level industry-TVET linkage



Governance structures

Apex institution for TVET	National Skills Development Authority (NSDA)	National Vocational and Technical Training Commission (NAVTTTC)	Federal Ministry of Digital and Economic Affairs (BMDW) and the Federal Ministry of Education, Science and Research	Federal Institute for Vocational Education and Training	Regions and autonomous provincial authorities govern VET in the respective regions National Board (coordinated by MIUR) and represented by all relevant partners
Responsible Federal Ministry	Ministry of Education and Ministry of Expatriates' Welfare and Overseas Employment (MEWOE)	Ministry of Federal Education and Professional Training (MoFEPT)	Federal Ministry of Digital and Economic Affairs (BMDW) and the Federal Ministry of Education, Science and Research	Federal Ministry of Education and Research (BMBF in collaboration with Federal Ministry for Economic Affairs and Energy	Ministry of Education, University, and Research (MIUR) in consultation with the Ministry of Labour and Social Welfare (MLPS)
Governance level	National	Sub-national (provincial)	National and regional Responsibilities divided between the Federal ministries, the government of the states (<i>Länder</i>), and social partners (School-based VET managed by the <i>Länder</i>)	National and regional Responsibilities divided between the Federal ministries, the government of the <i>Länder</i> , and social partners (School-based VET managed by the <i>Länder</i>)	Sub-national (regions and autonomous provinces)
TVET model	Academic and TVET pathways are separate	Academic and TVET pathways are separate	School-based VET and dual track training	School-based VET and dual track training	In principle, School-based VET and dual track training. Challenges experienced in implementation of dual track model.
Main Legislation	National Skills Development Authority Act 2018	NAVTTTC Act 2011; provincial ordinances	Vocational Training Act, Berufsausbildungsgesetz [BAG]	Vocational Training Act (1969), updated in 2020	Regional Law no. 5/2011



Policy (most recent)	National Skills Development Policy 2011	Skills for All Strategy (2018)	National Validation Strategy Austrian National Strategy for Validating Non-formal and Informal Learning Austrian National Strategy for the Youth: Competence oriented vocational training	No written policy document at the federal level, as vocational education is the competence of the state (Länder) governments	Regions and autonomous provinces have their own three-year strategies
Inclusion of representatives of employers	In principle, yes.	In principle, yes	Yes, strong participation	Yes, strong participation	Yes
Recognition agreements with key partner countries	Partnerships with Singaporean companies. Mutual Recognition Agreements being sought	With Saudi Arabia	With Hungary, South Tyrol, and Germany In some professions, qualifications from EU/ EEA and Switzerland are automatically recognised	With Switzerland, Austria, France Sector specific recognition agreements. For instance, on healthcare with Bosnia and Herzegovina, Philippines, Tunisia, Indonesia, Kerala (India)	None
Entry requirement for TVET	Completion of grade 8	Completion of grade 10 (Secondary School Certificate)	Completion of 9 years of compulsory education	Completion of 9 years of compulsory education (in some federations, 10 years of education)	Completion of 10 years of compulsory education
National Vocational Qualification	Bangladesh National Qualifications Framework (BNQF) 2021	National Vocational Qualification Framework (NVQF) 2013	Austrian National Qualifications Framework 2016	<i>Deutscher Qualifikationsrahmen für lebenslanges Lernen (DQR) 2013</i>	National Qualifications Framework 2018
Qualification level for Upper Secondary VET	BNQF 5 (SSC) BNQF 6 (Diploma)	NQF 4 (SSC) NQF 5 (Diploma)	EQF 4	EQF 3-4	EQF 3-4



Full Qualifications levels	Six levels (plus 2 pre-vocational qualifications) for vocational education; 10-level overall qualifications as per BNQF	Eight levels – as mentioned in NVQF based on EQF	Eight levels – aligned with EQF	Eight levels – aligned with EQF	Eight levels – aligned with EQF (references are made to the EQF rather than the NQF because of the differences in qualifications across regions) National Repertory of Qualifications is the framework for harmonising qualifications of different regions
Type of VET system	Either school-based or apprenticeship based	Either school-based or apprenticeship based	School-based and dual track apprenticeship system	School-based and dual track apprenticeship system	In principle, dual track apprenticeship system, but in practice, implementation of dual track system experiences challenges.
Main service providers	Public and private TVET institutes	Public and private TVET institutes	Public schools, training institutes, and private enterprises	Public schools, training institutes, and private enterprises	Public schools and institutes; private enterprises for apprenticeships
Apprenticeship system	Yes. Chapter XVIII under the Labour Act and Apprenticeship Regulations 2008 Traditionally, apprenticeships have been largely informal	Yes. Based on Apprenticeship Act 2018 Traditionally, apprenticeships have been largely informal	Dual track apprenticeship system. Apprenticeships are backed with formal contracts	Dual track apprenticeship system. Apprenticeships are backed with formal contracts	Type 1 apprenticeship leading to a VET certificate and educational qualification (faces challenges in implementation) Type 2 leading to a VET certification, but no educational qualification Type 3 refers to higher technical education leading to a technical diploma



Accreditation of informal and non-formal learning	Yes	Yes	Yes	Yes	Yes, but recognition mechanisms vary by regions
Transferability and comparability with general education	In principle, yes (as per the BNQF) Implementation mechanisms are being developed	In principle, yes (as per NVQF). In practice, mechanisms are still being developed	Yes – learners can switch between academic to VET tracks – an exam is needed for accessing general higher education after VET Double qualification programmes are also available	Yes as per DQR, learners can switch between academic to VET tracks – an exam is needed for accessing general higher education after VET Double qualification programmes are also available	Yes, after taking an exam for a secondary school certificate, learners can access general higher education
Recognition of foreign qualifications	no clear statement provided in the BNQF	Foreign qualifications recognised, but not equivalent to NVQF-based qualifications. Skills recognition agreement with Saudi Arabia.	Through foreign examination certificates	Professional Qualifications Assessment Act (a.k.a the Recognition Act)	Varies by region (limited scope for third country nationals)
Skills Database	National Skills Data System	National Skills Information System (NSIS)	Arbeitsmarktservice, AMS	Published regularly by Federal Institute for Vocational Education and Training (BIBB)	Atlas of Labour and Qualifications
Main international actors active in VET sector	EU, ILO, Asian Development Bank, Swiss Development Cooperation, UKAID, GIZ, AUSAID, the Canadian Government	EU, GIZ, Dutch Government, UNICEF, UNIDO, British Council, FCDO, World Bank, JICA	EU	EU	EU



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