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Study on

Producing Skilled Workforce for Potential Economic Sectors

in Azad Jammu & Kashmir

NAVTTC

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TVET Sector Support Programme
House 23, Street 55, F-7/4,
Islamabad, Pakistan
T +92 51 111 449 376
F +92 51 2608 860
www.giz.de
www.tvetreform.org.pk

Responsible
Mr. Raja Saad Khan, Deputy Programme Coordinator, TVET Sector Support Programme
Sayed Asghar Shah Technical Advisor Data Analysis, NSIS Cell, TVET Sector Support Programme

Authors
Sayed Asghar Shah, Technical Advisor Data Analysis, NSIS Cell, TVET Sector Support Programme

Edited by
Sonia Emaan, Technical Advisor Communication, TVET Sector Support Programme

Layout & design
Mr. Niaz Muhammad, Graphic Designer, TVET Sector Support Programme

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List of Acronyms

AJK	Azad Jammu and Kashmir
AKCCI	Azad Kashmir Chamber of Commerce & Industries
CBTA	Competency Based Training Assessment
AKSIC	Azad Kashmir Small Industries Corporation
AAP	Annual Action Program
COTHIM	College of Tourism & Hotel Management
CPEC	China Pakistan Economic Corridor
CTTI	Construction Technology Training Institute
DAE	Diploma of Associate Engineer
EU	European Union
GTTI	Government Technical training Institute
GB	Gilgit Baltistan
IESCO	Islamabad Electric Supply Company
ITHEM	Institute of Tourism & Hotel Management
KP	Khyber Pakhtunkhwa
NAVTTC	National Vocational & Technical Training Commission
NLC	National Logistic Cell
NSIS	National Skills Information System
NSS	National Skills Strategy
NVQF	National Vocational Qualification Framework
STATA	Statistical Software Package
SWWD	Social Welfare and Women's Development Department
TVET	Technical & Vocational Training
TWG	Technical Working Group

Executive Summary

The state of Azad Jammu and Kashmir lies between longitude 73º – 75º and latitude 33º – 36º comprising an area of 5,134 square miles (13,297 square kilometres). AJK falls within the Himalayan orogenic belt. Its topography is mainly hilly and mountainous, characterized by deep ravines, rugged, and undulating terrain. The northern districts (Neelum, Muzaffarabad, Hattian, Bagh, Haveli, Poonch, and Sudhnoti) are generally mountainous while southern districts (Kotli, Mirpur, and Bhimber) are relatively plain. The mountain ecosystems are unstable and have low inherent productivity. Within this fragile environment, however, there is a great variety of ecological niches on which people base their livelihood. Small land holdings and scarcity of cultivable land are the main factors limiting on-farm income generation. The area is full of natural beauty with thick forest, fast flowing rivers and winding streams. Main rivers are Jhelum, Neelum and Poonch.

The local economy of Azad Jammu and Kashmir (AJK) depends heavily on agriculture and livestock as well as remittances. Industry and tourism are one of the viable options but so far remained underdeveloped in this region.

More than 80% of households in AJK live on some type of farmland and nearly 40% of their income is generated from growing crops and raising livestock. Apple, apricot, pears, potato, turnip and spinach are the major fruits and vegetables grown here. Important crops include wheat, rice, and maize. The sale of eggs, milk and meat from the livestock also contributes to income. Despite of the fact that the official reports claim that the region's underutilized agricultural productions can be optimized, limited attention is paid for overcoming the concerned problems.[1]

The local community of the region is settled in different parts of the world and contributes to the economy through remittances. One of the major reasons for this resettlement and migration is construction of Mangla Dam. Almost two-third of Pakistanis living in England are from AJK and majority of them are from Mirpur. A 2007 socio-economic survey of AJK stated that more than 51% of AJK's population was living abroad and the average amount coming through remittances was between PKR 40,000 to 100,000 yearly. Overseas employment trend is one of the encouraging factors, where, AJK has 25% share in foreign remittances.[2]

In AJK, the easy movement of supplies and goods is difficult due to its geographical location and limited infrastructure facilities which hinder the growth of industrial sector. However, pharmaceutical factories, textile and paper mills, arms manufacturing, printing presses, steel works and furniture warehouse are a few industrial areas surviving despite of several barriers.

AJK, with its high mountains and lush green valleys, is perfectly suited for tourism. However, due to lack of political instability and its connection with the Line of Control in India; this region has remained under-invested. In addition, earthquakes, landslides and lack of infrastructure prevent the tourists from fully accessing the area.

[1] Ahmed, E. M. (n.d.). AJK Incredible Survey Potential.
[2] AJK, 2. (2007). Socio-economic Survey of AJK.

Hydro Power generation is the most emerging sector of AJK. A couple of projects with capacity of over 18,000 MW are completed. Some of the projects are in process and a few projects like Neelum-Jhelum project with 969 MW capacities are in process of completion. Private sector Power Generation project of 147 MW at Kunhar River (AJK/KP) is under construction and other project of capacity around 2,500 MW would operational before December, 2020 (Ahmed).

Geographical Location	Sector/Sub-sector	Employment Potential
All districts of AJK	Construction	3,018
Kotli, Bagh, Muzaffarabad, Neelum, Bhimber	Tourism & Hospitality	2,144
Neelum, Kotli, Poonch, Haveli & Muzaffarabad	Energy & Power	965
Mirpur	Manufacturing	400

There is a high demand of skills in AJK, however, the lack of structure and deriving the policies from the Federal Government of Pakistan, AJK lacks its own policies and private sector associations which hinder the promotion of TVET sector.

Sectors/Sub Sectors	Chambers/Associations	Training Establishment
Construction	AKCCI Contractor Association of AJK Association of Builder & Developers, Pakistan All Pakistan Contractors Association	Swedish Institute of Technology Sudhnuti Polytechnic Institute NLC Mandra Pak Hands Vocational Training Institute Help in need Construction Technology Training Institute
Tourism & Hospitality	Pakistan Hotel Association Travel Agent Association 05827-464444 All Restaurant Association of Pakistan Chairman Anjuman-e- Tajran	Hashoo Foundation COTHIM ITHEM PC Hotel
Energy & Power	AKCCI, Zulfiqar Abbasi, Hydro Power (0300-8505065) IESCO	NLC Mandra CTTI Hydro Power Institute Swat Swedish Institute of Technology Kashmir Institute of Technology
Manufacturing	Mirpur CCI Trade Associations	Swedish Institute of technology Kashmir Institute of technology Government Vocational Training Centre Mirpur GTTI New City Mirpur

Way forward

This study has involved quantitative and qualitative methodology for data collection and analysis. A few interviews with the focal person (s) were also conducted. However, a detailed discussion is required for each sector to include the views of local trade association in the study scope. As earlier mentioned, due to multiple reasons AJK is different from the remaining provincial unit (s). Therefore, the role of private sector is not incorporated in the development intervention pertaining to TVET sector.

Introduction

Scope of the Study

The main objective of this study is to support the TVET Reform Support Program (TVET-III) in identification of the economic sectors for programme interventions and facilitate the planning in AJK. In this study, the high employment potential economic sector trades are identified with respect to local and overseas labour market. The finding will help in identification of organizations which will help in creating close linkages between labour market demand and appropriate training institutes for better employability opportunities locally. These organizations may include business membership organizations (e.g. trade associations, chambers and training providers).

Objectives

Main objectives include:

- Identification of sectors having high and well paid employment potential which may include overseas employment
- Identification of the required trades, professions
- Identification of possible skills gap
- Identification and rating of the relevant training institutions
- Identification and rating of the relevant chambers/associations
- Formulation of recommendations/preparation of future Road Maps.

Deliverables

- Identification of at least four (4) economic sectors/subsectors with high employment potentials and identifying suitable business membership organisations and training establishments in the identified economic sectors
- Preparing a final report recommending and assessing the relevant business organisations and possible training providers
- Proposing a road map for each selected economic sector, defining the capacity building requirements and stating the TVET qualifications in demand.

Methodology

Data of skilled workforce with respect to demand was collected in January 2017, therefore, the tracer study will base on both quantitative and qualitative data. However, almost 100% TVET institutes will update the information for current year. NSIS cell also possess the databank of overseas labour market of last two years. Such information can help in identification of potential economic sector and trades. On the other hand, qualitative data also helped in identification of employable trades in AJK.

Quantitative Data

In first phase, the questionnaire was restricted up to three main indicators on the request of employer in Technical Working Group (TWG) meeting for the purpose of trust building between employers and NSIS cell and in future the revised questionnaire will be shared with TWG for approval.

Following are the indicators against, which data was collected.

- Existing Skilled Workforce
- Current Skills Deficiency
- Future Skilled Workforce requirement

The data was collected from the following economic sectors.

- Construction
- Manufacturing
- Energy & Power
- Services

The data was collected by the nominated personnel by AJK-TEVTA. The data collection was ensured from the above mentioned economic sectors.

Questionnaire Development

The questionnaire for analysing the demand side of skilled workforce was already developed and approved by the TWG addressing the following three indicators:

- Existing technical staff (Trade, level and gender wise)
- Existing skilled workforce deficiency (Trade & level wise)
- Future skilled workforce requirements (trade and level wise).

The sample questionnaire is attached as annex 2.

Data Quality

The data quality was ensured through comprehensive training of field staff and random spot checking. NSIS was directly involved to ensure data quality and data editing of all questionnaires before data entry.

Data Analysis

Data analysis was carried out at NSIS cell with data analysis software STATA. The main purpose of the analysis was to identify the supply and demand of skilled workforce, through skills gap analysis.

Qualitative approach

For collecting information regarding the priority sector and trades, two consultative workshops were conducted with Business Associations in Muzaffarabad and Mirpur, and some key informant interviews were also conducted with Trade Associations and training providers.

Socio-economic parameter

Pakistan Administered State of AJK has its own elected government led by a Prime Minister with a ceremonial President. The state is largely mountainous with three large rivers flowing across. It has a population estimated at 4.361 million in 2014. The state's economy is based on subsistence agriculture, livestock keeping, mining, tourism, and sale of electrical power. The state depends on Pakistan for its outlet to rest of the world and for technical support in the running of its economic affairs. Each government department in AJK has a corresponding section in Islamabad from the seat of government of Pakistan. There are no limitations of movement and commercial activities for the people between Pakistan and AJK. The literacy rate has increased from 55% to 74% after 1998 census. Infant mortality rate is approximately 62 per 1000 live births, whereas, the immunization rate for the children less than 5 years of age is more than 94%.[3]

It is imperative to understand the TVET strategy and policies implemented in Pakistan before apprising on the policy followed in AJK as the strategy followed in Pakistan heavily impact on AJK. Many students from AJK undertake their post-secondary education in the larger Pakistan as there are more opportunities there with more institutions available to them. Quotas are provided for students from AJK in Pakistani institutions of higher learning.

With a large population of over 150 million and a rapidly developing economy, Pakistan's energy needs are potentially huge. The country, historically a net energy importer, is confronting serious imminent energy shortages as its economy and population grow while global fossil fuel prices continue their upwards spiral. Thus, Pakistan needs to initiate a sustained, long-term transition towards greater use of renewable energy (RE)—an indigenous, clean, and abundant resource whose considerable potential the country has yet to tap meaningfully.[4]

NAVTEC came into existence in 2006 as the apex of TVET in the country and in 2007 mandate of NAVTEC was extended to AJK. Like other provinces, AJK formed its own TEVTA in 2007 with the mandate to coordinate and implement TVET programmes in the state. In AJK, some vocational training institutions are under the auspices of the semi-autonomous AKSIC, and SWWD. While their operations are essentially independent there is some overlap between scopes of these organizations. For example, during a discussion, the Director of AKSIC explained that while his agency implemented the model of skill training of three months or less AJKTEVTA was responsible for conducting similar trainings for a longer period. He mentioned that unfortunately TEVTA was not in a position at present to assume such responsibilities. The role of the private sector in TVET in AJK is considered minimal and confined to courses in commerce. A few trainings were conducted in the aftermath of the earthquake by various NGOs, and international organizations, but these were transient as most have since exited the scene.[5]

[3] AJK at Glance (2015), Planning & Development Department
[4] Policy (n.d), RE Policy
[5] National Skills Strategy -NAVTTC

The relevance of training to the needs of the market has been questioned by several sources. In an interview with the President ICCI he highlighted the unavailability of relevant trained and skilled workforce despite of the availability of employment opportunities.

TVET framework

The National Skills Strategy (NSS), which is the basis for ongoing reform in the TVET sector, defined three objectives:

i) providing relevant skills for industrial and economic development
ii) improving access, equity and employability
iii) Assuring quality to address the major issues confronting the TVET system. Based on the NSS and the Vision 2025, the Ministry of Federal Education and Professional Training developed a broader national TVET policy with the participation of various stakeholders from public and private sector.

The TVET policy emphasizes on increasing training opportunities for youth, reskilling existing workers, implementing NVQF and CBT&A. Supporting the vision of the national TVET policy, Pakistan has already embarked upon a comprehensive TVET Reform Support Programme in 2011. During the first phase of the Programme, which ended in December 2016, headways have been achieved in areas of improving TVET governance and creating a paradigm shift in the TVET design and delivery.

The second phase of the Programme (TVET III, 2017 – 2022) has been developed upon the groundwork, policies and results of the previous phase. It aims at taking the reform to the next development stage; provide extensive access to adequate vocational training and higher involvement of chambers, trade associations and private sector business establishments in TVET design and delivery.

With relation to the EU-Pakistan Cooperation, the EU support the Government of Pakistan in two priority areas as formulated in the Annual Action Programme (AAP) 2015:[6]

1. To contribute towards socio-economic growth through development of human resources, enabling people to engage in productive employment
2. To promote full integration of structurally poor and backward regions into the mainstream national development agenda by enhancing opportunities for economic

[6] TVET-III, TVET Reform Support Program

Identification of Sectors and sub-sectors (Based on primary data)

To identify the sectors having potential for future growth and employment, the economic outlook of the country and AJK primary data was collected directly from the employers of the above mentioned economic sectors. For the selection of demanding trades, three types of data types were utilized:

- Primary demand side data of NSIS
- Daily jobs data of local and international labour market
- Immigration bureau data

Primary data was collected from the following sectors and sub-sector on the basis of local economy of AJK.

Construction sector

Although the economy and skilled workforce requirement of AJK is comparable with other provinces of Pakistan i.e. Punjab and Sindh, the growth in construction sector is remarkable because of the on-going power projects. The annual demand of the construction sector is around 1,500 but in AJK, construction related trades are preferred for overseas employment. On the other side, skilled workforce demand in construction sector will further increase especially the development of economic zones due to planned power projects and business opportunities through the CPEC programme.

Tourism and hospitality

Tourism and hospitality are the leading sectors in AJK which contributes around 3% the economy. Tourism is increased in the region due to improved law and order situation in KP, however, underdeveloped infrastructure underinvestment in the region hinder the tourism industry. Around 22% of the population of the region is directly and indirectly involved in this tourism sector, therefore, investment in this sector will directly contribute towards poverty reduction. There is lack of attention by AJK TEVTA to this sector; however, the skilled workforce demand of this sector is around 5,000.

The annual tourism inflow in AJK is around 5.1 million which can increase in double if the infrastructure is improved, information regarding new and old tourist sites is disseminated and an effective marketing strategy is applied for image building. Such measures will ensure to create additional jobs for the TVET graduates in this sector [9].

Energy & power

The IESCO is responsible for power supply from national grid to about 70% of AJK population. Currently the total power demand of AJK is around 400 MW. On the other hand AJK also have a share in total power supply, which is much higher than demand of AJK. At present 12 small hydropower of installed capacity of 45 MW are operational. 22 hydropower

projects of cumulative capacity 268 MW are under various stages of progress, but 9 project of 15.25 MW are in advanced stage.

The medium term plan covers the development of five medium size hydropower projects of a total capacity of 145 MW, which will be completed by 2018.

AJK has enamours potential of hydropower generation, estimated at over 18,000 MW, Neelum-Jhelum project of 969 MW capacity is under completion, private sector project of 147 MW at Kunhar river (AJK/KP) is under construction and other project of around 2500 MW capacity would be operational before December 2020.[7]

Based on above discussion, it can be deduced that there is a high potential for skilled workforce in the hydropower generation sector. The recent demand of skilled workforce is around 2,950 which may increase drastically in future.

Manufacturing

The State of AJK by virtue of its topography, meteorology, hydrology & administrative setup provides huge opportunities of investment in various sectors.

The Government has adopted the Industrial policy of Federal Govt. which entails that every industries is allowed to be established in the territory of AJK except arms & ammunition, security printing, explosive material and radioactive material. In Mirpur industrial zone, there are a few large scale and sub-sector industries available including pharmaceutical, food and beverages etc. In this industrial zone around 30,000 people are employed. The annual skilled workforce requirement of the area is around 2,700 in various trades, which are mentioned in below matrix.

[7] Hydropower potential in AJK Ahmed

Matrix-1: Construction Sector

Table 1: Construction Sector

Geographical area, cluster location	Sector/subsector	Rationale	Trades/Profession	Employment potentials[8]	Business Membership Organisation	Training Establishment
All District of AJK	Construction	As per the overseas employment trend most of the construction sector preferred overseas employment. Construction sector have good number of TVET graduates	DAE & B. Tech Civil Civil Surveyor Quantity Surveyor Excavator Operator Heavy machine operator Mason Shuttering carpenter Steel fixer Moving Machine Operator Carpenter Tile Fixer Plumber wood carving	398 220 240 60 515 465 270 220 130 150 120 150 210	Contractor Association of AJK Association of Builder & Developers Pakistan All Pakistan Contractors Association	Swedish Institute of Technology , Sudhnuti Polytechnic Institute, NLC Mandra, Pak Hands Vocational Training Institute Help in Need, CTTI
Key Potential	In construction sector the demand of skilled workforce is high due to construction of Hydro power projects Construction sector in Pakistan is growing rapidly with growth rate11.31% Contribution of construction sector to GDP is around 4.13% High potential due to on-going hydropower projects Construction sector trades have high demand in overseas labour market Construction sector employers are comparatively more satisfied with TVET graduate					
Key weaknesses/Risk	TVET institutes does not have infrastructure facility as well as relevant curricula is not developed There is a missing link between labour market demand and skilled workforce supply					
CBTA packages available	NVQF Level-2: HAVC NVQF Level-3: Building Electrician, plumber & pipe fitting					

[8] National Skills Information System, Demand side Survey

Matrix-2: Tourism & Hospitality

Table 2: Tourism & Hospitality Sector

Geographical area, cluster location	Sector/subsector	Rationale	Trades/Profession	Employment potentials	Business Membership Organisation	Training Establishment
All District of AJK	Tourism & Hospitality	Tourism and hospitality is one of the leading sectors in AJK economy, which contributing around 2.9% to local economy. It is estimated that almost 22% of total population of J&K is directly and/or indirectly engaged in tourism related activities.	Bakery Certificate Chef Professional Cook Waiter House Keeping Receptionist Tour operator Computer Technician Driver	442 272 356 128 237 150 114 295 150	Pakistan Hotel Association Travel Agent Association 05827-464444 All restaurant Association of Pakistan Chairman Anjuman-e- Tajran	Hashoo Foundation COTHIM, ITHEM
Key Potential	Tourism & Hospitality sector is is growing rapidly in AJK due to safe security situation Around 22% population are directly or indirectly involved in Tourism related activities Hospitality sector trades have high demand in local and overseas labour market AJK have the highest number of Tourist spots					
Key weaknesses/Risk	In Public sector, TVET institutes does not have facility & staff Lack of coordination between employers & training providers					
CBTA Packages available	NVQF Level-2: Hospitality (Cook) NVQF Level-3: Hospitality (Chef de Parties) NVQF Level-2: Hospitality (Waiter) NVQF Level-4: Hospitality (Sous Chef)					

Matrix-3: Energy & Power

Table 3: Energy & Power

Geographical area, cluster location	Sector/subsector	Rationale	Trades/Profession	Employment potentials	Business Membership Organisation	Training Establishment
All District of AJK	Hydro Power	In AJK the total capacity of hydro power generation is around 5000 MW, 6 is operational with generation around 1036 MW, 969 MW under completion and remaining in planning process	DAE & B. Tech Electrical Heavy machine Operator Crane Operator Welder DAE Civil Turbine Technician Shuttering Carpenter Mason Pipe Fitter Solar Technician	272 71 56 97 45 46 58 150 120 50	AKCCI, Zulfiqar Abbasi, Hydro Power (0300-8505065)	NLC Mandra, CTTI, Hydro Power Institute Swat, Swedish Institute of Technology, Kashmir Institute of Technology
Key Potential	Hydro power sector growing rapidly There is a high demand in the on-going and planned power projects Solar energy demand in far-away population on hills tops					
Key weaknesses/Risk	TVET institute does not exists in the area for some demanding trades Lack of coordination between employers & training providers					
CBTA Packages available	NVQF Level-1-3: Plumbing cum Solar Water Heating Technology NVQF Level-1-4: Micro Hydro Power Plant Technology NVQF Level-2: HAVC NVQF Level-3: Building electrician, plumber & pipe fitting					

Matrix-4: Manufacturing Sector

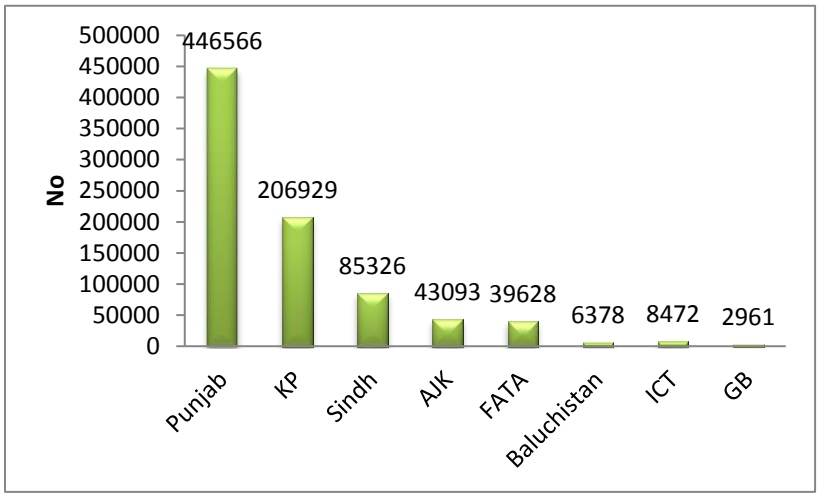
Table 4: Manufacturing Sector

Geographical area, cluster location	Sector/subsector	Rationale	Trades/Profession	Employment potentials	Business Membership Organisation	Training Establishment
Mirpur industrial Estate	Food & Beverages, Pharmaceutical and Auto	In AJK, there is only one industrial zone and another zone is proposed under CPEC from which around 30,000 people will be employed. The existing industries include Plastic, food, Auto & pharmaceutical	DAE & B. Tech Mechanical DAE Chemical Auto Mechanic CNC machine operator DAE Food Lab. Technician Mechanical Technician	50 30 115 88 56 34 27	Mirpur CCI Trade Associations	Swedish Institute of Technology, Kashmir Institute of Technology, Government Vocational Training Centre Mirpur, GTTI New City Mirpur
Key Potential	Industries in AJK also have high skilled worker potential The industries in AJK are interested to utilize skilled workers to produce quality products					
Key weaknesses/Risk	Some demanding trades does not exist in annual TVET supply Lack of GCT in AJK Lack of coordination between employer & Training providers					
CBTA Packages available	NVQF Level-2-3: Mechanical Technology (Welder & Fabricator) NVQF Level-3: Automotive Technology (Automotive Technician)					

Province Wise overseas Employment

Figure 1 show the province wise representation of overseas employment in year 2016, which was registered by the Immigration Bureau & Overseas Employment. As per the statistics, Punjab 53% (446,566), followed by Khyber Pakhtunkhwa 25% (206,929), Sindh 10% (85,326), AJK 5% (43,093) and GB have the lowest proportion 0.4%. From AJK, the overseas employment trend is encouraging.[9]

Figure 1: Province Wise Overseas Employment

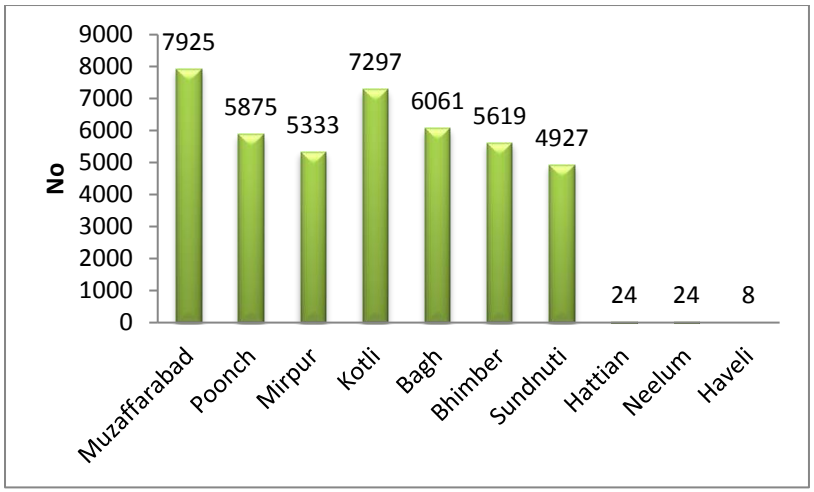


AJK District Wise Overseas Employment Trend

As mentioned in figure 1, the trend shows high employability as compared to available pool of skilled workforce. In the figure 2 district wise comparison of the overseas employment in three districts the Hattian, Neelum and Haveli is depicted; where the proportion of employment in Hattian, Neelum and Haveli is lowest however district Muzaffarabad and Kotli have the highest employability proportion. The tendency and willingness of the overseas employment shows that the contribution of the skilled workforce to the national and local economy is remarkable.

Figure 2: District Wise Overseas Employment Trend

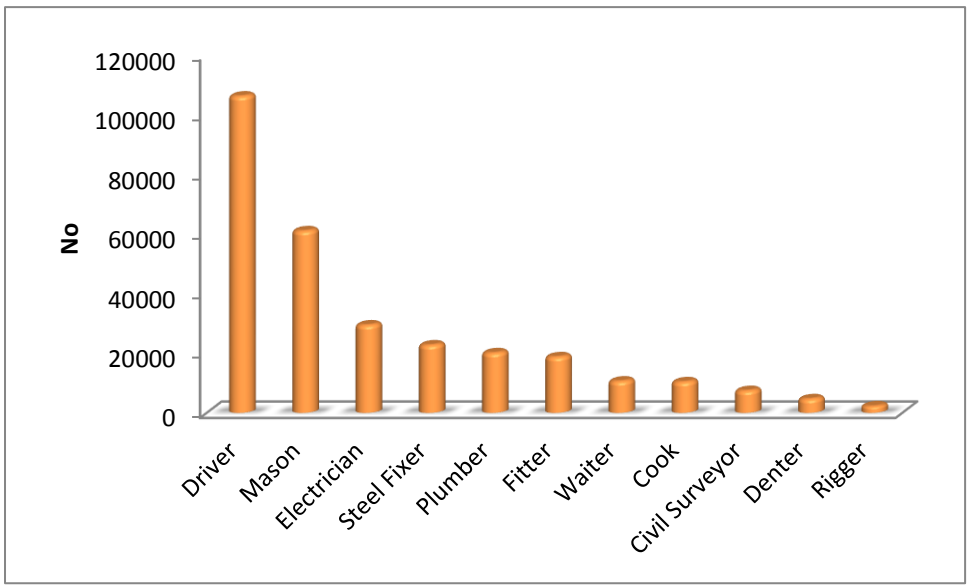
[9] Immigration Bureau of Pakistan (2016)



Trade Wise Employment of Overseas Employment

According to statistics from Immigration bureau, in 2016, the proportion of unskilled labour to overseas employment was around 35%. The second highest proportion was of drivers at 13% and masons at 7%, however, the proportion of masons in annual supply of skilled workforce to labour market was zero. In every province of Pakistan, the mismatch between supply and demand is above 50%, but in AJK the roles of private TVET institutes reduces the gap and the demand for the overseas labour market. Electrician, steel fixer and plumber are at 3rd, 4th and 5th position in overseas labour markets demand. The fact is that the trend of skilled workforce supply is on traditional pattern where scarce attention is paid to the employment of TVET graduates.

Figure 3: Leading Trades in Overseas Job Market



Skills Gap Analysis

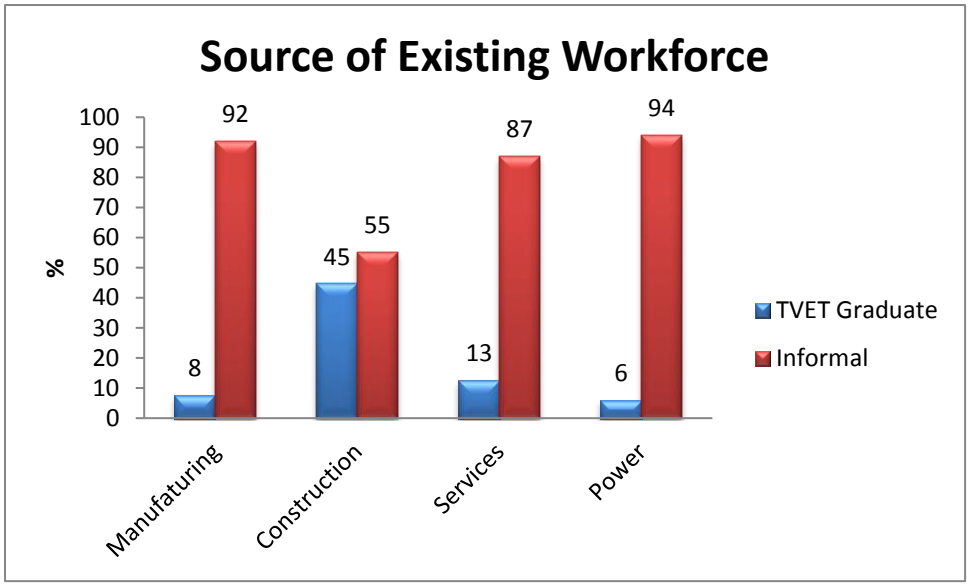
Table is demonstrating comparisons of the skilled workforce supply and demand of the labour market; the mismatch between supply and demand is main cause of unemployment of the

TVET graduates. In some cases, the supply is less and demand is high, while in some cases the supply is more than the actual demand of job market. Mason is the most demanding trade in construction sector at 465 jobs per year but supply of this particular skill in the market is zero. Baker is the second largest demanding trade with annual demand of 442 jobs but the attention is scarce to this trade as well. . The supply of DAE civil is around 1,005 but demand is only 359.[10]

Existing Skilled Workforce & Level of Employer Satisfaction

Figure 5 depicts the satisfaction level of employers from the skilled workforce of informational sector (work based learner) in all sectors. The pattern is same across the country and the graph shows a lower satisfaction level of the employers from the TVET graduates. This also raises a question on the coherence of the skills of the TVET graduate with respect to the job market demand. The gap exists between the skills required for employer and training providers and the skills learnt by the workforce, which can be addressed by CBT. However, a comprehensive study is recommended to identify the main reasons of this gap of skills available and job market demand.

Table 5: Source of Existing Skilled workforce



[10] www.skillingpakistan (2017)

Recommendations

1. The Government of AJK needs to focus on to establishment of institute of trades in demand like trades in construction and hydro power generation in future
2. Follow up meetings with the selected business associations are required to be scheduled for further modification and fine tuning of the intervention plan
3. The skilled workforce supply and demand gap needs to be addressed on the basis of local and overseas labour market and demand in future for employment purpose
4. Close coordination between the employers and training providers is recommended to improve satisfaction level of employers
5. The gender ratio in skilled workforce supply is required to be linked with labour market demand to reduce the cost per student.

Annex-1: Skills Gap Analysis of AJK

Table 6: Skills Supply & demand Gap Analysis

Province	Trade	Supply	Demand	Gaps
AJK	Mason	0	465	(465)
AJK	Baker	0	442	(442)
AJK	DAE civil	1,005	359	646
AJK	Tailor	695	336	359
AJK	Chef	0	272	(272)
AJK	Civil Surveyor	203	220	(17)
AJK	Mechanic	0	201	(201)
AJK	Carpenter	56	150	(94)
AJK	Waiter	0	137	(137)
AJK	Mason Tile	0	128	(128)
AJK	Plumbing	154	123	31
AJK	Quantity surveyor	108	120	(12)
AJK	AUTO CAD	538	120	418
AJK	Marble Cutter, Fitter & Polisher	20	117	(97)
AJK	DAE Chemical	0	115	(115)
AJK	Civil Draftsman	45	105	(60)
AJK	Computer Technician	1631	91	1,540
AJK	Heavy Machine Operator	0	71	(71)
AJK	Auto Mechanic	97	71	26
AJK	Mobile Technician	121	68	53

Province	Trade	Supply	Demand	Gaps
AJK	Steel Fixer	0	63	(63)
AJK	Quantity Surveyor	36	63	(27)
AJK	DAE electrical	712	63	649
AJK	Excavator Operator	0	60	(60)
AJK	Wood Carving	0	57	(57)
AJK	Shuttering Carpenter	0	56	(56)
AJK	Receptionist	0	50	(50)
AJK	Welder	56	47	9
AJK	Beautician	230	47	183
AJK	Crane Operator	0	45	(45)
AJK	B. Tech Civil	0	39	(39)
AJK	Electronics Technician	111	32	79
AJK	Machine Operator	0	31	(31)
AJK	Steel Fabricator	23	28	(5)
AJK	DAE Food	0	27	(27)
AJK	Helper	0	27	(27)
AJK	wood machine operator	0	27	(27)
AJK	Fashion Designer	0	26	(26)
AJK	Aluminium	21	25	(4)
AJK	Driver	0	24	(24)
AJK	Shoes Maker	0	24	(24)
AJK	DIT	65	23	42
AJK	Dozer Operator	0	20	(20)

Province	Trade	Supply	Demand	Gaps
AJK	Safety officer	55	20	35
AJK	Foreman	0	16	(16)
AJK	Software Expert	0	16	(16)
AJK	Tile Maker	0	14	(14)
AJK	Tour Operator	0	14	(14)
AJK	Turbine Operator	0	14	(14)
AJK	Geologist	0	13	(13)
AJK	Re Winder	0	13	(13)
AJK	Accounting	31	12	19
AJK	Moving Machine Operator	0	11	(11)
AJK	Roller Operator	0	11	(11)
AJK	Graphic Designer	97	11	86
AJK	Lab. Technician	0	10	(10)
AJK	Electrician	293	10	283
AJK	Drafting & Cutting	72	9	63
AJK	Polisher	0	8	(8)
AJK	Leather Specialist	0	7	(7)
AJK	Packing Staff	0	7	(7)
AJK	Sales Expert	0	7	(7)
AJK	DAE Mechanical	0	6	(6)
AJK	Refrigeration Technician	162	6	156
AJK	Piller Maker	0	5	(5)
AJK	Pipe Machine Repairing	0	5	(5)

Province	Trade	Supply	Demand	Gaps
AJK	Tile Designer	0	5	(5)
AJK	DAE Electronics	69	5	64
AJK	Petroleum	0	4	(4)
AJK	Watch Mechanic	0	4	(4)
AJK	Shawl Sazee	4	0	4
AJK	Mechanical drafting	14	0	14
AJK	Web Developer	14	0	14
AJK	Graphic & Animation	21	0	21
AJK	Multi-media	21	0	21
AJK	Fitter general	22	0	22
AJK	Radio/TV	26	0	26
AJK	Machinist	27	0	27
AJK	False celling	30	0	30
AJK	Networking	30	0	30
AJK	English spoken Language	59	0	59
AJK	Graphic Designing	91	0	91
AJK	Hand and machine Embroidery	357	0	357

Annex 2: Questionnaire

Skills Workforce Demand Side Questionnaires

This information supplied on this format will kept strictly confidential and will be used for research & Planning of National Skills Information System, NAVTTC, Government of Pakistan

Name of organization: _____

Dated: _____ for the Year: _____ Organization Contact No: _____

Email: _____ Address of the establishment _____

Name of focal person: _____ Designation: _____ Contact no: _____.

1. Existing Skilled Workers (Only Skilled workers)

S.N	Trade, name	No. of workers		Source (use codes)	
		Male	Female	Male	Female
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					

Code: 1- TVET Graduate, 2- Work based learner, 3- Informal sector, 77- Others (Specify)

2. Skills deficiencies

2.1: Do you face skilled workforce deficiencies? 1= Yes 2= No

S.N	Trade name	Level (use codes)	Number
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

Codes: 1: B. Tech, 2: DAE, 3= Diploma, 4= Certificate, 5= short course, 6= others (Specify)

3. Future Skills requirement

S.N	Trade, name	Level (use codes)		Number/Annum	
		Male	Female	Male	Female
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					

Codes: 1: B. Tech, 2: DAE, 3= Diploma, 4= Certificate, 5= short course, 6= others (Specify)

3.1: What is your level of satisfaction from the TVET graduate? 1= Satisfied, 2= Not Satisfied, 3=Don't Know

3.2: What is your Suggestion improvement: _____

_____

_____

Name of Enumerator: _____Signature: _____

Name of Data entry operator: _____ Status: _____(Enter/Rejected)