

2018



National “Skills for All” Strategy

A Roadmap for Skill Development in Pakistan

Government of Pakistan
Ministry of Federal Education & Professional Training
Taskforce on Education

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EXECUTIVE SUMMARY

More than 120 million or 60% of Pakistan's rapidly growing population of 207.77 million is below the age of 35 years. If this demographic dividend is harnessed and skilled to meet domestic and international market requirements, the youth bulge would yield increased industrial productivity and higher foreign remittances. If left unskilled and not economically engaged, many of them may succumb to anti-social overtures with disastrous eventualities, in addition to being engulfed by poverty and deprivation.

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 Unfortunately, TVET sector in Pakistan suffers from chronic systemic ailments including limited training capacity, outdated workshops and laboratories, obsolete training equipment, archaic teaching methods and antiquated curricula and, therefore, is grossly incapacitated to meet the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, the Task Force has identified eight key areas where immediate interventions are required. These eight intervention areas with identified gaps and actionable recommendations are elaborated below:

1. Governance

TVET sector in Pakistan is historically marked by lack of clearly defined functional domains for various stakeholders as well as an absence of TVET coordination mechanism to allocate scarce resources in the right direction. Fragmentation and overlapping have culminated in systemic inefficiencies such as increased transaction costs and high training expenditures, lukewarm response to client needs, hindrance in implementation of reforms, and increased structural impediments¹. The complexity of the situation is further compounded owing to a tangible lack of understanding about the roles and responsibilities assigned to various institutions, particularly in the backdrop of 18th Constitutional Amendment.

First of all, it needs to be elaborated that as the 18th amendment has not transferred any subject from the federal to provincial domains in terms of technical and vocational training, there is an urgent need to understand the domains of National and Provincial entities in light of this unambiguous constitutional position. Accordingly, federal and provincial domains need to be bifurcated as under.

- *Federal domain covers policy formulation, management of National Vocational Qualifications Framework (NVQF), national competency standards setting, quality assurance, licensing and accreditation, certification and addressing capacity gaps in provinces for skill development, and;*
- *The provincial sphere should encompass coordination with federal apex body in implementation of policy, national competency standards setting and implementation, and compliance with Quality Assurance (QA) system.*

¹ Oliver, D. 2010, *Complexity in Vocational Education and Training Governance*, Research in Comparative and International Education, Vol, 5, No. 3.

At the Federal Level and under the overarching administrative control of National Vocational and Technical Training Commission (NAVTTTC), the following three key functional roles are proposed:-

- *National Skills Development for strategic planning, standards setting and quality assurance;*
- *Management of National Skills Fund for overall facilitation and financing the national skills programs; and*
- *Testing and Certification of Skills for testing and certifications under NVQF as a system of TVET quality assurance across the country and its international equivalence.*

2. Funding

Along with the governance issues, TVET sector suffers from abysmally low investment. Years of neglect has left the sector in dire need of urgent and immediate investment for the two-fold requirements of enhancing the capacity and quality of TVET system in Pakistan. However, the limited financial space presently available with the government entails that funds required for meeting the overall objectives of revamping TVET sector and ensuring “Skills for All” initiative is generated from multiple sources, which include:

- a. Government Funding on the pattern prevalent in most of the countries and in view of the absence of significant contribution from private sector. For targeted and result-oriented intervention in the sector, it is proposed that national funding allocation should specifically contain a budget line item dedicated for TVET, separate from formal education;
- b. Donor Funding to ease burden on governmental allocation;
- c. Industry engagement: through promotion of Apprenticeship Training under the amended Apprenticeship laws:
 - *Voluntary or incentive-based financing (Tax relief or a tax credit; government-industry partnerships, CSRs and;*
 - *Non-voluntary contributions such as obligatory levy (albeit with due caution at an appropriate stage).*
- d. Paid Technical Training: through gradual inclusion of high-end/high-tech technologies in TVET sector which could attract parents/students towards paid courses; and
- e. Diversion of Funds from other Welfare/Charitable/Poverty Funds which also specifically target mass welfare and poverty alleviation like Workers Welfare Fund (WWF), Benazir Income Support Programme (BISP), Pakistan Baitul Maal etc.,

3. Capacity Enhancement

There are an estimated 1.8² million new labour market entrants each year from the formal schooling system. Add to that an approximately 4.4 million youth who are not captured in the formal schooling, but nevertheless need to be trained if the nation is to fully exploit the

² Source: NAVTTTC, National Skills Information System (NSIS)

demographic dividend. Therefore, additional skills development capacity for 5 million trainees is immediately required even if we preclude youth entering into other avenues of tertiary education. To cater for this youth bulge there are only an estimated 437,000 training places available in 3,740 training institutes with 18,207 trained teachers in the formal TVET sector. If the entire cohort of 5 million youth were to be provided skills training based on present methodology, it would require at least 45,000 further training institutes and 200,000 more TVET teachers to be inducted into the system. Keeping in view the urgency of the requirement and the financial constraints, following initiatives are recommended.

A. Optimum Utilization of Existing Facilities

TVET sector capacity enhancement is both cost-intensive and time-consuming. Therefore, the Task Force recommends the following steps to optimize output from the existing facilities.

- a. Broadening the Scope of Targeted Skill Development Programmes*
- b. Running Short Term – Double Shift Training Programmes*
- c. Enhancing Role of Private Schooling Systems in TVET sector*
- d. Engaging Universities into TVET System for High-end Technologies*
- e. Implementation of Apprenticeship Laws across the country*
- f. Implementing the System of Recognition of Prior Learning (RPL)*
- g. Introducing Distance/ Online Learning Systems for Freelancing etc.*
- h. Exploring Public Private Partnerships for Training Opportunities*
- i. Setting-up of vocational workshops / institutes in Madaris*

The above recommended optimization measures could yield capacity enhancement for approximately one million youth in a relatively short period without expanding TVET infrastructure, subject to availability of additional funding (see Table 4 for cost estimates).

B. Capacity Enhancement

In the long run, however, capacity enhancement of the TVET infrastructure is inevitable considering the size of our youth population. Existing infrastructure is both insufficient (in terms of capacity) and incapable (in terms of quality) for adequately responding to challenges of greater youth employment, increased industrial productivity and foreign exchange maximization. The following is recommended for capacity enhancement.

- a. Establishing TVET Fund to provide a permanent source of financing for TVET sector development.*
- b. Exploring possibilities for Public Private Partnerships to set up Industry based TVET Institutes which could be jointly operated/managed by industry and government*
- c. Setting-up of vocational workshops / institutes in Madaris*
- d. Establishing TVET institutes for High-end technologies as part of preparation for CPEC, International Market and most importantly, for the Industry 4.0 Revolution.*

4. Quality Assurance

Coupled with its insufficient capacity, TVET sector in Pakistan is also plagued with low quality of training. This not only tarnishes the sector's image but also fails to train youth

commensurate to the requirements of national and international job markets. As a result, national productivity remains low compared to our competitors and economic growth is constrained. Following measures are proposed to raise the quality of TVET in Pakistan.

- i. Designate centers of excellence to showcase best international practices*
- ii. Make maximum use of latest technological advancements in the TVET sector*
- iii. Upgrade existing training facilities in TVET institutes*
- iv. Introduce and implement standardized curriculum development and periodic review*
- v. Conduct Human Resource Development of existing TVET Practitioners*
- vi. Establish International Linkages to uplift National TVET System*
- vii. Enforce NVQF across Pakistan for Standardization and Quality Enhancement*
- viii. Ensure Planning and implementation of TVET licensing system by 2023*
- ix. Promote Entrepreneurial Skills*
- x. Improve Validity and Relevance of Assessment and Certification*
- xi. Establish Standardized TVET Monitoring and Evaluation Framework*

5. Access and Equity

In Pakistan, the reported rate of women's participation in the labour force is very low (24.3%) especially when compared with other countries of the region. In order to ensure maximum participation of Pakistani female youth in skill training, the task force's recommendations are summarized below.

- 1. Prescribe minimum female quota in government and private sector jobs through legislation.*
- 2. Target enhancing share of female students in the TVET institutions gradually from 10% to 30% by 2023.*
- 3. Develop special programs for promoting entrepreneurial courses for women.*
- 4. Remove legislative obstacles which prevent women from seeking foreign employment*
- 5. Develop and implement tailor made courses for women engaged in rural economies such as agriculture and livestock etc.*

In order to harness the full potential of its people to meet national goals, it's imperative that the TVET policy must also ensure equity and inclusivity by addressing the issues of marginalized segments of society such as women, transgender, orphans etc. and ensure their wholesome participate in the skilled labour market.

6. Industry Ownership

In countries like Germany, United Kingdom and Australia, the entire TVET system is owned, managed and propelled by their industry. This happens due to their realization of skilled workers as the most important instruments of increased productivity, industrial efficiency and quality assurance of their products. In Pakistan, the role of industry is a far cry from such essential ownership of TVET sector. To enhance industry engagement in TVET sector development, the Task Force suggests measures as:-

- a. Immediate implementation and provincial adoption of Apprenticeship Act, 2018*
- b. Increasing industry representation on Boards of TVET authorities at all levels.*

- c. *Increasing and systemizing employer/private sector led TVET Institute Management Committees (IMCs) and District Boards of Management.*
- d. *Engaging selected Business Industry Associations (BIAs) for TVET awareness.*
- e. *Implement National Vocational Qualification Framework (NVQF) and institute Competency Based Training in industry owned TVET institutes.*
- f. *Establishing industry-led Sector Skills Councils all key economic sectors.*

7. Skill Development for International Market

Foreign remittances have remained a major mainstay of Pakistan's economy. Such heavy reliance on foreign remittances calls for high priority to be accorded to equipping skilled workforce to meet the challenges of international market. Unfortunately the situation is in complete contrast. Consequently, majority of Pakistani youth work in the international markets as unskilled workers and earn less than a third of what a skilled worker earns. Moreover, due to the increasing demand for high skilled workforce at the major destinations of our migrant workforce, we are increasingly losing space to our international competitors. In order to produce skilled workforce in conformity with international standard, following recommendations are made: -

- i. *Strengthen National Skills Information Systems for job placements and career counseling*
- ii. *Establish country of destination specific TVET institutes.*
- iii. *Assign quantifiable targets to overseas Pakistani missions and commercial attaches for Pakistani workforce in the overseas job market.*
- iv. *Collaborate with regional countries for a mutually recognized TVET qualification framework.*
- v. *Establish certification regime for workforce seeking overseas employment*

8. TVET Communication Plan

Skills sector in Pakistan is faced with the serious challenge of perennially remaining low on youth priority. In this, however, Pakistan is not alone: most of the emerging markets suffer similar image issues. In Pakistan, a number of negative perceptions are associated with opting for TVET as career choice such as: TVET is choice of last resort for academically weak students and weaker segments of society who cannot afford formal education; skilled youth are not considered educated; lower social status is ascribed to skilled workers, there are higher insecurity of tenures and wages are not only lower and also intermittent. Additionally, in the informal sector, the viability of formal skill training is often questioned when skills can be learnt from an *ustaad* in more informal ways.

Social image of skills cannot be elevated unless political and economic factors are fixed. Issues of governance, quality, industry engagement and funding must be addressed to upscale TVET in youth career choices. Additionally, clear education pathways need to be made available to skilled workers to continuously upgrade their skills. Accordingly, a two-pronged approach for image building of the sector is suggested.

In the short run, TVET authorities must kick start 'targeted' campaigns to build awareness among youth and their families about the existence and benefits of TVET education. Similarly, female-oriented advocacy campaigns must also be planned to enroll them into

TVET programs. As Medium-to-Long term Image Building measures, it is proposed that awareness about TVET as career choice should be made part of the school curricula. Similarly, developing higher educational pathways for TVET education, introduction of opportunities for higher learning in TVET sector, its equivalence with the formal education through an elaborate 'equivalence' mechanism and most importantly, making TVET training component mandatory for all companies participating in the bidding for Government Tenders, are other measures for TVET Image building.

Detailed analyses of the Task Force, looking into the prevailing circumstances, identifying gaps, and the recommendations for filling the identified gaps is elaborated upon in detail in the report below.

Action Plan: "Skills for All"

Objectives	Recommendations	Institution Responsible	Targets/Outcomes
Intervention 1: Improving TVET Governance & Funding			
1.0	Delineating Roles for Federal and Provincial Governments	<ul style="list-style-type: none"> • Clarifying Constitutional provisions related to TVET Sector • Clear Role assignment in light of Constitutional provisions • Defining Mandates and preventing Replications 	Federal/ Provincial Governments <ul style="list-style-type: none"> • Remove fragmentation and duplication • Reduce systemic losses/improve efficiency • Greater focus and result-orientation • Optimum utilization of scarce resources
1.1	Defining Functional Roles of Federal Government	NAVTTC, at the Federal Level should perform the following functions:- <ul style="list-style-type: none"> • <i>National Skills Development</i> • <i>Management of National Skills Fund</i> • <i>Testing and Certification of Skills</i> 	Federal Governments <ul style="list-style-type: none"> • Standardization and quality assurance • Filling provincial capacity gaps • Implementation of National level projects
Intervention 2: Multi-Source Funding			
2.0	Exploring broader financial space for TVET funding	Following Funding options have to be explored <ul style="list-style-type: none"> • <i>Government Funding</i> 	Federal and Provincial Governments, Private sector, <ul style="list-style-type: none"> • Ensure constant stream of funds for financing/implementing TVET projects

		<ul style="list-style-type: none"> • <i>Donor Funding</i> • <i>Industry engagement</i> • <i>Apprenticeship Training</i> • <i>Voluntary or incentive-based financing</i> • <i>Paid Technical Training</i> • <i>Diversion of Funds from other Welfare/Charitable/Poverty Funds</i> 	Development Partners	<ul style="list-style-type: none"> • Ease pressure on Public sector which has limited financial resources • Enlist greater commitment for TVET sector from all stakeholders • Broaden financial space for TVET sector to ensure broad-based intervention
Intervention 3: Enhancing TVET Capacity				
3.0	Optimum Utilization of Existing Resources	<ul style="list-style-type: none"> • <i>Broadening Scope of Targeted Skill Development Programmes</i> • <i>Running Short Term – Double Shift Training Programmes</i> • <i>Enhancing Role of Private Schooling Systems in TVET sector</i> • <i>Engaging Universities into TVET System for High-end Technologies</i> • <i>Implementation of Apprenticeship Laws</i> • <i>Implementing the System of Recognition of Prior Learning (RPL)</i> • <i>Introducing Distance/ Online Learning Systems for Freelancing etc.</i> • <i>Exploring Public Private Partnerships for Training Opportunities</i> • <i>Setting-up of vocational workshops / institutes in Madaris</i> 	Federal, Provincial Government, Private Sector, Development Partners	<ul style="list-style-type: none"> • Ensuring maximum output from existing resources • Plugging demand and supply gap in the short-to-medium term • Fulfill immediate skill requirements of domestic/international job markets/CPEC

3.1	TVET Sector Capacity Enhancement	<ul style="list-style-type: none"> • <i>Establishing TVET Fund to provide a permanent source of financing for TVET sector development.</i> • <i>Exploring Possibilities for Public Private Partnerships to set up Industry based TVET Institutes which could be jointly operated/managed by industry and government</i> • <i>Setting-up of vocational workshops / institutes in Madaris</i> • <i>Establishing TVET institutes for High-end technologies as part of preparation for CPEC, International Market and most importantly, for the Industry 4.0 Revolution</i> 	Federal, Provincial Government, Private Sector, Development Partners	<ul style="list-style-type: none"> • Increase TVET capacity and bring it in line with market demand • Ensure broad-based intervention for capacity enhancement to lessen burden on public sector expenditure • Channelize TVET resource in the right direction • Create capacity in Pakistani TVET sector to produce high-skilled workforce
Intervention 4: Improving Quality				
4.0	High quality TVET output for increased youth employability, industrial productivity and economic growth	<ul style="list-style-type: none"> • <i>Establishing centres of excellence to showcase best international practices</i> • <i>Upgrade existing training facilities in TVET institutes</i> • <i>Introduce and implement standardized curriculum development/ periodic review</i> • <i>Human Resource Development</i> • <i>Establish International Linkages to uplift National TVET System</i> • <i>Enforce NVQF across Pakistan for Standardization and Quality Enhancement</i> • <i>Plan/implement TVET licensing system</i> • <i>Promote Entrepreneurial culture</i> • <i>Improve Validity/Relevance of Assessment and Certification</i> 	NAVTTC, TVETAs, QABs, Development Partners	<ul style="list-style-type: none"> • Producing skills commensurate with local and international market requirements, with special focus on CPEC • Using TVET as a tool for increasing industrial efficiency and productivity • Ensuring higher wages for Pakistani workforce in job markets • Expanding and diversifying skill sets for increasing both employability and its sustainability

		<ul style="list-style-type: none"> • <i>Establish Standardized TVET M&E Framework</i> 		
Intervention 5: Access and Equity				
5.0	Maximizing female participation in TVET sector	<ul style="list-style-type: none"> • <i>Prescribe minimum female quota in government and private sector jobs through legislation.</i> • <i>Target enhancing share of female students in the TVET institutions gradually from 10% to 30% by 2023.</i> • <i>Develop special programs for promoting and training entrepreneurial courses for women as in Pakistan.</i> • <i>Remove legislative obstacles which prevent women from seeking foreign employment</i> • <i>Develop and implement tailor made courses for women engaged in rural economies such as agriculture and live stock etc.</i> 	All Stakeholders in TVET sector in Pakistan	<ul style="list-style-type: none"> • Engaging female in national productivity enhancement • Increasing female employability as factor of greater empowerment, reduced deprivation and higher socio-economic prosperity • Using TVET to formalize female workforce participation in labour market
Intervention 6: Increasing Industry Ownership				
6.0	Increase industry ownership for capacity enhancement, quality assurance and greater employability	<ul style="list-style-type: none"> • <i>Immediate implementation and provincial adoption of Apprenticeship Act, 2018</i> • <i>Increasing industry representation on Boards of TVET authorities at all levels.</i> • <i>Increasing and systemizing employer/private sector led TVET Institute Management Committees (IMCs) and District Boards of Management.</i> • <i>Engaging selected Business Industry Associations (BIAs) for TVET awareness.</i> • <i>National Vocational Qualification Framework (NVQF) and</i> 	NAVTTTC, TEVTAs and Private Sector	<ul style="list-style-type: none"> • Making Industry the major stakeholder in TVET promotion as the end-user of TVET output • Transitioning towards demand driven TVET output in line with industry requirement • Build greater TVET-Industry linkages from youth employability • Ease public sector burden of TVET sector

		<p><i>institute Competency Based Training in industry owned TVET institutes.</i></p> <ul style="list-style-type: none"> • <i>Establishing industry-led Sector Skills Councils in all key economic sectors.</i> 		
Intervention 7: Enhancing Workforce Export				
7.0	<ul style="list-style-type: none"> • Enhancing labour force for increased remittances • Shifting to export of high-skilled workforce 	<ul style="list-style-type: none"> • <i>Strengthen National Skills Information Systems for job placements and career counseling</i> • <i>Establish country of destination specific TVET institutes.</i> • <i>Assign quantifiable targets to overseas Pakistani missions and commercial attaches for Pakistani workforce in the overseas job market.</i> • <i>Collaborate with regional countries for a mutually recognized TVET qualification framework.</i> 	NAVTTTC, TEVTAs and Ministry of Overseas/HRD	<ul style="list-style-type: none"> • Utilize employment opportunities in international market • Secure/expand share in international job market • Shift the Pakistan's profile from unskilled/low-skilled exporting workforce to high-skilled workforce country • Maximize foreign remittances
Intervention 8: Communication Plan				
8.0	Enhance TVET Image/awareness for greater youth attraction	<p><u>Short Term</u></p> <ul style="list-style-type: none"> • Targeted campaigns to build awareness among youth and their families about the existence and benefits of TVET education. • Female-oriented advocacy campaigns <p><u>Medium-to-Long term</u></p> <ul style="list-style-type: none"> • Awareness about TVET as career choice should be made part of the school curricula. 	NAVTTTC, TEVTAs, active Private sector involvement and Development Partners	<ul style="list-style-type: none"> • Bringing TVET high on youth career choice • Enhancing the quality of TVET output by bringing talented youth to the sector • Decreasing youth reliance on, and employment from formal education • Decrease pressure on public sector employment

		<ul style="list-style-type: none">• Developing higher educational pathways for TVET education• Introduction of opportunities for higher learning in TVET sector/equivalence with the formal education• Making TVET training component mandatory for all companies participating in bidding for Government Tenders.		
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TVET and Youth Bulge in Pakistan: Issues, Challenges and Recommendations

A. Situation Analysis

Pakistan is blessed with the youthful exuberance of more than 120 million people below 18 years of age. The demographic dividend yielded by this youth bulge can be both a boon and bane for the country, depending on the manner in which we respond to it. Through positive engagement and enabling environment, youth can be converted into the most potent tool for changing the destiny of the country. Conversely, frustration and unexploited energies of idle youth could make them easy prey for the anti-state and anti-social elements.

Technical and Vocational Education and Training (TVET) offers the shortest, swiftest and cheapest pathway to youth engagement through gainful livelihood opportunities. Therefore, for countries with huge youth bulge like ours, TVET offers the most beneficial instrument for harnessing the potential their youth population and channelizing it into national socio-economic development. Unfortunately, Pakistan's TVET sector is marked by both fragmentation and overlaps, emanating from the two primary factors: lack of clearly defined functional domains for various stakeholders and absence of TVET coordination mechanism to channelize scarce resources in the right direction. It is important to avoid the undesirable consequences of this complexity, such as systemic inefficiencies stemming from increased transaction costs and high training expenditures, slow response to client needs, hindrance in implementation of reforms, and increased structural impediments³. This has led to both fragmentation and replication resulting in systemic inefficiencies and resource wastage.

Despite the existence of clear and unequivocal constitutional provisions about the mandate of federal and provincial domains in TVET sector, considerable confusion exists as to the roles and responsibilities of various institutions, particularly in the backdrop of 18th Constitutional Amendment. It may be clarified that no provision related to technical and

³ Oliver, D. 2010, *Complexity in Vocational Education and Training Governance*, Research in Comparative and International Education, Vol, 5, No. 3.

vocational training existed in the (defunct) Concurrent Legislative List (CLL). Accordingly, by transferring subjects in CLL to Provinces under the 18th constitutional amendment, nothing has been transferred from Federal to Provincial domain in terms of Technical and Vocational Training. On the other hand, the existing Article 37(c),(f); FLL Part I, Entry 16, 57; FLL Part II, entry 6, 7, 12 & 17 makes Technical and Vocational Training an essentially Federal subject. To remove fragmentations and overlaps, this constitutional position needs not only to be highlighted for all stakeholders, but effective steps are required to be taken to stop anything being done in contravention of these provisions.

In the current opaque scenario, some of the functions are either not being performed institutionally, others are being performed by too many players leading to friction and chaos. On the other hand, some entities are performing multiple functions under one umbrella, creating conflict of interest. There is also lack of clarity as to the purview of federal and provincial control and coordination in respect of different elements of the TVET system. For example, P-TEVTA licenses, trains and tests & certifies. Similarly, NAVTTC, TEVTAs and PVTC set curricula and standards. The most detrimental consequence of this fragmentation and overlap is that development partners are working in the TVET sector in virtual disarray and their contributions are not producing a wholesome improvement in the sector. Another related outcome of this confusion is that TVET sector remains low on Development Partners' priority, despite realization of the importance of positive engagement of Pakistani youth due to lack of direction and ambiguity around the roles and functions of different entities.

Budgetary allocation for a sector is indicative of the priority it acquires with the Policy makers. In the face of our huge youth population and large gap in the labour force supply and demand in both national and international market, the existing level of funding is abysmally low. At the same time, the low financial space available with the government under the prevailing circumstances also warrants consideration. Taking account of this difficult situation, the Task Force is of the view that government needs to develop innovative funding solutions for the uplift of the TVET sector in Pakistan.

In Pakistan, technical and vocational training primarily takes place in time-bound, theory-based, teacher-led classroom environments, in virtual isolation from industry. For

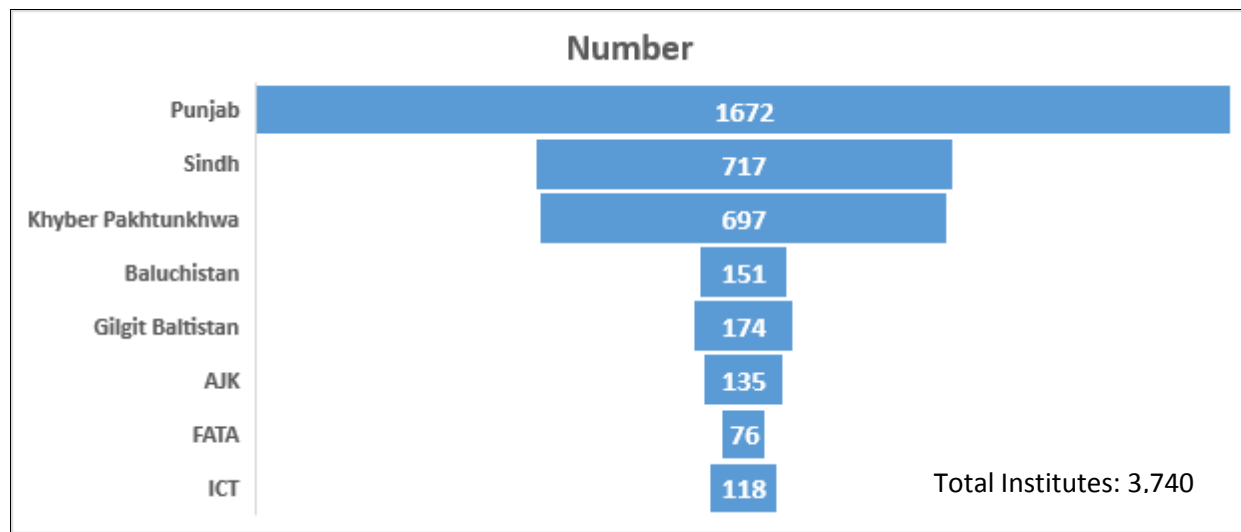
people bogged down by exigencies of work, living in remote regions, or bound by other responsibilities, access to skills development opportunities is restricted. In addition, rigid time stipulations in connection with participation in courses are proving to be discouraging factor. Consequently, capacity continues to be constrained and fails to adequately respond to the demands of the labour market.

This lack of capacity manifests itself through core segments of the sector, some of which are enumerated below:

a. Shortage of TVET Institutes

The total number of Technical Education and Vocational Training (TVET) institutes in Pakistan is 3,740 both in public and private sector. This is grossly inadequate to respond effectively to the needs both youth as well as industry.

Figure 1: TVET Institutes Province Wise¹



¹ National Skills Information System (NSIS) survey of 2016-17.

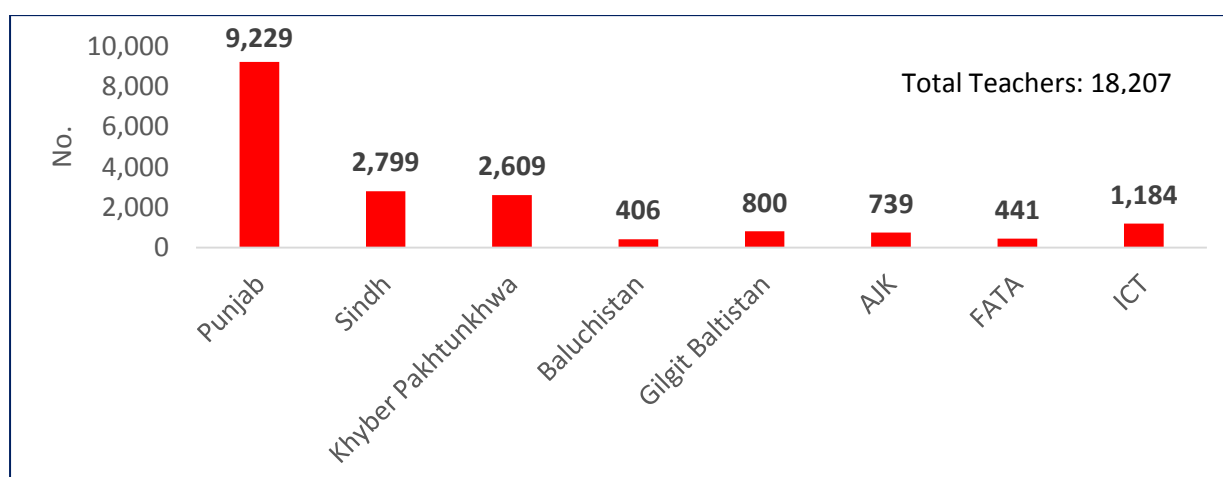
Table 1: Gender-wise Institutes

Province/Region	Male	Female	Co-Education
Punjab	880	517	275
Sindh	359	164	194
Khyber Pakhtunkhwa	453	203	41
Baluchistan	95	41	15
Gilgit Baltistan	54	93	27
AJK	71	47	17
FATA	56	20	0
ICT	67	38	13
Total Institutes	2035	1123	582

b. Teachers in TVET Sector

Total number of TVET teachers in both the technical and vocational streams is 18,207 according to NAVTTC survey. The province-wise breakup is shown in the following graph:

Figure 2: Province wise Teachers



c. Enrollment in TVET Institutes

The total enrollment in TVET institutes is around 433,237. Punjab dominates with an enrollment of 53%, followed by Sindh with 19.8%, Khyber Pakhtunkhwa with 14.3% and Baluchistan with 4.11%.

Figure 3: Province wise Enrollment

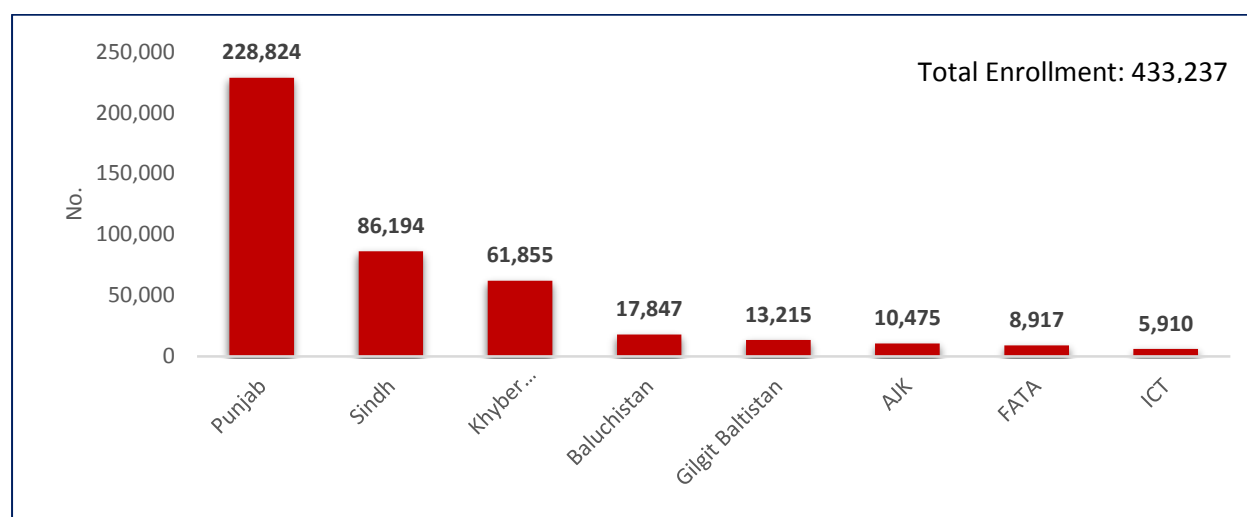


Table 2: Gender-wise Enrollment

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

The prevailing circumstances are reflective of a disproportionately large supply and demand gap within the TVET sector of Pakistan, both in terms of the size of our youth population and skilled workforce requirement of industry. This gap will widen further with the demand coming from the CPEC project, unless urgent efforts are made for its bridging.

The primary factor responsible for this resource gap is years of neglect of TVET sector coupled with the mindset that treated it as a by-product of mainstream education sector. Major challenge, confronting the country is how to enhance capacity and augment access of the TVET sector to enable it to respond effectively to the tasks of youth employability, increasing productivity and stimulating international competitiveness of Pakistani workforce.

In addition to the capacity gap, years of neglect of TEVT sector in Pakistan has rendered the quality of technical and vocational training grossly incapacitated in reacting to the latest skill demands as induced by technological advancement in both national and international market settings. TVET institutes are not only deficient but are also conspicuously outdated. Apart from their paucity, TVET institutes in their current form are ill-equipped to develop skilled workforce for the national and international job markets. We are the least prepared to produce skilled workforce commensurate with the demands of CPEC projects!

The absence of quality TVET training in Pakistan is adversely impacting both youth employability and the national economy in a variety of ways. First, low standards of skills acquired by youth negatively affect industrial productivity which leads to lower gross national product. Second, with outdated training, the capacity of youth to find employment and earn a decent living remains a distant dream. A major indication is the employment of Pakistani youth in the overseas job markets as unskilled or semi-skilled workers, with extremely low wages. Third, low quality of TVET training seriously tarnishes the image of skill training in the country, which makes it the least attractive for youth.

Another long standing sore point hampering skill development in Pakistan is the *absence of active, productive and meaningful involvement of Industry*. Active involvement of industry in design, delivery and placement of graduates benefits not only in provision of employable skills to the youth, but it also boosts industry to be more productive, competitive and efficient. A demand-driven TVET system has a telling effect on promoting export of skilled workforce to the international job markets.

In South Asian context, countries such as India, Sri Lanka, Bangladesh and Nepal have made significant strides in terms of revamping their respective TVET systems with

enhanced focus on industry engagement and resultantly have moved from the old traditional supply-led system to a demand-oriented Competency Based Training (CBT) mode. The demand-driven system ensures systematic and institutional engagement of industry in the overall TVET system through varied platforms.

In Pakistan, there is a greater realisation within the industry that dearth of skilled and qualified workforce is instrumental in limiting the productivity and growth of industry. However, except the ongoing piloting of CBT through recently introduced National Vocational Qualifications Framework (NVQF) and industry-led initiatives, the training delivery is marked by overwhelmingly supply-driven approach with negligible involvement of formal private sector.

Employers often are blamed for not investing sufficiently into vocational training despite engaging significant numbers of employees that benefit from in-company and on the job training. It is however, true that the lack of response to supply-driven training of the public sector hampers a real return of public investment, as large numbers of graduates find themselves in circumstances of unemployment or are rejected as being unemployable. For employers, it is important to identify and acknowledge the skills and knowledge that employees have.

There is a growing realisation amongst public and private sector practitioners that partnership between industry and institution is beneficial in terms of employability, enhanced workplace productivity and enterprise competitiveness with overall socio-economic development. However, a number of challenges inhibit the emergence of such mutually rewarding, sustainable partnerships:-

- *Poor quality of training and infrastructure of public institutes*
- *Lack of autonomy to respond to the needs of industry and keep pace with changing requirements of labour markets*
- *Lack of awareness on part of companies and private sector organizations regarding TEVT programmes and initiatives*
- *Absence of favorable framework enabling industry to participate in the planning, management and implementation of TEVT initiatives*
- *No incentives for the industry for training of youth and enterprise-based training*

In terms of its image, skills sector in Pakistan has faced a serious challenge in attracting students for decades. In this, however, Pakistan is not alone: most emerging markets suffer similar image issues in attracting youth into the skills sector. Based on India's National Sample Survey Office, it is estimated that only 4.7 percent of India's total workforce has undergone formal skill training, compared with 52 percent in the USA, 68 percent in the UK, 75 percent in Germany, 80 percent in Japan and 96 percent in South Korea.

A number of negative perceptions are associated with technical and vocational training as career choice for youth such as; technical training is for academically weak students and weaker segments of society and the poor who cannot afford private education; a skill worker is always considered ignorant and uneducated; lower social status is ascribed to skilled work and wages in the sector are not only lower but also intermittent. . In the informal sector, the viability of formal skill training is often questioned when skills can be learnt from an *ustaad* in more informal ways. Cumulative effect of all these factors translates into the fact that TVET remains a career choice of lowest priority with the Pakistani youth.

Foreign Remittances have remained one of the main planks of Pakistan's economy and steady flow of highly skilled Pakistani workforce is essential not only for the sustainability but for optimizing the benefits of this precious stream of foreign exchange for the country. Accruing benefits to Pakistani youth from gainful employment in the international market is another pressing reason for focusing on imparting appropriate skills to youth for international labour market. Given the importance of the foreign remittances for the country's economy, it is essential to establish a robust TVET institutional mechanism which is not only capable of *producing skilled workforce in accordance with international standards*, but is also adequately resilient and adept to constantly update itself in consonance with the demands of international job market.

We need to be cognizant of the fact that we are increasingly losing job markets at the major destination for our overseas workforce. The situation has exacerbated by the retrenchment of job markets at the Gulf countries (GCC), which calls for immediate arrangements for alternate international workforce destinations, to forestall the possibility of imminent retrenchment of foreign remittances for the country. Majority of Pakistani youth work in the international markets as unskilled workers and earn less than a third of what a

skilled worker earns. Moreover, due to the increasing demand for high skilled workforce in the international market, we are rapidly trailing behind our international competitors.

Table 3- Comparative Statistics of Workforce and Remittances

Country	Emigrant Workers	Remittances (USD in Billion)					Average Remittances Per Worker	Remittance Compared to Philippines (%)	Female Participation (%)
		OECD	Non-OECD Asia	GCC	Total (2016)	2017			
Philippines	5,970,193	25.1	0.16	6.97	31.15	32.81	5495.26	100.00	65
India	16,444,830	3.38	0.81	55.6	62.7	68.97	4193.91	76.32	16
Sri Lanka	1,728,372	1.03	0.34	5.40	7.26	7.19	4159.91	75.70	35
Pakistan	6,098,502	3.85	8.5	5.06	19.76	19.67	3224.50	58.68	1
Bangladesh	7,796,958	0.57	10.2	3.15	13.54	13.47	1727.53	31.44	37

According to the statistics available with Bureau of Emigration and Overseas Employment, Ministry of OP&HRD and NAVTTC-NSIS, 98.3% Pakistani workforce is annually proceeding abroad to six countries, KSA, UAE, Oman, Qatar, Malaysia and Bahrain. A significant decline has been noted in the number of Pakistani migrant workforce to these countries. As of Oct, 2018, only 244,504 workers could proceed abroad, compared to 496,286 in 2017, 839,353 in 2016, 946,571 in 2015 and 752,466 during 2014. This narrow base of our migrant workforce not only makes our foreign remittances extremely volatile but, at the same time, renders our workforce highly susceptible to the internal policies and political conditions of the host countries.

In Pakistan, the reported rate of *women's participation in the labour force* is significantly low, at 24.3%, especially compared with other countries of the region such as Philippines, Malaysia and Indonesia, where the female labour force participation rates account for 50.2%, 46.1% and 51%, of the total workforce, respectively. There are a number of barriers that inhibit women participation, which include:

- *Enduring social and cultural attitudes about women's roles and suitable occupations for them, employers' attitudes, limited mobility of women and girls,*
- *Women lack of access to information, career guidance*
- *Absence of demand driven women skills development opportunities.*

Almost exclusive focus on hardcore skills such as welding, plumbing, carpentry, masonry, heavy machinery operators, electricians, etc; and neglect of skills in the fields like office management and automation, hospitality, tourism, restaurant management, childcare etc., has severely diminished females interest. At the same time, hardly any effort has been made to surmount the existing barriers (cultural, legal, and social) and disseminate awareness among the female youth about opportunities available within the sector.

Another dimension of the problem is the fact that Pakistani women are hugely under-represented in the international job market. While our competitors in the international job markets including India, Philippines, Bangladesh, Sri Lanka have made substantial headway in acquiring a permanent foothold in terms of migrant females' workforce, Pakistan has failed to come up with any policy response to capture the emerging opportunities, keeping within the religious and cultural context of its female population.

Finally, unfolding of CPEC and allied projects are also expected to open up considerable employment opportunities for female skilled workforce, particularly in fields related to IT, hospitality and paramedics. Accordingly, there is an urgent and immediate need to equip our female youth with the appropriate skills thus enabling them to benefit from the opportunities in their surrounding and contributing towards socio-economic development of the country.

B. The Challenges

Learning from the experiences of countries with highly productive TVET sectors, it can be safely averred that an effective, coordinated, efficient and fully functioning TVET system must comprises the following essential components:

1. *Strategic Planning and Clearly Assigned Functions*
2. *Sufficient Funding*
3. *Standards Setting and Quality Assurance*
4. *Updated Curriculum Design & Delivery in accordance with market needs*
5. *Effective Monitoring & Evaluations*
6. *Obligatory Licensing & Accreditation Regimes*
7. *Elaborate Testing & Certification system*
8. *Viable and Workable Training Delivery mechanism*
9. *Industry linkage, on-the-Job Training & Placements*
10. *Career Progressions and higher learning opportunities through effective linkages with formal education system*

Based on these key requirements and keeping in view the factors identified through our situational analyses, the Task Force has identified eight (08) key areas where interventions are required urgently for Pakistan to have a vibrant, responsive and productive TVET system. These eight areas, in the order of their priority are mentioned below:

1. **Governance – Roles clearly defined**
2. **Multi-Source Funding**
3. **Capacity Enhancement**
4. **Improving Quality Assurance**
5. **Greater Access and Equity**
6. **Increased Industry engagement**
7. **Focused Skill Development for International Market**
8. **Viable Communication Plan for TVET Image Building**

The Task Force recommendations in these eight crosscutting intervention areas are outlined below.

C. Recommendations & Way Forward

1) TVET Sector Governance

The Task Force believes that Governance of TVET system in Pakistan should constitute clearly defined roles, functions and responsibilities for all the stakeholders. There should be precise lucidity as to who will be performing which functions. Clear role defining in terms of mandates and functions will ensure optimization of resource allocation and reduce systemic losses resulting from fragmentations and overlaps. Towards this end, the following concrete steps are proposed to be taken.

Clarity of Mandate between the Federation and Provinces

At the governmental level, Federal and Provincial governments are the two primary players. It is recommended that the federal government and provincial governments should work out a greater consensus around the following dispensation.

Table 3: Mandate between Federal and Provinces

Areas	Federal	Provincial
Regulatory	<ul style="list-style-type: none"> • National curricula standards with input from all stakeholders. • Quality Assurance Standards for delivery • Licensing & Accreditation Standards • Testing & Certification Standards 	<ul style="list-style-type: none"> • Provide input into national standards and share authorization of those standards. • Apply standards in jurisdictions using institutions with delegated regulatory authority. • Collaborate with national body to audit compliance and performance in line with Quality Assurance standards
Policy	<ul style="list-style-type: none"> • Identify national priorities supporting the economic and social landscape of the country • Policy determination, guidance and coordination with provinces to achieve national and provincial goals. 	<ul style="list-style-type: none"> • Responsible for jurisdiction-based policy, plus application of national policy within the economic context and priorities of provinces
Funding	<ul style="list-style-type: none"> • Maintain Skill Development fund for meeting training needs • Advocacy for increased budgetary allocations • Develop ways to raise non-public funding for skills • Need-based channelizing of donor funding 	<ul style="list-style-type: none"> • Determine budgetary requirements to meet national and provincial skills goals • Fund regulatory bodies and publicly owned TVET organizations (e.g. institutes) within provinces

Roles and Responsibilities across Entities at the Federal Level

At the Federal level, the Task Force recommends that three essential functions may be performed *vis National Regulator for Skill Development, Management of Skill Development Fund and Operating as Federal Testing and certification Agency*. To avoid the cumbersome and time-consuming process of undue institutional rehashing, it is proposed that these functions may be performed under the overarching administrative and functional control of National Vocational and Technical Training Commission (NAVTTTC), which is the mandated apex organization at the Federal level for TVET Policy making, Standardization, Regulation and coordination. NAVTTTC may perform the three functions-

a) National Skills Regulator as an apex body responsible for strategic planning, standards setting and quality assurance. It should also have its provincial chapters and should be mandated to perform the following functions.

- *Set top-down objectives & targets for national programs*
- *Address provincial gaps in TVET delivery*
- *Set funding criteria and budgets*
- *Set academic standards by trade*
- *Develop and monitor quality assurance frameworks and protocols.*
- *Promote 'skills' brand*

b) Management of National Skills Fund as the apex national funding body responsible for overall funding of the national skills programs. It should:-

- *Develop funding guidelines for national and provincial programs*
- *Raise funding from public/ private and donors in Pakistan & globally*
- *Develop financial products for student funding & businesses*
- *Developing financial products for funding training facilities*
- *Allocate funding across the sector/ TSPs for national programs*

Provinces shall also be entitled to set up their own funding mechanisms under the funding guidelines of the national fund.

c) Pakistan Skills Testing Agency as the apex national body for testing and certifications. Testing and certifications can be delivered through public and

private entities across the country under the guidelines of the national testing agency.

- *Develop assessment standards, criteria tools*
- *Train and certify assessors*
- *Conduct assessments*
- *Issue certificates*
- *Develop certificate verification framework for employers*

2) Multi-Source Funding

Total public funding for TVET sector, both federal and provincial funding included, is not more than Rs. 20 Billion annually, which is grossly insufficient to meet the skill technical training needs of the country's huge youth population on one hand and industrial requirements on the other. The sector is, therefore, in dire need of enhanced public sector funding. Of still more pressing importance is the proper channeling of different sources of funding coming into the sector. With government's financial resource constraint, sources of funding for the sector not only need to be diversified but more importantly, all sources of funding should be properly streamlined to ensure optimization and minimize systemic losses resulting from undue duplication. This in view, the Task Force has explored the following funding mechanism for TVET financing in the country.

a) Government funding

Public sector funding is the principal driver of TVET financing, which is invariably the case in most countries. The current level of public sector funding needs to be enhanced, not only to provide more training opportunities for youth and to enhance the quality of TVET training, but also to demonstrate greater governmental commitment to the sector. Donor funding and private sector always reciprocate the priority accorded to the sector by the government. Increased government commitment in the shape of higher financial allocation will also attract donor funding and private sector contribution for TVET sector. Keeping in view the immediate requirements of the sector as highlighted in this document, government needs to announce a special "TVET Development Package" by allocating a minimum of Rs. 50 Billion for the sector, on urgent basis. This will

showcase government's resolve towards prioritizing the sector and will encourage the donors and private sector to increase their interventions commensurate to the government's commitment.

b) Donor Funding

In addition to multilateral donors including DFID, USAID, European Union and the World Bank and notable bilateral donors comprising Governments of Norway, Germany, Australia; several other international and regional donors have been funding skills development programs in Pakistan. The government should reach out to them in a more objective and coordinated manner to solicit expansion in their support to the skills programs in line with national and provincial priorities. The manner in which Donors are operating in the sector is of special concern. Ideally, all the donors' contributions should be channeled through the Federal Government *via* NAVTTC which is mandated by the Federal Government to pursue international collaboration. However, in practice a number of international organizations are indulging in skill development without any government involvement. There are instances where collaboration are made for training delivery and certification with entities which are not even mandated to do so. In addition to producing such hurdles as replication and lack of standardization, this also provides opportunities to anti-state elements to use TVET development for their nefarious designs. Accordingly, the Task Force proposes that Government should take effective steps to channelize all donors' funding in TVET through the government channels.

As is often the case, donors' contributions follow government commitment in various sector (matching grants). Years of neglect of TVET has resulted in a void, both in terms of quantity and quality, plugging of which needs substantial donors' intervention in addition to the financial allocations from the government. Accordingly, interventions from donors to the tune of at least Rs. 25 to 30 Billion annually could help in producing a palpable change in the TVET sector of the country.

c) Industry engagement

In countries with most successful TVET models; like Germany, UK and Australia, industry is at the forefront of TVET development. Enterprise-based funding is supremely important to enable TVET sector in Pakistan to respond adequately to the challenge of constructively engaging our huge youth population. TVET financing may be sourced from the industry through *voluntary and non-voluntary/compelling approaches*.

Under **voluntary or incentive-based financing**: -

- Companies that provide training or contribute to its financing, benefit from tax relief or a tax credit. In the Philippines, companies can deduct from their taxable income 50% of the expenses incurred on daily allowances paid to apprentices.
- Also, government-industry partnerships may be forged to obtain direct contributions (demand-based or as part of corporate social responsibility efforts) or funds-matching investment agreements.
- Allocations from corporate philanthropic foundations (local and international) are also an option worth tapping into as these organizations have larger budgets parked under corporate social responsibility initiatives.
- Sector Skills Councils are also a key platform for mobilizing funds for skills programs that are critical and relevant to the sector.

Under **non-voluntary approaches**, obligatory levy and levy exemptions may be applied to employers. More than 60 countries around the world use training levy to fund skills development programs. In instances observed globally, 0.5-3% of payroll tax is collected by Finance Ministries and then disbursed to relevant apex bodies, such as sector funds, for reinvestment into skills development.

d) Paid for high-end TVET courses

Additional support may be obtained from *fee-based programmes* that have visible and tangible employment outcomes justifying the price premium. Trainees can be charged a portion of the total training cost in programmes for which employers provide employment commitments and guarantees prior to training. Connecting students to *credit facilities* for entrepreneurship and training is another way to

recoup fees over time as paybacks post-employment within the timeframe agreed between the trainees and lenders.

e) Diversion Of Funds From Other Welfare Oriented Schemes

A number of welfare oriented and poverty-alleviation centric programmes are currently underway under the Federal and Provincial governments, such as Workers Welfare Fund (WWF), Benazir Income Support Programme (BISP), and Pakistan Bait-ul-Maal etc. Funds may be diverted from these programmes for TVET development in view of the close affinity of objectives of TVET with these programmes.

For increasing access of TVET system and providing maximum technical and vocational training opportunities to Pakistani youth, the task force recommends a two-pronged initiative, namely enhancing capacity and improving quality.

3) Enhancing TVET Capacity

Increasing technical and vocational training opportunities demand incrementing TVET system capacity. However, it needs to be realized that capacity enhancement is both time consuming and capital intensive, whereas the challenge of youth employability and increasing industrial productivity demand intervention of more immediate nature. Financial resource constraints also militate against greater intervention towards immediate institutional capacity enhancement. In the given circumstances, the Task Force proposes a two-pronged approach of optimizing existing training opportunities in the short term, and institutional capacity enhancement in the medium to long term.

I. Optimum Utilization of Existing Facilities

It is suggested that more flexible delivery mechanisms be introduced in Pakistan such as modular training system based on Competency Based Training and Assessment (CBT&A) approach. These include introducing part-time and evening-shift programmes and using the premises of existing TVET institutions, including secondary schools, during holidays and after regular working hours. Existing labs and classrooms in general education (school, colleges and universities) can be utilized for imparting training in such fields as health, IT and entrepreneurship etc.

a. Broadening the Scope of Targeted National Skill Development Programmes

Targeted training programmes play the dual role of filling capacity gaps in skill development and at the same time showcasing best international practices in the TVET sector. The scope of such programmes need to widened to train more and more people at least till the time when sufficient capacity is created in the regions to provide quality training to the required number of youth.

b. Short Term – Double Shift Options

In order to provide maximum access to the potential and interested students we should open-up dual enrollment options. If students studying in matriculation want to get admission in TVET institute for technical and vocational training concomitantly, our system should facilitate them to do so. ‘Dual Enrolment’ can only be successful if regulated by the government and a formal relationship established between school learning and TVET. To be effective it will require secondary/tertiary education and TVET frameworks to be integrated. Students should have opportunities to be able to gain credit or opt for TVET modules/programs that can become a part of their formal educational pathway as they progress onwards from matriculation, intermediate and/or graduation.

c. Enhancing Role of Private Schooling Systems

Private “For Profit” school systems may be encouraged to come forward and introduce high-end/ emerging technologies workshops and programs that have better employment prospects because of their in-demand trade selection, offering quality training. Prominent private high-quality schooling systems like Roots Schools System, City Schools and Beacon house should be motivated and facilitated to establish their technical and vocational streams of institutes. Government of Pakistan may provide tax relaxations, rebate or any other form of incentives to bring them into TVET Sector and establish quality training facilities. If they can even play a small role to establish TVET stream with only 500 private sector model institutes with 200 students per year per institute, it will add around 100,000 highly skilled youth into the system.

Above all, they will not only improve the quality and ensure best practices but also help reverse the stigma associated with TVET system in Pakistan.

d. Engaging Universities in TVET System for High-end Technologies

To change the skill profile of Pakistan to a country capable of producing high skilled workforce, we need to focus on high-end technologies like artificial intelligence, robotics, mechatronics, IT and business solutions etc. For this, we should integrate University into the TVET system under NVQF. If a university is offering single / separate course(s) of advance level of engineering like Advanced Technologies in Manufacturing, 3D animation & graphics, programming or web development, such institutes should also have the integrated facility to produce technicians and skilled workers in the allied subjects at the lower end. A large number of high skilled workforce could be generated through such dove-tailing of the two separately operating processes in the vast number of both public and private sector universities.

e. Implementation of Apprenticeship Schemes

Apprenticeship is an established international best practice of “informal” and “traditional” learning of skills through on-job-training, in practice for hundreds years, all over the world, particularly in countries with most developed TVET systems like Australia and Germany, where students / apprentices go to industry three days a week and attend the institutes for two days. If implemented in Pakistan it could considerably increase capacity of the present institutions in a very short span of time. While apprenticeship or industry-based training programs are available in Pakistan on a very small scale, greater effort is required to modernize, upgrade and further formalize these programs to enhance their impact in terms of improving the quality of training and increasing the availability of such programs. A revision of the apprenticeship system is required across the country for which the adoption of Apprenticeship Act 2018 by the provinces could provide a foundation. The revised system should be aligned with current practices for such programs in

G20 economies and program design should be compatible for recognition in international TVET frameworks. The following aspects need to be reviewed:

- *Quality of work and training conditions;*
- *Quality of training standards and contents;*
- *Quality of assessment;*
- *National Certification: recognition and equivalence in national and international education frameworks;*
- *Involvement of TVET institutes in the training*

A well-crafted apprenticeship system can groom the TVET system into a more responsive for bridging the skills gaps and addressing skills mismatch in addition to reducing ratios of youth unemployment in the country.

f. Implementing the System of Recognition of Prior Learning (RPL)

A recent NAVTTC survey revealed that formal TVET sector accounts for only 18% of the workforce in the economy while the remaining 82% of Pakistan's workforce requirement is met through informal learning pathways, known as the "*Ustaad-Shagird*" system. This informal component of skill transfer is unregulated and characterized by low earnings and low productivity. Skills are passed on from one generation to another and from person to person in the most unorganized manner, which practically sound, but are usually outdated, static, job-specific, non-portable, lacking in theoretical understanding, and uncertified.

There is, therefore, urgent for validating skills acquired through the informal system through the mechanism of Recognition of Prior Learning (RPL). RPL allows existing skills to be assessed, recognized and certified under National Vocational Qualifications Framework (NVQF). The basic framework for conducting RPL exists but the Government needs to allocate resources for enhancing the scope and pace of RPL assessments and certification. For the RPL assessment, the existing capacity of TVET institutes could be effectively utilized in evening/holiday shifts. It should be made mandatory for all

companies, especially applying for govt. tenders to engage all skilled workers who are certified under RPL system.

g. Distance/ Online Learning Systems

Distance Education and online learning is becoming increasingly popular globally. A number of countries have successfully brought distance/ online concepts in their TVET systems. Tailor-made online TVET training solutions are offered by a number of companies which can be adopted in TVET for selected programs or at least parts of programs. Recognition of this method of training delivery in TVET can have an immense impact in terms of reducing training cost and improving access to training, particularly for youth segments facing barriers of access to institutes.

II. TVET Sector Capacity Enhancement

a. Increasing System's Capacity- Establishing TVET Fund

The establishment of TVET fund could provide a permanent source of finances for the TVET sector development. The federal government can enhance its commitment in the TVET sector by diverting funds from other programmes like the Benazir Income Support Programme (BISP), which will enhance the empowerment of Pakistani youth and reduce their dependencies.

b. Public Private Partnerships

Public Private Partnerships are of significant importance for the revitalization and up-lifting of the Technical and Vocational Education in Pakistan. Hence it is suggested that Government should collaborate with the Private Sector under mutually acceptable terms. This may include handing over administration and operation of the non-functional provincial and federal government's institutes so that they can be run under the autonomous board comprising employers from the private sector with at least 50% board members coming from private sector. Further, Government should focus on the institutes having low enrollment and try to uplift and improve the operations up to the minimum

acceptable level with the assistance of private sector in advisory or any other capacity.

c. Setting-up of vocational workshops / institutes in selected Madaris.

This intervention has worked successfully in Indonesia and Malaysia. In Indonesia over 150 institutions were setup through financing of Islamic Development Bank (IDP) in 1990s and early 2000. Now private Madaris are themselves equipping their Madaris with vocational workshops. Furthermore, set up with Government of Pakistan's managed funding, independently run by private sector, these model and state of the art small to medium size institutes in 500 to 1000 Deeni Madaris in phase one, with an approximate capacity of 200 to 600 students annually per institute may add 150,000 to 600,000 students annually into the skilled workforce in the country. Subsequently, this number may be increased gradually up to 1,000,000 (1M) in next five years. If there is evidence of early adoption by Madaris, the scope of this initiative can be significantly expanded. The core objectives behind this concept could be two-fold: capacity enhancement of the TVET sector in a cost effective manner and enabling a large segment of the youth in the Madaris *to acquire market-oriented skills and enhancing their access to gainful employment.*

d. Preparing for Future Generation - Industry 4.0 Revolution:

Technologies are undergoing brisk transformation globally with a pace that can leave many unprepared nations far behind. To forestall this possibility in our case, we need to foresee and plan for the upcoming industrial revolution called Industry 4.0 Workforce Development which envisages 50 to 70% change in the nature of skills requirements by 10 to 15 years down the road due to automation and technology. This implies that there will be two new avenues:

- *Development of the fresh workforce as per the upcoming technological requirements*
- *Up scaling of existing training facilities by incorporating new technologies e.g. artificial intelligence etc into them.*

Strategy for accomplishment of the mentioned recommendations

This task force recommends that after the finalization and approval of the recommendations, it shall be given the role on the planning and implementation teams so that any hindrance or situation shall be dealt with the same objectives under the guidance and advice of this advisory committee till the conclusion and achievement of the desired milestones.

Costs Involved

A summary of the capacity optimization and expected results is given in Table 4 below. For the costs involved for this optimization, the task force suggests that a sum of at least Rs. 25.000 Billion may be allocated to TVET development immediately from Benazir Income Support Programme (BISP) which has an annual budgetary allocation of Rs. 126.000 Billion. The task force is of the view that this will pave the way for reducing permanent dependencies and enhancing empowerment of both youth and their families, which will ultimately enable government to alleviate poverty and reduce deprivation.

Table 4: TVET Optimization and Capacity Maximization Matrix with Costs

Proposed Interventions	Capacity Increase	Estimated Cost (PKR in billions)
Double shift in existing institutions	150,000	9.0
Involving private schooling systems in TVET	100,000	6.0
Engaging Universities into TVET system for High-end Technologies	30,000	4.0
Apprenticeship Schemes	200,000	10.0
Implementation of Recognition of Prior Learning (RPL)	200,000	1.0
Distance/Online Learning System	150,000	8.0
Public Private Partnership – handing over of non-operational institute to private sector	50,000	2.0
Setting-up of vocational workshops/ institutes in selected Madaris	100,000	10.0
Capacity Building and Quality Improvement of existing institutes		25.0
Advocacy and Social marketing of TVET		1.0
Total Estimated Cost	1000,000	77.0

4) Quality Assurance in TVET Sector

a. Establishing Centres of Excellence for Skill Development

The government should focus on establishing world class Technical and Vocational training Centres of Excellence (CoEs) in collaboration with our development partners and private sector, which will serve as models for the TVET sector to enhance their quality of training. These CoEs should have facilities for teacher's training, industry incubation centres for industry engagement and job placement/vocational counseling in addition to training facilities for training youth in large number.

b. Capacity Building of the Existing Training Facilities

Government, development partners as well as the private sector need to invest in the capacity building of existing TVET institutes to enhance the quality of training imparted in these institutes. This will enable Pakistani youth to gain decent employment in both national and international markets and contribute towards the wellbeing of their families, thereby significantly contributing towards poverty alleviation and socio-economic development of the country.

c. Standardized curriculum development and periodic review

Currently there are multiple curricula at provincial as well as federal level with different duration targeting the same job market including but not limited to, curricula developed and implemented by PTEVTA, TTB, PVTC, PBTE, STEVTA, SBTE, NAVTTC, KP-TEVTA, GIZ-CBT&A etc. Demand driven curricula need to be developed in consultation with relevant industries and employers. A system must be devised for curricula development and revision. Gradually, all the unapproved curricula must be withdrawn through refusing to recognize qualifications granted on the basis of such curricula.

d. Human Resource Development of TVET Practitioners

In order to streamline the technical/vocational integration, trained resources are required to conduct and organize trainings at international standard. For this, the exposure of both TVET managers and TVET trainers to modern methods of training

is essential. Both the federal and provincial TVET Authorities need to devise strategies and operational plans to fulfill this essential requirement of the TVET sector in Pakistan.

e. International Linkages to uplift National TVET System

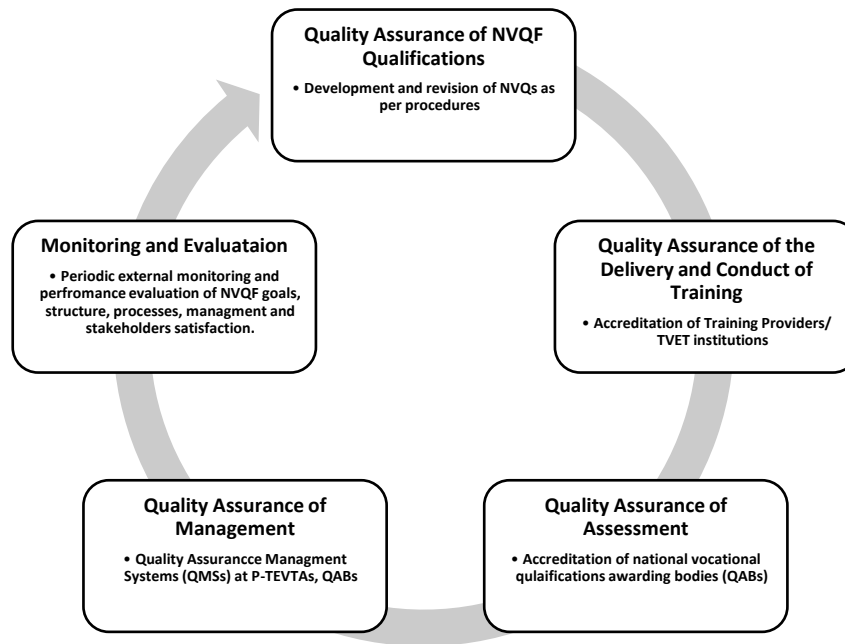
For international recognition and equivalence of Pakistani qualifications, there is a need to negotiate with international organizations e.g. European Centre for the Development of Vocational Training (Cedefop), European Foundation for the Improvement of Living & Working Conditions (Eurofound), European Training Foundation (ETF), European Agency for Safety & Health at Work (EU-OSHA) of Europe, Office of Career, Technical, and Adult Education (OCTAE) of America, Australian Skills Quality Authority (ASQA) of Australia. In this regard quality advisory facilities, auditing services and bilateral agreements should be deemed crucial in order to remain up to date with forthcoming global developments in the TVET sector.

f. Enforcement of National Vocational Qualification Framework (NVQF) across Pakistan for Standardization and Quality Enhancement of TVET

(NVQF) recommends a system for quality assurance of TVET. This quality assurance system has five aspects covering all activities from designing the curricula to delivering the training.

In order to standardize and enhance the quality of TVET in Pakistan, we must explore the avenues for enforcing NVQF through legislation. In this regard, a five year phasing out plan need to be developed and implemented to replace traditional and outdated curricula with new demand driven and competency based curricula.

Figure 5: Components of NVQF Quality Assurance



Planning and implementation of licensing by 2023

Government should plan and aim to introduce licensing for the TVET graduates who intend to enter into the field. These licensing options will help these technicians to improve their skill standards. Licensing could be carried on in 3 categories as suggested below:

- *Category 1 would be considered highly competent and may serve up to 05 years without renewal.*
- *Category 2 would be considered reasonably skilled but requiring renewal followed by examination in 02 years*
- *Category 3 would pertain to unskilled, liable to be forwarded to the institution for reassessment to ensure that only capable technicians could be awarded the licensing.*

There could be facilitation for the category 01 and 02 candidates if they demonstrate any distinction, including scholarships for continuing education etc. for the promotion of the licensing concept.

g. Promoting Entrepreneurial Skills

Many trainees have technical, trade specific skills, and would like to run their own businesses, but lack the supplementary skills needed to establish and sustain them. Training modules on entrepreneurship need to be developed which will include information such as developing business plans, financial administration, marketing techniques, conducting market surveys, ensuring quality, and approaching financiers. Career guidance and job placement centres can be entrusted the task of offering guidance to the students how plan to approach financial institutions.

h. Validity and Relevance of Assessment and Certification

There is a need to shift from the traditional theory-based assessment to the modern, project-oriented practical based assessment system to test the actual skills of students. Further, Competency Based Assessment (CBA) approach which is internationally recognized system of certification must be implemented at Trade Testing Boards and Boards of Technical Education levels. Competency Standards must be used as benchmarks for assessment for all the trades. This will ultimately ensure standardization in TVET and would enhance the trust of the employers on certification system both nationally and internationally.

At the same time, a mechanism need to be devised for preventing the unauthorized assessments and issuance of certificates by those entities who are not legally mandated to perform this function. Parents and students should also be made aware of such institutes which carry out assessments and certification without any lawful authority to ensure that student choose only authentic and genuine institutes for skill training and certification. Lastly, employers- both public and private sectors- need to be made aware of the institutes which are genuinely mandated to carry out assessment and certification so that they can employ youth with genuinely acquired skills.

i. Establishing Standardized TVET Monitoring and Evaluation Framework

Quality of TVET training needs to be upgraded across the country through a standard system of monitoring and evaluation to ensure that quality not only

matches the requirements of domestic industry but also fulfills the requirements of international job markets/. Against this backdrop, NAVTTC, through periodic external monitoring and evaluation in collaboration with stakeholder institutions, needs to evaluate the performance of the NVQF and ensure:-

- a) *Continuous updating and review of NVQF in accordance with the needs of both national and international job markets*
- b) *Devising quality criteria for registering qualifications, accrediting training providers and delivering assessment are still relevant*
- c) *Effective and efficient management of NVQF system*
- d) *That Employers are satisfied with the quality of the graduates with NVQF qualifications*

Table-5 provides the cost estimates of the proposed measures for quality enhancement of TVET sector in Pakistan.

Table-5: Resources Required for Enhancing Quality of TVET

Interventions	Target	Estimated Cost in Million
Labour Demand & Supply Survey	5 (every year for 5 year)	30.00
Competency Based Training (CBT) Curricula Development (Competency Standards, Curriculum, TLGs & Assessment Materials)	500 qualifications	500.00
Capacity building of Teachers	18,000	1080.00
Capacity building of Assessors	3,000	150.00
Capacity building of Principals	3,740	187.00
Accreditation of Institutes	3,000	450.00
Establishment of Job Placement Centers	250 (50 every year)	500.00
Total Estimated Cost		2,897.00

5) Access and Equity in TVET

Pakistan needs a demand-led approach to plan and implement skills development to cater for the current and future needs of labour markets and this requires the emergence of a comprehensive enabling environment:

- A physical environment with the availability of relevant and high-quality training institutes;
- A supportive environment that is characterized by responsive public agencies, functioning industry-led bodies such as Sector Skills Councils, and a strong buy-in from private sector companies and their organizations with clear benefits and incentives;
- A regulatory environment in which TVET is a shared responsibility between the private and public sector, federation and provinces.

In shaping this environment, following are few recommendations for ensuring access and equity with special focus on mainstreaming the marginalize segments of society.

- a) Special, coordinated and concerted efforts are required to ensure maximum participation of Pakistani female youth in skill training and playing productive role in the socio-economic development of the country. Towards this end, the task force recommends the following.
 - i) Prescribe minimum female quota in government and private sector jobs through legislation.
 - ii) To enhance share of female students in the TVET institutions gradually from 10% over all to 30% by 2023.
 - iii) Special programs to be developed for promoting and training entrepreneurial courses for women as in Pakistan. As a significant number of rural women are working from their homes, such initiatives may be encouraged.
 - iv) There are impeding legislation glitches that prevent women to seek foreign employment which need to be addressed to provide equal opportunities to women so that they are able to realize their potential in areas such as teaching, hospitality and service industry.
 - v) In Pakistan, women have major stakes in agriculture in all the rural areas. There is a need for developing and implementing tailor made courses for these women like in the areas of agriculture, animal husbandry to enhance and support traditional trades.
- b) Similarly, TVET can be effectively used as instrument for empowering such marginalized communities as transgender, physically challenged, orphans etc. Specially designed targeted TVET programmes in accordance with the needs

and circumstances of these communities could prove effective in enabling these communities to contribute in the socio-economic development of the country, in addition to reducing their own deprivation.

6) Enhancing Industry Engagement

a. **Increased Involvement of Industry in Decision Making**

Task Force recommends increased representation of relevant industry in the decision-making boards of TVET authorities at national, provincial and regional levels to at least 50% (with private sector chairmanship) and evolving criteria for such nominations. Further, formal involvement of Business Industry Associations (BIAs) is proposed which may include a provision for delegated authorities with regard to TVET, in appropriate regulations.

b. **Involvement of Industry in TVET Sector Advocacy and Awareness**

It is recommended that selected BIAs may be supported and enabled at national, provincial and local levels to engage in a robust awareness raising campaign with strong marketing elements (using BIA events, websites, publications, etc.).

c. **Industry Led Quality TVET delivery through NVQF**

It is essential to take the organized private sector on board for scaling up National Vocational Qualification Framework (NVQF) and Establish liaison and outreach desks in respective BIAs for topics related to TVET and ensuring placement of TVET graduates. We should also accelerate the development and delivery of standard-based Competency Based Training with active involvement of industry.

d. **Establishing Sector Skill Councils (SSCs) for comprehensive Industry involvement**

Establishment of industry-led Sector Skills Councils in key economic sectors for design and delivery of demand-driven training programmes are proposed. Through such institutional arrangement, industry needs to be involved in all aspects of TVET

delivery such as curricula development, trade selection, assessment and certification and most importantly, job placement.

7) Skill Development for International Markets

- a. Improve the National Skills Information System with vertical and horizontal linkages with Overseas Employment Corporation (OEC), Overseas Pakistani Foundation (OPF) and Bureau of Emigration and Overseas Employment (BE&OE). These should also establish special information and counselling centers for skilled workers intending to secure overseas jobs.
- b. Establish country of destination specific TVET institutes to prepare workforce for specific international market as per its requirement. Initially, some of the best existing TVET institutes may be so designated and in the meanwhile resources need to be mobilized for establishing more institutes or upgrading some existing institutes as "Centres of International TVET Excellence".
- c. Secure a "quota" for Pakistani workforce that could be revised upwards on yearly basis in the overseas job market. For this, quantified targets of obtaining employment for Pakistani youth may be assigned to all the Pakistani Missions/Embassies/Commercial Attaches in different countries and this may be made one of their crucial performance evaluation criteria of the all the staff deployed in such entities.
- d. Sign Memorandum of Understanding with labor receiving countries as coordination strategy for ascertaining their workforce requirements, their skill levels, affiliation of Pakistani institutes and recognition and equivalence of Pakistani qualification.
- e. Create equal regional and bilateral qualification framework with countries of destination to recognize certifications, establish common standards for skilled occupations.
- f. Establish special information and counseling centers for skilled workers intending to secure overseas jobs.

8) TVET Communication Plan

It is vital to understand that the social image of skills cannot be elevated unless the political and economic factors are fixed. Issues of governance, quality, industry engagement and funding must be addressed so that the skilled workers are preferred choice for employment. Education pathways should be available to skilled workers to continuously upgrade their skills and rewarded with higher economic premium. Once these arrangements are in place, the image of skills will improve.

A two-pronged approach to building the image of skills is suggested as under:

- **Short-term Image Building Measures: awareness**

In the short term, the TVET authorities must kick start ‘targeted’ campaigns to build awareness among the youth and their families about the existence and benefits of TVET education. According to the primary research conducted by the largest skills fund in Pakistan, 90% of the youth in higher secondary schools has never heard of skills development programs. Similarly, women targeted campaigns must also be planned to enroll them into TVET programs.

- Develop a skills brand in Pakistan and bring all the work of the National Task Force on Skills under it. For example, ‘Skilled Pakistan’, with the tagline ‘*Hunarmand Pakistan hee Kamyab Pakistan*’.
- Develop and rollout national awareness campaigns across TV, radio, print and digital platforms with industry representatives, celebrities and public opinion leaders in the forefront.
- Develop and hold awareness sessions across all higher secondary schools across Pakistan and persuade them to enroll in skills programs near them. Initiate Career Footsteps programs to provide career guidance and counseling in schools, at the level of grade 9 and 10.
- Hold local, provincial and national skills competitions across the country and support their participation in international skills competitions.
- Develop sector-specific campaigns targeting sectors that are of national importance to economic growth, with success stories and brand ambassadors.

- **Medium-to-Long term Image Building: concrete actions to improve outcomes**
- Awareness of skills and inclusion of small skills-related work must be integrated in all elementary and middle school curricula. The focus should be working with hand and examples can include basic model making, tools recognition, crop growing, etc.
- Setting up independent skills schools that children can join after middle and graduate with higher secondary school certificate. There are many examples of such schools across the developed world, Turkey, Australia and China.
- Developing higher educational pathways for TVET education is critical to establishing interest and enhancing image of skills programs. Graduates of DAE and other skills diplomas must be able to pursue higher education in skills programs as well as to move into higher education programs in traditional tertiary education through the 'equivalence' mechanism.
- In government tenders, TVET training component should be made mandatory for all companies participating in the bid. This will encourage companies to promote TVET at one side and on the other hand it will enhance opportunities for on-job trainings for the workforce.

Appendix: The Singapore Experience

Skills Future is a national movement to provide Singaporeans with the opportunities to develop their fullest potential throughout life, regardless of their starting points. Through this movement, the skills, passion and contributions of every individual will drive Singapore's next phase of development towards an advanced economy and inclusive society. Investment in human capital through education and training has been at the heart of Singapore's economic progress, and has also helped Singaporeans develop and maximise their potential. By enabling a highly-skilled and competitive workforce, it has allowed Singaporeans to secure better jobs, higher incomes and enjoy higher standards of living.

Continuous education and formal training remains core to Singapore's society and economy today and for the future. With the fast pace of technological advancements and stronger global competition for jobs, skills upgrading, and deepening have been essential for Singapore's youth to maintain a competitive edge.

Singapore is the best-known example of a nation globally that has successfully and continuously upskilled its workforce over the last 40 years. 54% of Singapore's workforce is highly skilled.

Skills Future Council: Led by Deputy Prime Minister, Tharman Shanmugaratnam,

Four key areas of focus under the Skills Future Council are:

1. Helping individuals make well-informed choices in education, training and careers.
2. Developing an integrated, high-quality system of education and formal training that responds to constantly evolving industry needs.
3. Promoting employer recognition and career development based on skills and mastery.
4. Fostering a culture that supports and celebrates lifelong learning.



National "Skills for All" Strategy, 2018
A Roadmap for
Skill Development in Pakistan

Government of Pakistan
Ministry of Federal Education & Professional Training
Taskforce on Education