Poverty Alleviation through Skill development

Sharukh Ali Khan [1], *Muhamad Jamil* 2, *Jahangir Azam Wazir* 3, *Wajid Ali Khan* 4, *Fawad Anwer Bhatti* [5], *Dr. Muqeem ul Islam*[6]

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Abstract:

Poverty in Pakistan is a multifaceted issue rooted in systemic socioeconomic challenges, including limited access to income-generating skills. Technical and Vocational Education and Training (TVET) offers a pragmatic solution by equipping youth with competencies to become self-reliant and entrepreneurial. This paper examines the inadequacy of conventional academic education in addressing unemployment and proposes a robust, skill-based educational approach. Drawing from successful international models such as Norway, Finland, and Switzerland, the study emphasizes reforming Pakistan's TVET system through public-private partnerships, updated curricula, and industry alignment. It outlines short-, medium-, and long-term policy interventions aimed at strengthening TVET quality, relevance, and societal perception. Empowering youth through market-driven vocational training can significantly contribute to poverty alleviation, economic development, and social inclusion in Pakistan.

Key words: *Technical and Vocational Education (TVET), Poverty Alleviation, Youth Empowerment, Skills Development, Economic Growth*

[1] *Pakistan Administrative Service (PAS)*, *Email: Shahrukh_csp@yahoo.com*
[2]*Economist Group* , *Email: ddinfrapw@gmail.com*
[3]*Government of Khyber Pakhtunkhwa* (PMS), *Email: Jehangirazam84@gmail.com*
[4]*Government of Khyber Pakhtunkhwa (PMS)* , *Email: wajidalipms@gmail.com*
[5]*Ministry of Interior, Email: bhattifawad@gmail.com*
[6] *Chief Instructor, National Institute of Management Peshawar, Email: muqeemci@nipapeshawar.gov.pk*

Introduction

Poverty is a pronounced deprivation in well-being and comprises many dimensions, including low income and the inability to acquire the basic goods and services necessary for survival. Skill training in TVET leads to the acquisition of competencies to generate wealth through applicable education, which empowers graduates of the education system with skills and competencies to become self-employed. TVET is a key solution to poverty eradication, job creation, and economic expansion. Conventional academic education in Pakistan seems to have failed to meet the needs of the rapidly growing population. The objective of TVET should emphasize the role of the government and corporate bodies in reducing poverty by empowering youth with entrepreneurial skills and knowledge through Technical and Vocational Education, thereby fostering creativity and contributing to the social and economic development of the nation.

The education system of Pakistan is a legacy of the system introduced by the British during their colonial rule. In the current situation, technical and vocational education must be given great importance for youth, as it will help them become confident and independent. They must channel their energy into this specific aspect of education. Shah et al. (2010) describe that by acquiring knowledge and skills, technical education and vocational training can help youth generate profits and contribute to the economic growth and social progress of the country. High-performing economies such as Norway, Finland, and Switzerland have transformed their societies by focusing on TVET. These countries lead the world in terms of technological advancement and workforce development. Pakistan should take lessons from these economies.

In Pakistan, 60 percent of the population consists of youth, and this percentage is increasing every year. The job market is struggling, as there are not enough jobs available in either the public or private sector to match the academic qualifications of young people. It is, therefore, the responsibility of the youth to acquire skills to earn a decent livelihood. Parents, teachers, and employers should support them in this regard. Textbook learning and classroom lectures are important for academic success; however, one must also develop practical skills to gain a competitive advantage when seeking employment or starting a business.

Problem Statement

Labor productivity levels in Pakistan lag behind regional countries, and the poor state of human capital is considered a major binding constraint to achieving the country's export-driven growth and industrialization objectives. Pakistan is one of the worst performers in terms of technical and vocational education. There is a need for an effective development and implementation strategy for TVET to harness the potential of Pakistani youth. The issues and challenges associated with skill development in Pakistan require in-depth study to identify the fault lines in the system so that an appropriate future course of action may be suggested for policymakers.

Scope of the Study

This study intends to explore the skills situation in the country in the context of both local and foreign market demand while focusing on the situational analysis of the TVET institutional framework. The current federal "Skills for All" strategy (2019) will be critically examined, keeping in view the on-ground performance of TVET institutes in the four provinces. The skill development programs of India, Bangladesh, and Malaysia will also be examined for lessons to be learned. Furthermore, best practices such as the German model of technical education will also be studied.

Methodology

To conduct this study, a situational analysis for identifying institutional gaps was carried out using qualitative tools such as PESTLE, SWOT, and logical framework models. A comparative analysis of the provincial skill development frameworks has been conducted. Additionally, the skill development frameworks of other countries such as India, Bangladesh, and Malaysia have been studied. Furthermore, case studies of the German dual education model and the Kamyab Jawan Programme have been carried out.

Poverty Alleviation through Skill Development

According to WB report (2021), the prevalence of poverty in Pakistan is 39% of the population. An obvious benefit of skills development is that a skilled person is more employable than an unskilled individual. A person with marketable skills has more opportunities and is more likely to find employment. Employability is a major factor if we are to see long-term

poverty eradication. Another benefit is that skilled people have better options to start their own businesses. Skilled entrepreneurs are a major factor in addressing poverty in any country.

Policy Analysis:

National Skill Strategy 2009

Pakistan's first skills sector specific policy, the National Skills Strategy (NSS), was developed in 2009. The policy proposed a paradigm shift from curricula-based education to competency-based training (CBT). It also envisioned a shift from supply-led training to demand-driven skills development by promoting the role of industry in both the design and the delivery of TVET. Key reforms proposed by the NSS include the overhaul of the apprenticeship system, encouraging entrepreneurship, integrating informal economy workers into the formal sector, establishing a National Vocational Qualifications Framework (NVQF) and registering and accrediting TVET institutes. The provinces of Punjab and Sindh developed their respective skills strategies in 2015.

National "Skills for All" Strategy 2019

Technical and Vocational Education and Training (TVET) offers the shortest and swiftest path to productive youth engagement. Unfortunately, TVET sector in Pakistan suffers from chronic systemic ailments including limited training capacity, outdated workshops and laboratories, obsolete training equipment, archaic teaching methods and antiquated curricula and, therefore, is grossly incapacitated to meet the skill training needs of domestic and international markets, in terms of both quantity and quality. The sector has never been accorded due priority in Pakistan and therefore has attracted inadequate investment from both the public and private sectors. In order to reverse the past neglect eight key areas were identified where immediate interventions are required.

i. Improving Governance to remove fragmentation/duplications leading to systemic wastages;

ii. Exploring Multi-Source Funding to pursue a broad-based reform agenda;

iii. Capacity Enhancement to create more and more training opportunities;

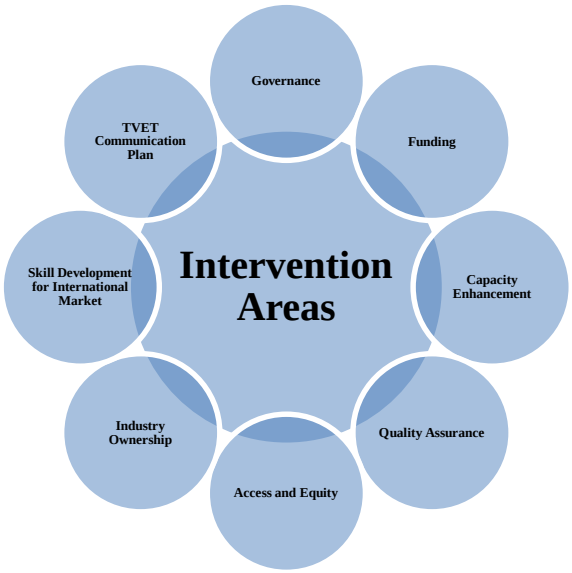
iv. Quality Assurance to bring quality of skills at par with national-international requirements;

v. Access and equity for providing equal opportunities to such marginalized segments of society as females, orphans, special people, youth from less developed areas etc.

vi. Industry ownership to enhance both relevance of training and youth employability;

vii. Skill development for international market for increasing foreign remittances; and

viii. TVET communication plan to increase image of skill sector.

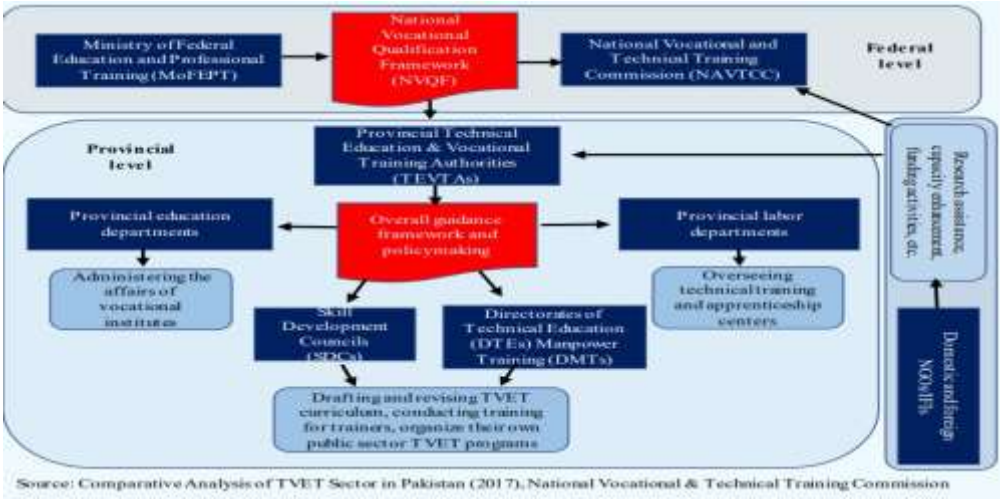


Institutional Analysis:

TVET Institutes in Pakistan:

At the federal level, the NAVTTC is responsible for regulating, facilitating and providing policy direction for skills development in the country, setting up national occupational skills standards, developing curricula, administering the NVQF, undertaking labor market information analysis, training of trainers and public–private partnerships and determining institutional standards for TVET providers. At the provincial level, Technical Education and Vocational Training Authorities (TEVTAs) have been set up in all four provinces. Established as autonomous entities, TEVTAs are governed by independent Boards, whose members represent both the public and private sector. TEVTAs operate and manage vocational and technical training institutes in their respective provinces. They are also engaged in developing training content and curricula as well as updating the existing provision offered in their institutes. In addition to TEVTAs, each province has its own set of Qualifications Awarding Bodies (QABs) for technical education and vocational training.

Courses for vocational trades are assessed and certified by Trade Testing Boards (TTBs), while certification for technical education diploma courses is carried out by the Board of Technical Education (BTE) in each province. TTBs operate under their respective TEVTA while BTEs are autonomous bodies operating independently of TEVTAs.



Source: Comparative Analysis of TVET Sector in Pakistan (2017), National Vocational & Technical Training Commission

Shortage of TVET Institutes in Pakistan:

In Pakistan, there are a total of 3,740 Technical Education and Vocational Training (TVET) institutes in both the public and private sectors. However, this is grossly inadequate to effectively respond to the needs of both youth and industry (M/o FE&PT, 2018). The report observes that if more than 6 million youth were to be provided with skills training based on the present methodology, it would require at least 45,000 additional training institutes.

Competency-Based Training & Assessment (CBT&A)

Competency-Based Training & Assessment (CBT&A) represents a shift from the traditional supply-led system to a demand-oriented approach. This demand-driven system ensures systematic and institutional engagement of industry in the overall TVET system through various platforms. In Pakistan, there is increasing awareness within the industry that a shortage of skilled and qualified workers is a significant factor limiting productivity and industrial growth. However, aside from the ongoing piloting of CBT through the recently introduced National Vocational Qualifications Framework (NVQF) and industry-led initiatives, training delivery remains predominantly supply-driven, with negligible involvement from the formal private sector.

KP TEVTA has adopted the CBT&A model in 61 vocational institutes out of a total of 106 TVET institutes in KP. These institutes have begun offering training in 34 demand-driven trades under CBT&A. So far, 18,196 students have been enrolled in the CBT&A program.

Overlapping of Functions

When examining the challenges at the point of TVET delivery, it becomes apparent that there is some overlap in roles between NAVTTC at the federal level and the TEVTAs at the provincial level, following the reorganization of responsibilities after devolution. This duplication appears to result from institutions at both the federal and provincial levels not having fully transitioned to the new institutional arrangements. Overlaps exist both at the strategic level—policy formulation—and the operational level—implementation of TVET services. These interdependencies are often unclear, and the complementarity of roles between the two levels is not currently being fully utilized. While past reform efforts have addressed this issue as part of improving governance, there is still a clear need to develop synergies among the various TVET institutions.

Role of the Private Sector

The private sector makes a sizable contribution to TVET provision in the country. According to the National Skills Information System (NSIS) maintained by NAVTTC, out of the total 3,740 institutes providing TVET services, 2,113 are operated by the private sector. In addition to service provision, the private sector has recently been engaged in a strategic role by establishing three Sector Skills Councils—in hospitality, renewable energy, and construction—as mechanisms to ensure greater private sector involvement in the design and implementation of publicly funded training. This aims to improve both the quality and scale of training provision.

Recently, NAVTTC and the Federation of Pakistan Chambers of Commerce and Industry (FPCCI) launched the National Skills Forum (NSF) as a platform to promote strategic partnerships between industry and public-sector organizations delivering technical education and vocational training. This is intended to balance inputs from both the private and public sectors.

Women Industrial Training Centers (ITCs) in KP

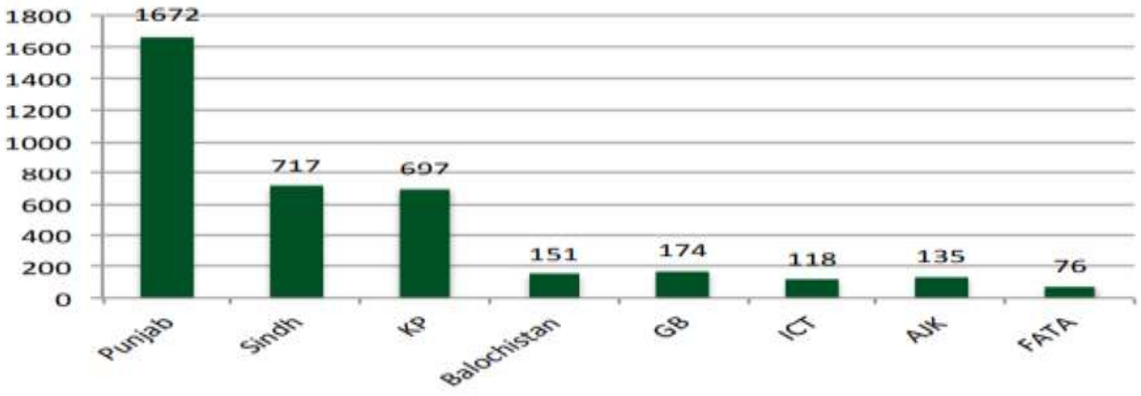
A study of the Directorate of Social Welfare, Special Education, and Women Empowerment Department, Government of KP, shows that there are 117 Industrial Training Centers established in 25 districts of KP, which are providing training in nine basic skills such as beautification, tailoring, embroidery, etc.

Over the past three years, more than 16,291 women have received skill development training. However, these skills are primarily intended for home and family use and are rarely marketable. Furthermore, the women are often trained using substandard tools and equipment, and in many cases, the provision of basic infrastructure is also compromised.

Comparative Analysis of TVET in Four Provinces:

The details of province wise and gender-wise institutes are given below:

Public				Private				Total			
Male	Female	Co-ed	Total	Male	Female	Co-ed	Total	Male	Female	Co-ed	Total
902	570	52	1,524	1,030	553	530	2,113	2,035	1,123	582	3,740

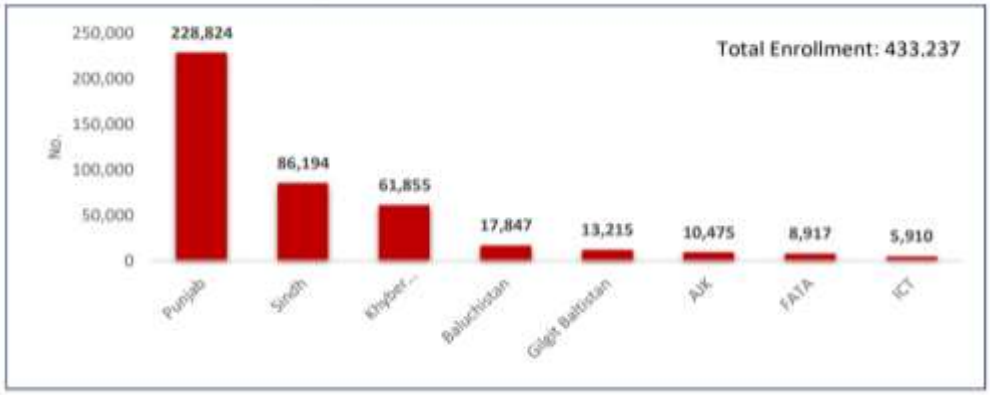


Teachers in TVET Sector

Total number of TVET teachers in both the technical and vocational streams is 18,207 according to NAVTTC survey 2018. However, around 200,000 more TVET teachers are to be inducted into the system to meet the requirement of students and industry. The province-wise breakup is shown in the following graph:

Enrollment in TVET Institutes

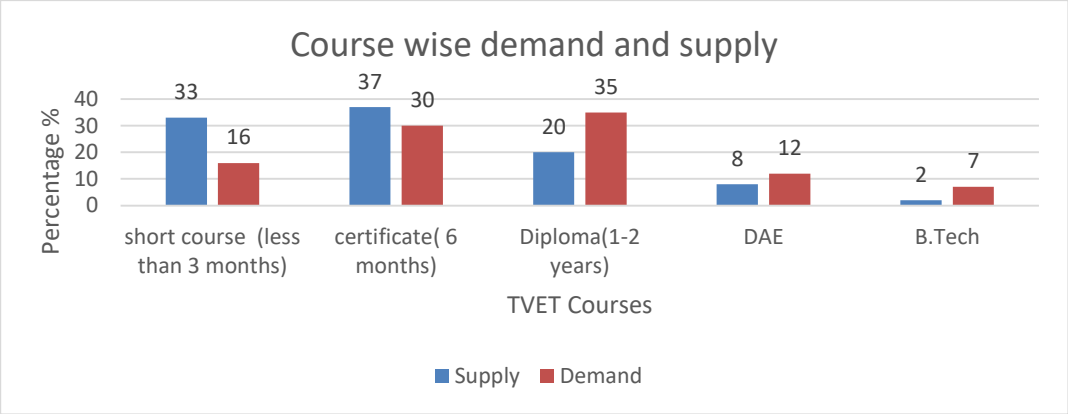
The total enrollment in TVET institutes is around 433,237, out of which 285,426 are male and 147,811 are females. Punjab dominates with an enrollment of 53%, followed by Sindh with 19.8%, Khyber Pakhtunkhwa with 14.3% and Baluchistan with 4.11%.



Province/Region	Male	Female
Punjab	152,708	76,116
Sindh	67,035	19,159
Khyber Pakhtunkhwa	36,938	24,917
Baluchistan	10,759	7,088
Gilgit Baltistan	4,049	9,166
AJK	6,334	4,141
FATA	4,267	4,650
ICT	3,336	2,574
Total Enrollment	**285,426**	**147,811**

Courses wise Demand and supply in The Market:

The data obtained from NAVTTC shows that people are more interested in short courses and certificates whereas the demand in the market is of Diploma holders, DAE and B.Tech.



Source: National Skills Information System, NVTEC

Trained Individuals Supplied by Technical Institutions to the Labour Market:

Technical institutions include colleges of technology, polytechnic, and mono-technic institutions, where the Diploma of Associate Engineer (DAE) is awarded by the respective Board of Technical Education (BTE). The total annual output of technical institutions across various disciplines is approximately 81,834, with public institutions accounting for 89% of this figure.

In Punjab, the most popular trade is Electrical Technology, representing around 20% of the total skilled workforce supplied to the labour market. The second most popular trades are Mechanical and Civil Technology, each comprising 19%, while Chemical Technology ranks third with 8% of the total DAE supply. The share of private technical institutions is approximately 18%, and the gender ratio is 1:20 (1 female to 20 males). Among female students, the most popular technologies are Computer, Food Processing, and Fashion Designing.

In Sindh, the total annual supply of technically trained individuals is around 25,998 (32% of the national total). The most popular trade is Civil Technology, comprising about 27%, followed by Electrical Technology (22%) and Mechanical Technology (18%).

The gender ratio in the skilled workforce supply is 1:16 (1 female to 16 males), and the contribution of public sector institutions is approximately 9%.

In Khyber Pakhtunkhwa, the total annual supply of technically trained individuals is around 18,486 (23% of the national total), with public technical institutions contributing about 86%. The gender ratio in the supply of skilled labour in technical trades is 1:33 (1 female to 33 males). The most popular trade is Civil Technology (35%), followed by Electrical Technology (29%), and Mechanical Technology (12%).

In Balochistan, the lowest enrollment in technical institutions is observed, with the province contributing only 0.2% of the total 81,834 graduates in various technologies, despite accounting for 3.8% of the national population aged 15–29. The most popular trade is Electronics (31%), followed by Electrical Technology (26%), and Computer & Information Technology as the third most popular.

Skill Development Programs in India, Bangladesh & Malaysia

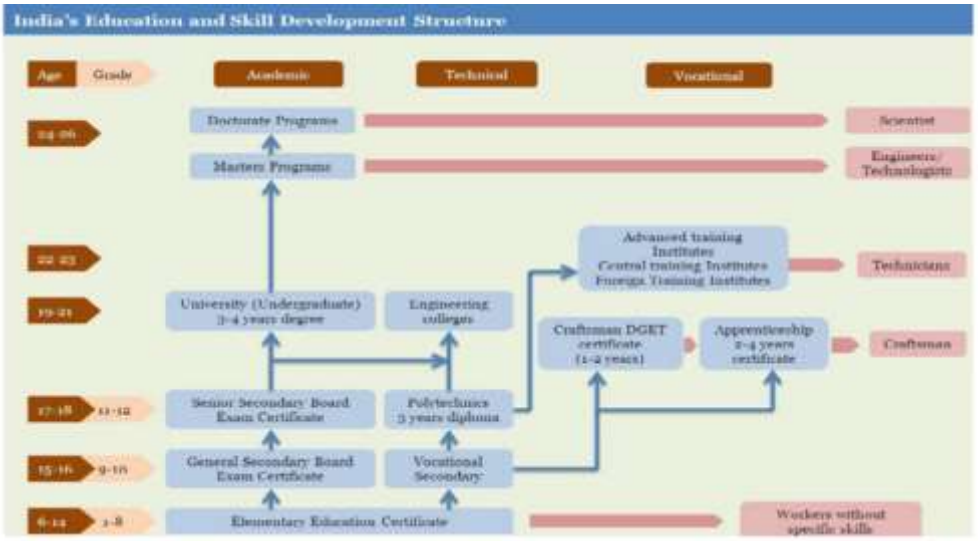
Indian Skill Development Program:

The Indian economy grew at an impressive rate of 7.6 percent during the January–March quarter of 2022–23, making it one of the fastest-growing economies. India's demographic profile is enabling the country to aim for accelerated economic growth. While most economies around the world are aging rapidly, India will be an exception, expected to dominate the global workforce by becoming the largest provider of skilled labor.

In this context, skill development emerges as one of the most critical aspects of India's economic policies. The Prime Minister of India, Shri Narendra Modi, recognized the need to focus on skill development due to evolving labor market dynamics. As a result, a new Ministry of Skill Development and Entrepreneurship was established. This ministry works in close collaboration with other ministries to address the huge demand for a skilled workforce.

The National Policy on Skill Development was framed in 2009 with the aim of strengthening the country's skill development initiatives. It is a Public-Private Partnership model operating under the Ministry of Skill Development and Entrepreneurship. The policy was established to promote skill development by creating large, high-quality vocational institutions with appropriate training infrastructure. Although India has a large number of aspirants, it lacks the infrastructure required to meet the demand for vocational education and training. Therefore, the government has encouraged more such partnerships to ensure the success of the vocational training model.

Skill development in India is categorized into two main areas: Skill Education and Skill-Based Vocational Training.



Looking at the labor market dynamics, the government has started initiatives to fight the major difficulty. In fact, the Government has given utmost priority to skill development and it will continue to be a vital matter for the next 10 years. There will be a considerable growth in the Infrastructure sector followed by the Auto & Auto Components.

Skill Development Program in Bangladesh:

The TVET Reform in Bangladesh has five key target areas which together ensure a TVET system being well-coordinated, flexible, responsive and able to meet industry needs. These are policy, relevance, strengthening, linkages and access. Many of the rapidly developing countries and recently developed countries of Asia like Bangladesh made TVET a central focus of their education systems as a way of preparing for rapid industrialization. In Bangladesh, formal TVET education is the integral part of secondary education, and evidence suggests that some TVET resources are underutilized because of low demand from students. A unified and simplified system of TVET management and provision; promotional efforts to students and their families; and, perhaps most importantly, a continuous system of communication, coordination, and cooperation with private industry help make TVET an important element of development.

There are linkages between employers and most institutions that provide TVET. This has led to the desired responsiveness of TVET provision to job market demands—with systematic feedback concerning industry requirements. The national skill development policy of Bangladesh is illustrated as under:

In Bangladesh, through the adoption of NSDA Act 2018 and NSDA Rules 2020, NSDA has got the mandate for skills development in the country by way of coordination, quality assurance, and assessment and certification

Malaysian Skills Development Model

Many organizational structures support skills development and employment in Malaysia. First, the Ministry of Education provides formal education for youth at the primary, secondary, and tertiary levels, including VET provision. In addition, the Ministry of Human Resources, the Ministry of Entrepreneur Development, and the Ministry of Youth and Sports, along with a range of public and private organizations, deliver skills training for youth, the unemployed, and those already in the workforce. In the Southeast Asian sub-region, Malaysia was a pioneer with its Occupational Skills Standard Act introduced in 1993, followed by the National Skills Development Act in 2006. As a result of this legislation, there are now over 1,000 accredited public and private training centers in the country (Leong, 2017).

Under the Ministry of Human Resources, there are 14 industrial training institutes that provide pre-employment training, focusing on upskilling existing employees—especially those working in the manufacturing and construction sectors. There are several long-term study programs through which graduates can obtain a Level 1 or Level 2 Malaysian Skills Certificate. Advanced-level qualifications can be obtained at one of the four Advanced Technology Centers.

The effectiveness of these programs is evident from the fact that 80% of graduate's secure employment within six months of completing their programs. Higher-level technical training is provided at the National Polytechnics and Community Colleges.

Comparison of Pakistan with India, Bangladesh and Malaysia:

Sr No.	Country	Total Population	Workforce Abroad	Remittances
1.	Pakistan	225	11.6	31,000
2.	India	1393	32	85,000
3.	Bangladesh	168	10	24,700
4.	Malaysia	33.9	NA	NA

Source: World Bank Employment2population/remittances (Figures in millions)

German Dual Education System

Human capital plays a vital role in the pursuit of sustainable economic growth. Alongside education, skill-building of the workforce is also essential for economic development. This is evident from the case of the German vocational training system, which, with its combination of classroom and workplace learning, theory and practice, and education and employment, is recognized worldwide as a fundamental and highly effective model for vocational training.

The German dual system offers an excellent approach to skill development, covering initial vocational education and training, advanced vocational education and training, employability, occupational competency, and identity. Due to this dual system, Germany enjoys low youth unemployment and a highly skilled workforce.

In Germany, there are currently around 350 officially recognized occupational standards. These standards are a central element of the German vocational training system. Although they are incorporated into state law, trade and industry also play a decisive role in their formulation.

Therefore, the dual system is firmly established within the German education system. After finishing school, more than half of young people in Germany begin vocational education and training by starting an "apprenticeship," i.e., training within the dual system.

The system is described as "dual" because training is conducted at two venues: the company and the vocational school. Extra-company training, which may take place in VET institutions outside both the vocational school and company-based TVET, is another possible learning venue. Access to vocational education is not formally linked to any particular school-leaving qualification—the fundamental principle is that training is open to everyone.

The main characteristic of the dual system is the cooperation between small and medium enterprises, on one hand, and publicly funded vocational schools, on the other. This cooperation is regulated by law. The primary benefit for trainees is receiving market-relevant training that improves their chances in the labor market while simultaneously enhancing social skills and personal development. The state also benefits from the dual system by reducing the burden on public budgets through enterprise participation and by maintaining an up-to-date workforce.

Trainees in the dual system typically spend part of each week at a vocational school and the other part at a company, or they may alternate longer periods at each venue. Dual training usually lasts between two and three-and-a-half years.

Businesses that participate in the dual training scheme view vocational training as the best form of personnel recruitment. Companies that provide training not only save on recruitment costs but also reduce the risk of hiring unsuitable employees. Investment in first-class training is a key success factor in an increasingly competitive world. The main benefit for apprentices is that they receive market-relevant training that enhances their prospects in a labor market that is constantly evolving and upgrading skills in response to the latest innovations of the digital age.

There is growing global awareness that high-quality, work-based vocational education and training are essential for competitiveness and social inclusion. Austria, Switzerland, Luxembourg, and Denmark have already adopted this dual education system. Demand from other countries for cooperation with Germany in this area remains high (BMBF, 2022).

In contrast to the German dual system, Pakistan is ranked 92 out of 133 countries in the university-industry linkages index—much lower than China and India, which are ranked 23 and 46, respectively. Due to the weak university-industry-professional nexus in Pakistan, our youth are not acquiring the skills sought by employers. This skill mismatch is a fundamental reason why our enterprises and universities fail to compete effectively in global markets.

Kamyab Jawan Initiative

In light of rapidly changing global socio-economic and political dynamics, it is critically important to engage and invest in the national youth to educate and empower them. The country required a comprehensive framework at a strategic level for the meaningful and sustainable development of youth. If the young generation is properly engaged, developed, and empowered, it can serve as a change agent and catalyst for the attainment of the Sustainable Development Goals (SDGs) in Pakistan.

Therefore, an implementation strategy for the National Youth Development Framework (NYDF) was formulated and formally launched with the initiation of the Prime Minister's Kamyab Jawan Programme in October 2019. Under this youth development program, six schemes were designed, including the "Youth Entrepreneurship Scheme" and "Skills for All." The primary objective of the program is to bridge the gap between education and labor market realities, strengthen technical and vocational education, and develop employability skills.

Strategy for Placement of TVET-Trained Individuals in the GCC Job Market

The Gulf Cooperation Council (GCC) is a political and economic alliance of six affluent Arab countries on the Arabian Peninsula: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. During the 1970s, these Middle Eastern countries launched massive development projects that attracted foreign manpower due to labor shortages.

It is estimated that 9 million Pakistanis are working abroad, with more than half employed in the six GCC countries. The migration of Pakistani workers is heavily concentrated in the GCC region (96 percent), with Saudi Arabia and the United Arab Emirates hosting the majority. As a result, more than half of Pakistan's remittances are received from GCC countries.

In the GCC, India, Bangladesh, and the Philippines are major contributors of skilled manpower. These countries have established organized systems for training emigrants in technical and vocational fields. The estimated proportion of the labor force in the GCC is as follows:

Expats in GCC (% of workforce)	**India**	**Bangladesh**	**Pakistan**	**Egypt**	**Philippines**
Bahrain	5%	3%	3%	1%	3%
Kuwait	11%	6%	4%	24%	11%
Oman	9%	19%	7%	1%	2%
Qatar	7%	5%	3%	8%	12%
KSA	32%	46%	46%	47%	40%
UAE	35%	21%	37%	19%	31%

Source: (Florian T. Malit, 2017)

The situation mentioned calls for preparing specialized and skilled manpower to gain share in dynamic job market of GCC. Therefore, technical and vocational education imparting bodies should revive course modules to meet the projected demand in GCC job market.

Gap Analysis of the Local Job Market

Pakistan has a large labor force, ranked among the top 10 largest in the world, and it continues to grow day by day. On the other hand, employers frequently report that they are unable to find workers with the appropriate skills required for their industries. This clearly indicates a mismatch between the demand and supply of skills. Skill development can play a major role in poverty alleviation when it is carefully planned and implemented in the context of available and emerging employment and income-generation opportunities.

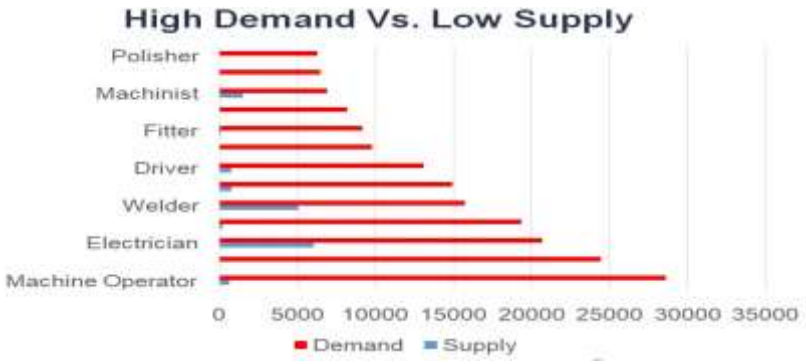
The current provision of TVET is highly supply-driven, with most training programs designed without any market research. This is further compounded by a lack of reliable data and a shortage of administrative capacity for skills analysis and forecasting of market needs among most TVET service providers. The absence of localized market research continues to create skills mismatches, resulting in poor employment outcomes.

The prevailing situation in Pakistan's skills development sector reflects a disproportionately large gap between supply and demand within the TVET system—both in terms of the size of the youth population and the skilled workforce requirements of industry.

This gap is expected to widen further with increasing demand from CPEC projects unless urgent efforts are made to bridge it. There is little alignment between the needs of local industry and the training provided by vocational institutes. Rather than aligning training with local economic needs, institutes tend to offer what they have traditionally taught or what has been mandated through centralized decision-making. As a result, trainees emerge from the system inadequately skilled and with limited employment opportunities.

Thus, there exists a significant gap between the demand and supply of skilled labor in the services, construction, and manufacturing sectors—both within Pakistan and abroad.

Although the government has in the past attempted to liaise with employers in the development of skill standards and endorsement of curricula, but this engagement was not wide enough to be truly meaningful.



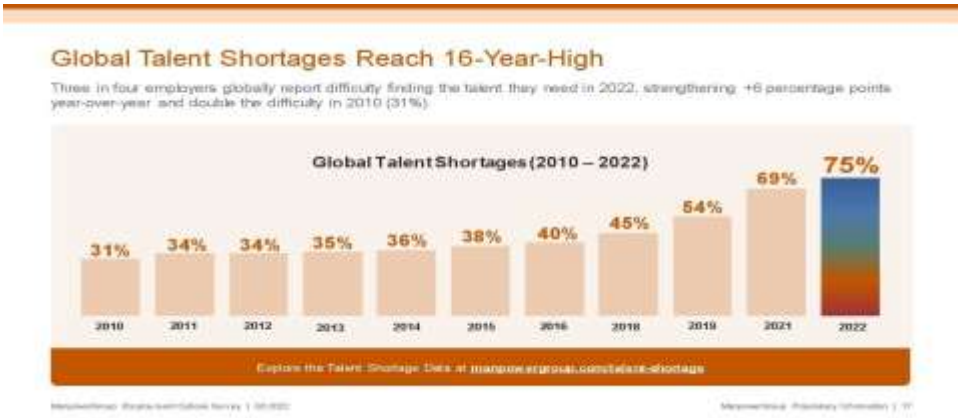
Gap Analysis of the Overseas Job Market

It has been estimated that 41% of all work activities in Kuwait are susceptible to automation, as are 46% in Bahrain and Saudi Arabia, 47% in the UAE, 49% in Egypt, 50% in Morocco and Turkey, and 52% in Qatar. In addition, whether jobs are declining, stable, or growing, they are undergoing major changes in their skills profiles. The World Economic Forum's *Future of Jobs* analysis found that, in the future, 21% of core skills in the GCC and 41% of those in Turkey will differ from the skills required in 2015. At the same time, across the globe, there is substantial potential for creating high value-adding formal sector jobs across various sectors, skill levels, and work formats.

The reliance on foreign workers by the group of high-income, resource-rich Gulf countries—including Saudi Arabia, the UAE, Kuwait, and Qatar—has historical roots dating back to early fossil fuel discoveries. These discoveries led to an influx of physical and service workers as well as highly skilled technical and managerial talent. Pakistani migrant workers are currently employed in more than 50 destination countries, with GCC countries being the most common choice. During the period from 2008 to 2016, approximately 97% of Pakistani migrant workers went to a GCC country. In recent years, Malaysia has also emerged as a significant destination, with 20,577 workers there in 2014 and 20,216 in 2015. The top five destination countries since at least 2008 have been Saudi Arabia, the United Arab Emirates, Oman, Bahrain, and Qatar.

It is pertinent to mention that, due to the ongoing transformation toward a digital and automated world, overseas job market dynamics have changed. There is now a growing demand for skilled manpower equipped with modern technologies, particularly in information technology. Multinational companies across the world are striving to employ experienced and competent workers, who are considered valuable assets.

The *Employment Outlook Survey* surveyed more than 40,000 employees worldwide. It identified the most in-demand jobs, while also revealing the highest level of global talent shortages in 16 years. Employers reported difficulty in filling open roles, with the most significant impacts observed in Taiwan, Portugal, Singapore, China, Hong Kong, and India (ManpowerGroup, 2022).



PESTLE Analysis

Political	i. Low Government Priority ii. Incoherent approach by Federal & Provincial Governments
Economic	i. Economic growth ii. Unemployment iii. Low per capita income iv. Low Remittance from Overseas
Social	i. Vocational training is considered as inferior in society ii. Low women participation iii. Crimes in society iv. Trend towards general education
Technological	i. Rapid change in technology ii. Obsolete equipment at TVET institutes iii. Limited industry ownership
Legal	i. Ambiguity in roles between Federal & Provincial Governments after 18th Amendment ii. No legislation for regulating private TVET institutes
Environmental	Modern skills in Agriculture

SWOT Analysis

Strengths	**Weaknesses**
i. "Skills for All" Initiative ii. Competency Based Training iii. Network of TVET Institutes	i. Lack of Govt Interest ii. Overlapping of Functions between Fed & Provincial Govts iii. Outdated Workshops iv. Obsolete Equipment v. Archaic Teaching Methods vi. Antiquated & Incoherent Curricula vii. Focus on Traditional Education viii. Perception of Lower Social Status ix. Limited Ownership/Participation of Industry x. Lack of Demand Oriented Technologies
Opportunities	**Threats**
i. 65% Young Population ii. Local Job Creation iii. SME Start-up Culture iv. Demand in International Job Market v. FX Remittances	i. Better TVET in Competitive Countries ii. Rapid Technology Growth iii. Effect of Political Instability on Policies iv. Low Budget Allocation for TVET v. Low Female Participation

Issues and Challenges

Deficient Brand Equity

The general public's perception of vocational education is a recurring problem for TVET and skill development in Pakistan. TVET has weak brand equity compared to general education and has historically been considered a fallback option for students who leave the academic system, despite the growing demand for more and better skills training. This perception has hindered the growth of skills training as a respectable alternative to conventional academic pathways. Since the 1980s, TVET has functioned as an independent program, disconnected from the country's general education system, and lacks a clearly defined transition point.

Overlaps in Institutional Framework

Institutions at the federal and provincial levels have not fully adapted to the new institutional arrangements, which has led to overlaps in functions. Similarities exist at both the strategic level of policy formulation and the operational level of TVET service implementation.

The complementarity of roles between the two levels remains underutilized, and these interdependencies are often unclear. Although previous reform efforts have addressed this issue in the context of governance improvement, there is still a clear need to develop synergies among the various TVET institutions.

Participation of the Private Sector

The inclusion of the private sector in TEVTA governance structures is an indicator of collaboration, but this inclusion varies across provinces, and the private sector is underrepresented on each Board. Institutional connections—such as with Chambers of Commerce and Industry or the Employers' Federation of Pakistan (EFP)—are either nonexistent or at best sporadic.

These connections are vital for job placement, apprenticeship programs, and the adoption of a dual training system. Furthermore, engagement with the private sector at the local level, particularly in training delivery, remains minimal. To ensure that TVET provision aligns with market demand, local business involvement is essential, as market relevance is highly contextualized and localized. Currently, private sector participation at the institute level is in decline. Although in theory the private sector is included in local management structures such as Institute Management Committees, in most cases these structures are not fully functional. The decision-making process remains centralized, and local structures have little to no autonomy.

Limited Approach to TVET

While there is growing recognition of the need to enhance youth employability through the teaching of a broader skill set—including both technical and transferable core skills—the TVET sector still lacks a coherent and systematic approach to address this need. There is no consistent definition or consensus on which core skills are crucial for a successful transition to employment. These skills are not outlined or addressed by any national standards or qualifications.

In the absence of a widely accepted core skills framework, the process of integrating such skills into the training curriculum remains unstructured and fragmented.

Inadequate Market Research

TVET is still largely supply-driven, with most training programs designed without any form of market analysis. The lack of administrative expertise in skills analysis and labor market forecasting among most TVET providers exacerbates the lack of reliable data.

This, coupled with limited localized market research, continues to result in skill mismatches and poor employment outcomes.

Focus on Wages and Paid Employment

Most existing TVET programs are geared toward preparing students for paid employment, often focusing on jobs in large enterprises that offer little in terms of entrepreneurship development. When entrepreneurship education is included, it tends to be basic, emphasizing knowledge acquisition rather than cultivating the attitudes and skills essential for business success.

Conclusion

The quality of TVET provision is also variable across the country. TVET sector institutes in both the public and private sectors (with a few exceptions in the private sector) are characterized by outdated curricula, a mismatch between the skills taught and those demanded by industry, inadequate quality assurance mechanisms, substandard physical and learning resources, and low levels of private sector participation—which is crucial to bridging the skills–market gap. Technical and vocational training primarily takes place in time-constrained, theory-based, teacher-led classroom environments, isolated from industry applications. Attachments and links to industry are fragile, poorly planned, and inadequately supervised. The low quality of training provision results in poor employment outcomes and becomes a disincentive, diminishing the demand for TVET, particularly from young men and women aspiring to enter the labor market.

Moreover, TVET in the country suffers from a lack of "brand" equity when compared to general education and has traditionally been seen as a backup option for students who drop out of the academic system. This perception, combined with the poor employment outcomes of TVET graduates, discourages young people from choosing vocational education and training as their preferred academic route.

There is growing recognition at the strategic policy level that strengthening the TVET system will require a shift away from conventional approaches to TVET delivery. The recent adoption of the Competency-Based Training (CBT) approach is a major milestone in quality improvement, particularly in terms of aligning training content more closely with market needs. In recent years, the NAVTTC has taken the lead in designing CBT curricula to develop standards of occupational competency for various trades with the active participation of leading industry practitioners.

Recommendations:

Given the above detailed analysis, we propose several policy interventions. For clarity, the recommendations are grouped into short-term, medium-term, and long-term actions as outlined below:

Short Term:

i. The federal government should focus exclusively on National Skills Development, management of the National Skills Fund, and testing and certification of skills.

ii. Available resources should be optimally utilized by both federal and provincial governments to enhance the capacity of TVETs, such as running double shifts in TVET institutes. Private sector involvement should be increased through apprenticeship programs. Universities should be engaged for high-tech skill training. Apprenticeship laws should be implemented, and online learning systems should be launched.

iii. A communication strategy should be devised to launch a targeted campaign to create public awareness about the existence and benefits of TVET education.

Medium Term:

i. The capacity of the TVET sector to provide market demand-based training should be enhanced through public-private partnerships and industry involvement, so that requirements for CPEC and the Industry 4.0 revolution can be met. Vocational workshops may be established in Madaris, following the models of Malaysia and Indonesia.

ii. Model TVET institutes should be established by both the federal government (NAVTTC) and provincial governments (TEVTAs) to implement international best practices. Additionally, TVET curricula should be incorporated into the Pakistan National Curriculum (PNC).

iii. Exploring broader financial space for TVET funding is the need of the hour. Various options should be considered, such as government funding, engagement with INGOs and NGOs, industry partnerships, paid technical training, and the diversion of funds from welfare/charitable/poverty programs like BISP and the Bait-ul-Mal.

iv. Women's participation in TVET should be enhanced by developing special programs to promote and train women in entrepreneurial courses. Courses aimed at uplifting rural economies should be designed, focusing on modern agriculture and livestock techniques.

v. All TEVTAs should work in close coordination with industry and Chambers of Commerce and Industry (CCI) to identify and deliver market-oriented skills.

Long Term:

i. The overlap of TVET functions between the federal and provincial governments should be negotiated and resolved through the Council of Common Interests (CCI).

ii. Research should be conducted to identify the existing and future skilled workforce requirements in both local and overseas markets, especially in GCC countries.

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