Skills Gap Analysis

BALOCHISTAN

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Acronyms Used

AAP	Annul Action Plan
AJK	Azad Jammu and Kashmir
AKCCI	Azad Kashmir Chamber of Commerce & Industries
BTE	Board of Technical Education
CBTA	Competency Based Training Assessment
CPEC	China Pakistan Economic Corridor
DAE	Diploma of Associate Engineer
EU	European Union
FATA	Federally Administrative Tribal Area
GDP	Gross Domestic Product
KP	Khyber Pakhtunkhwa
LDT	Light Displacement
NAVTTC	National Vocational & Technical Training Commission
NSIS	National Skills Information System
NSS	National Skills Strategy
NVQF	National Vocational Qualification Framework
SBRI	Ship Breaking and Recycling Industry
TSSP	TVET Sector Support Program
TTB	Trade testing Board
TVET	Technical & Vocational Training
TEVTA	Technical education & Vocational Training Authority
TWG	Technical Working Group

Executive Summary

The significant skills gap has been cropped up in Baluchistan across a range of industries, particularly in technical and specialized fields. The high unemployment rate causes these gaps to persist in developing and even developed economies. The unavailability of potential workers, shortage of the required skillset and training are reasons to create a rise in unfilled jobs in the industrial sector.

These challenges such as closing skill gaps and reducing unemployment can be addressed by proper application of Technical and Vocational Education through provincial TVET. The acumen of inferiority grows for the general academic education, producing a negative-feedback loop: which creates the perception of low quality and limits the investment opportunities in TVET sector. The TVET schools suffer from inferior infrastructure as compare to the traditional education channels and have scarce resources for teacher training, curriculum upgrades, and the equipment required for students to learn the required skills due to less interest and inadequate investment shown by the investors in the sector.

So far, as availability of TVET institutes in the province is concerned, the dismal result emerges that only nine male and two female technical institutes are available to impart technical education while no co-education institute exists. The available data regarding gender wise enrolment in TVET institutes gives a clear picture that 68% male students are enrolled in the technical institutes whereas, 67% are enrolled in vocational institutes against less female enrolment that is required to be increased in coming years for ending the gender disparity. Only one teacher is available for seven male students in technical institutes while one teacher is deputed for 14 students in vocational institutes. The manufacturing sector has the highest proportion 62.6% in coverage of survey, followed by shipbreaking 18.3%, the mining 2.5% and the construction has the lowest proportion.

The informal sector is the highest source of provision of skilled workforce followed by work based learner in manufacturing, construction, mining, service and shipbreaking industries. TVET graduate is another source of provision of skilled workforce. The short course level provides the highest skilled work force (67%) in the construction sector, 63% in the mining sector, 56% in the service sector and 38% skilled workforce in the manufacturing sector. The safety in-charge trade emerges as the highest demand driven trade with 24% followed by 21% demand for electrician,

19% for cutter/binder, and 16% for wielding cutter and 6% for computer operator as the least trade in terms of consumption of skilled workforce. The degree level provision of skilled workforce in shipbreaking sector is 12%, followed by 9% in manufacturing sector and 3% in service sector whereas, in construction and mining sectors, the contribution is reduced to nothing. The DAE level supplies skilled workforce with 8%, 33%, 13%, and 5% in manufacturing, construction, mining and ship breaking sectors respectively. The B. Tech level produces skilled workforce in manufacturing and mining sectors with 12% and 13% respectively. The certificate level needs the highest skilled workforce with 46% in comparison with other levels, followed by short course with 40%. The B. Tech and others levels require the least skilled workforce with 1% only. The highest deficiency of skilled workforce has been recorded in mining sector with 61% against 39% availability of skilled workforce. The fishery is the next sector with second highest skill deficiency of 52% against 48% existing strength of skilled workforce. It is followed by 44% skill deficiency in construction sector while 56% skilled workforce is already engaged in the work process. The manufacturing sector and service sector lacks 31% and 25% skilled workforce deficiency against 69% and 75% availability of skilled workforce respectively.

The key findings of this study will facilitate the policy planners at federal and provincial level, training institutes and other TVET stakeholders for evident based decision making for designing and implementation of need based training system to reduce skills supply and demands gaps in the province.

Introduction

Recognizing the critical role of skills development in achieving sustained economic and social development, maintaining global competitiveness and responding timely to changes in technology and work patterns, the Government of Pakistan has committed to a major reform of its system of Technical, Vocational Education and Training. Since April 2011, the TVET Sector Support Programmes (TVET SSP) assists the Government of Pakistan in the implementation of its ambitious TVET sector reform. The programme is co-funded by the European Union and the Federal Republic of Germany and implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. Programme partners include the National Vocational and Technical Training Commission (NAVTTC), the Technical and Vocational Training Authorities (TEVTAs) in provinces and regions, and a large number of other stakeholders.

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[1].

The TVET policy places emphasis on increasing training opportunities for young people, reskilling existing workers, implementing the National Vocational Qualification Framework (NVQF) and the Competency-based Training and Assessment approach (CBT&A). Supporting the vision of the national TVET policy, Pakistan has already embarked upon a comprehensive TVET Sector Support Programme in 2011. During the first phase of the Programme, which ended in Dec 2016, much headway has 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 (2017–2022) has been built on the groundwork, policies and results of the previous phase. It aims at taking the reform to the next

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[1]   NSIS Project Documents

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:
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

During the first phase, TVET SSP supported NAVTTC in establishment of National Skills Information System (NSIS). NSIS supports decision makers and TVET planners in policy formulation and execution by providing research based labour market data. It also facilitates career guidance and placement services for TVET jobs seekers and employers. Following are the main objectives of NSIS Cell.
- To develop/provide a reliable National Skills Information System for workforce development in employable skills
- To provide timely and accurate information on demand and supply analysis, to TVET planners, training institutes, industry, academia, students and public in general;
- To establish and facilitate career/vocational guidance and placement services for TVET graduates and potential employers;

In addition to these skills for the future, changing employment patterns and their intersection with the TVET sector was the broad research area investigated by a NSIS cell with support of TVET Sector Support Program. It is very essential to have complete picture of skilled workforce supply to labour market and skills demand. The mismatch in the skilled force supply and demand is the main cause of unemployment rate of TVET graduates. Most of the developed countries are making efforts to match the supply of skills with current and projected skill needs. In Pakistan, all the statistical activities are salient for skilled workforce supply and demand and affect the employability of the TVET graduate. In order to ensure proper functioning of NSIS as well as accuracy of the information/data available, it is important to feed labour market data from both supply and demand side in the system. The supply side data i.e. data from TVET institutes and provincial/regional TVET governing bodies (e.g. TEVTAs) was added through the supply side census last year. The demand side data i.e. data from the employers and industry about skilled workforce has been collected already for Khyber Pakhtunkhwa, Baluchistan, AJK and Sindh. Similar data will be collected for Gilgit Baltistan region against the following indicators:
a. existing skilled workforce with employers
b. current skilled workforce deficiencies
c. future skilled workforce needs

The collected information will primarily focus on skilled workers training for various trades/occupations in Balochistan region and their actual utilization in local, national and international labour markets. This kind of data is not available in the market hence a demand side census needs to be carried out.

Objectives

The overall objective of the assignment was to collect data to calculate labour market demand for skilled workforce in Baluchistan for the following purpose:

- To calculate supply and demand mismatch
- To calculate and predict the skilled workforce demand for CPEC
- To calculate the participation rate of the skilled workforce
- To calculate skilled deficiencies in labour market of Baluchistan
- To know about the future skilled demand of Baluchistan

Scope of Assignment

Labour market demand based Skills development enhances both people's capacities to work and their opportunities at work, offering more scope for creativity and satisfaction at work. The future prosperity of any country depends ultimately on the number of people in employment and their productivity ration. Initially, with recommendation of Technical Working Group (TWG) of NSIS cell developed a short questionnaire for the purpose of trust building with employers, but in future after trust building the questionnaire will be revised as per the approved indicators of NSIS cell to catch complete information of the labour market.

Methodology

The skilled workforce demand is different from province to province, as each province has different economy. In case of Baluchistan in some area most of skilled workforce from other provinces is working and the local population number is very less due to different reason, but the main reason is non-availability of skills in local population. The demand side data had been collected in December 2017, Baluchistan, therefore, the provincial gap analysis of Baluchistan is completely based upon the primary data, which was collected through the support of provincial stakeholders. On the other hand very limited TVET institutes in Baluchistan update information for current year, due to non-availability of internet connection. NSIS cell also have databank of overseas labour market data since last two year, such information can help in identification of potential economic sector and trades. On other hand qualitative information have also help in identification of employable trades. NSIS always preferred to use the existing system of the government for data collection. In Baluchistan, services of the field staff from Industries Department were used for data collection on demand side.. The filed team of industries department was trained by the NSIS team and they collected data from the following sectors.

1. Construction
2. Manufacturing
3. Services

4. Mining
5. Shipbreaking

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

For the assignment Industries Department nominated 11 persons who collected data from the above mentioned economic sectors from their respective assigned area.

Questionnaires Development

Demand side questionnaire was already developed and approved by the technical working group which address 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).

Data Quality

The data quality was ensured through comprehensive training of field staff and random spot checking. Director industries department and NSIS were 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 the analysis to identify the supply and demand of skilled workforce, through skills gas analysis.

Results and Interpretation

TVET Institutes in Baluchistan

The above graph depicts data regarding availability of TVETA institutes in Baluchistan that only nine males and two female technical institutes are working to impart technical education to male and female students while no institute of co-education is existed. As far as vocational institutes are concerned, there are 48 males and 58 female institutes functional in the province which is comparatively better than strength of technical institutes. However, the presence of 18 institutes of mixed students of both male and female indicates the encouraging result of upward trend in the development of professional skill on vocational side.
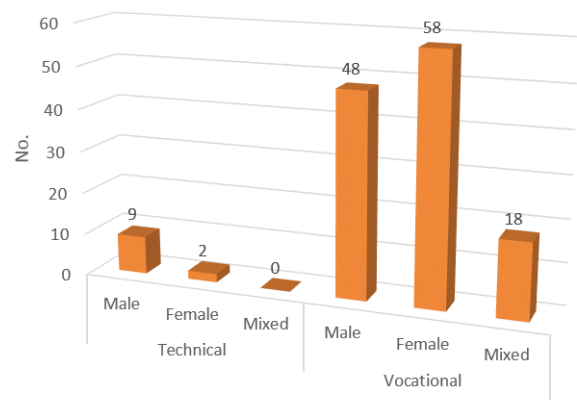
Figure 1: Gender Wise TVET Institutes

Gender Wise Enrolment

The above graph gives comparison of data pertaining to gender-wise enrolment of male and female students in both technical and vocational institutes in the province. The result emerged from the data analysis shows that 68% male students are enrolled in the technical institutes whereas 67% are enrolled in vocational institutes. It means that there is no significant difference between strength of male student's enrolment in both the institutes for development of skill and education to invest in earning profession for contribution towards national economy. Similarly, the data does not show any marked contrast between female students in terms of enrolment in both the institutes that depicts 32% enrolment in technical institute as against 33% in the vocational institutes. It means that little more efforts are required to increase female enrolment at par with male in such institutes.

Figure 2: Gender Wise Enrolment

Student Teacher Ratio

The graph shows data about student teacher ratio in terms of male and female students in both technical and vocational institutes. The outcome obtained from the analysis of the data indicates that one teacher is available for seven male students in technical institutes while one teacher is also deputed for 14 students in vocational institutes. It means that number of male students is less in the class and need to be increased for bringing to the standard of standard student teacher ratio.
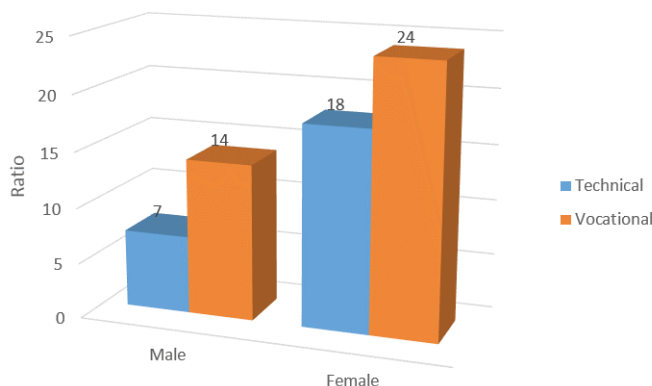
Figure 3: Gender Ratio
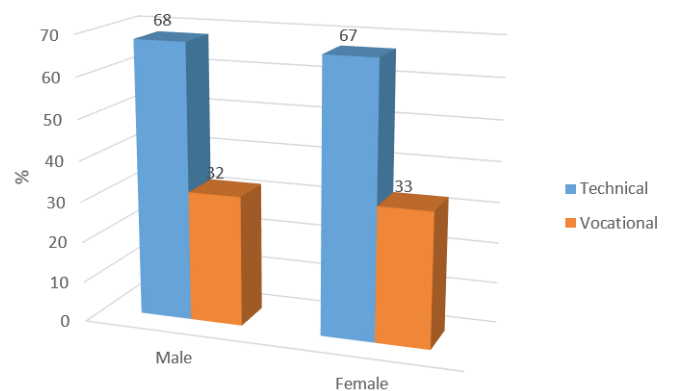
Likewise, the data on student teacher ratio for female students in both the institutes' points out that one teacher is available for 18 students as well as for 24 students in technical and vocational institutes respectively. It means that student teacher ratio is higher in female students than male students.

Sector Wise Coverage

As per figure 4, the manufacturing sector has the highest proportion 62.6 percent in coverage of survey, followed by shipbreaking 18.3%, mining 2.5% and construction with lowest proportion. The comparison of data concludes that skilled workforce must be increased for its consumption in the much-needed sectors aimed at enhancement of production through effective use of both technical and vocational institutes.
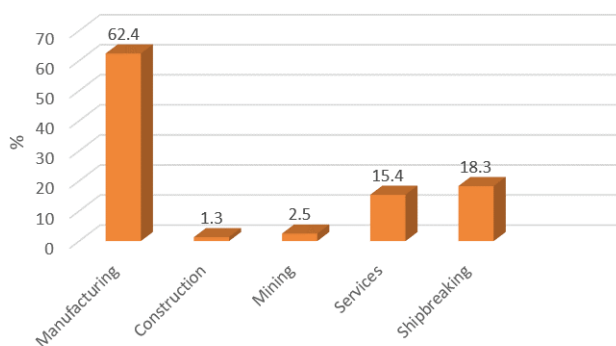
Figure 4: Sector wise Coverage

Source of exiting skilled workforce

The below-tabulated statement relating to sources of existing skilled workforce in technical as well as vocational institutes discloses the stunning facts that informal sector is the highest source of provision of skilled workforce followed by work-based learner in manufacturing, construction, mining, service and shipbreaking industries. TVET graduate is another source of provision of skilled workforce to the industries

with 12% contribution and the least source is termed as other unspecified sources whose contribution of skilled workforce provision to the industries is only 1.2%. The shipbreaking industry ranks first in terms of utilization of skilled workforce (57%) produced by informal sector followed by services whose workforce is produced by work-based learner (51.5%). The least source of utilization is service industries with its skilled workforce provided by other sources (2.6%).

Sector	Manufacturing	Construction	Mining	Services	Shipbreaking	Total
TVET Graduate	15.0	9.1	11.6	7.9	0.0	12.1
Work based learner	34.0	9.1	51.2	51.5	43.0	37.3
Informal Sector	50.6	40.9	37.2	38.0	57.0	49.3
Others	0.5	40.9	0.0	2.6	0.0	1.2

Table 1: Source of Skilled Workforce requirement

Level and Sector wise existing skilled workforce

The below table depicts data regarding level and sector wise existing skilled workforce in the province. The short course level provides the highest skilled work force (67%) in the construction sector, 63% in the mining sector, 56% in the service sector and 38% skilled workforce in the manufacturing sector.

The degree level provision of skilled workforce in shipbreaking sector is 12%, followed by 9% in manufacturing sector and 3% in service sector whereas in construction and mining sectors, the contribution is reduced to zero. The DAE level supplies skilled workforce with 8%, 33%, 13%, and 5% in manufacturing, construction, mining and shipbreaking sectors respectively. The B. Tech level produces skilled workforce in manufacturing and mining sectors with 12% and 13% respectively. The other levels such as certificate and diploma are also involved in the provision of skilled workforce manufacturing and service sectors only. Others make the least provision of skilled workforce in all the sectors except shipbreaking with 72% of encouraging result.

Sector	Degree	B. Tech	DAE	Short course	Certificate	Diploma	Others
Manufacturing	9	12	8	38	29	3	1
Construction	0	0	33	67	0	0	0
Mining	0	13	13	63	13	0	0
Services	3	0	0	56	26	15	0
Shipbreaking	12	0	5	5	2	4	72

Table 2: Level & sector Wise existing skilled workforce
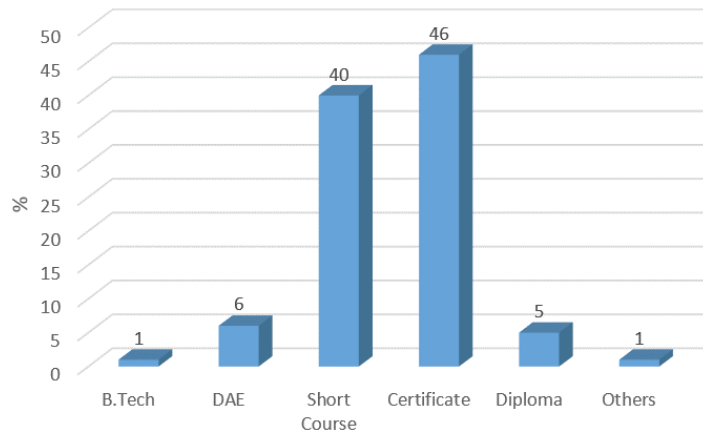
Figure 5: Level wise Skills Workforce requirement

The interpretation of data in the above graph indicates that certificate level needs the highest skilled workforce with 46% in comparison with other levels followed by short course with 40%. The B. Tech and other levels require the least skilled workforce with 1% only. The other levels such as DAE and diploma do not need maximum skilled workforce due to which both fall in the range of 6% and 5% respectively under required skilled workforce.

Sector and Trade wise skills demand

The data in the below tabulated statement puts light on the trade wise skill demand in various sectors. It is evident that welder ranks top on trade with demand of 1,560 in manufacturing sector (1,210 No) and shipbreaking sector (350 number). The auto electrician in service sector, bar ruling in manufacturing sector, chain repairing and cooling plant mechanic in shipbreaking sector and machine operator in manufacturing sector rank the least in demand with 10 each on trade. Overall, the highest demand needed is 6,402 in manufacturing sector followed by shipbreaking sector with 2,460 skill demand required to meet the existing deficiency. The skill demand in other sectors such as construction and service are stand at 2,070 and 1,675 respectively that are required to be met in a planned manner. The least demand prevails in the fisheries sector with only 455 followed by mining sector with 680 that mean only limited space available in the skilled workforce which can be filled easily with passage of time.

Trade	Manufacturing	Construction	Mining	Services	Ship-breaking	Fisher-ies	Total
AC Technician			60				60
Aluminum Fixer	160	120					280
Auto Denter				520			520
Auto Electrician				10			10
Auto Mechanic	90			160	100		350
Auto Machinery				80			80
B Pharmacy	30						30
Bar Ruling	10						10
Boat maker						455	455
Boiler Operator	230						230
Carpenter		520					520
Chain Repairing					10		10
Chief			40				40
Civil Surveyor		135					135
Cleaner					25		25
Compressor Mechanic					50		50
Computer Operator	515		40	45	260		860
Cook				60			60
Cooling Plant Mechanic					10		10
Cutting Technician					70		70
DAE Chemical	80						80
DAE Civil		280					280
DAE Computer Technology	60						60
DAE electrical	55						55
DAE Mechanical	150						150
Driver	60			55	380		495
Electrical	485						485
Electrician	215	100	80	70	210		675
Fabricator	40						40
Finishing Supervisor	50						50
Fitter	75				5		80
Garage Mechanic	140						140
Gas Cutter	20		240				260
Gas Welder					20		20
Generator Mechanic					40		40
Glass Workers	220						220
Graphic Designer	15						15
Helper	270						270
House Keeping			120				120

Trade	Manufacturing	Construction	Mining	Services	Ship-breaking	Fisher-ies	Total
Hydraulic excavator					40		40
Injection Molding	80						80
IT Specialist	10				50		60
Jall Maker					20		20
Kenchi Man	60						60
Crane Operator		120					120
Lab Assistant	113			15	10		138
Leather machine operator	124						124
Machine Operators	250						250
Mason		615					615
Mechanic	245				40		285
Machine Operator	10						10
Mechanical	40						40
Mono Rams Operator	80						80
Molding Helper	20						20
Painter	210				10		220
Packing Labour	45						45
Pharmacists	80						80
Plumber		180					180
Polisher	80			20			100
Purifier	20						20
Q Control Officer	15						15
Quantity Manager	20						20
Receptionist				40			40
Ruler Mechanic Operator	30		20				50
Security Expert	40				585		625
Sewing Machine Mechanic	125						125
Auto mechanic (Diesel)					40		40
Software Technician	90				20		110
Stitching & Cutting	145						145
Tailoring, Cutting	60						60
Tank Man	80						80
Shoes making	0			350			350
Telecom technician				200			200
Turner	120		40				160
Vertical Operator	20						20
Warehouse Officer	20						20

Trade	Manufacturing	Construction	Mining	Services	Ship-breaking	Fisher-ies	Total
Weight machine Operator				50			50
Welder	1210				350		1560
Workshop Maintenance	30						30
Grand Total	6402	2070	680	1675	2460	455	13742

Table 3:Sector & trade wise demand

Sector Wise Skills Deficiencv

The skill deficiency has been analysed in the sectors ranging from manufacturing, construction, mining, services and shipbreaking to fisheries as depicted from above graph. The highest deficiency has been recorded in mining sector with 61% against 39% availability of skilled workforce. The fisheries are the next sector with second highest skill

Figure 6: Sector Wise Skills Deficiency

deficiency of 52% against 48% existing strength of skilled workforce. It is followed by 44% skill deficiency in construction sector while 56% skilled workforce is already engaged in the work process. The manufacturing sector and service sector lack 31% and 25% skilled workforce deficiency against 69% and 75% availability of skilled workforce respectively. Both sectors have the highest manpower in comparison with other sectors. The sectors with deficiency of skilled workforce are required to be considered in terms of increase in manpower through planned education in the both technical and vocational institutes.

Employer level of Satisfaction

The data depicted in above graph shows that a survey has been conducted amongst various employers to check the level of satisfaction on consumption of skilled workforce produced by technical and vocational institutes followed by efficiency and productivity leading to satisfaction levels. It has been transpired after threadbare analysis of data that shipbreaking and mining

Figure 7: Level of Satisfaction

emerge as the highest employer with equal 83% satisfied and only 17% unsatisfied category. The manufacture employer has a variety of satisfaction levels with 59% termed as satisfied, 21% not satisfied and 20% don't know. Similarly, fisheries sector shares three level of satisfaction levels with 56% satisfied, 20% not satisfied and 24% don't know. Likewise, 38% people are satisfied,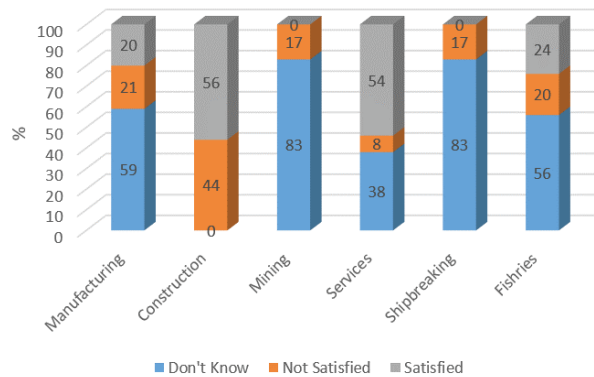 8% unsatisfied and 54% don't know in service employer as being the highest unsatisfactory level in the list of employers. The last but not the least is construction sector where two satisfactory levels are prevalent with 44% unsatisfied and 56% don't know. The employers such as construction, fisheries and shipbreaking are required to be motivated through provision of abundant supply of skilled workforce for improvement in efficiency and productivity aimed at bringing them at par with other employers in the economic field.

Shipbreaking industries

Ship Breaking in Pakistan is started in 1947 at Gadani. Gadani is a village of district Lasbela located in the southern part of Baluchistan along the Arabian Sea, Pakistan. This industry is one of the most hazardous industries, which was much active after the independence. The shipbreaking industry is mainly linked with the demand of steel in domestic and international market. Gadani is now the world third largest shipbreaking yard in terms of capacity whereas, in terms of efficiency, it is the fourth shipbreaking yard. Gadani Shipbreaking yard contain 128 shipbreaking lots and the annual capacity of shipbreaking is up to 125 ships of all sizes. This Industry was active in the era of 1970-1980, and became the world's most efficient industry. But its performance was reduced due to hiked tax impositions in 1997, giving an edge to the competitors for growth. Revival of this industry has been seen in 2012. According to the SBRI, this sector pays five billion annual taxes to the Pakistan government, out of which 30% has been given to Provincial government[2]. In the economic prospective, this industry reduces imports by providing steel to many of the steel industries which ultimately contributed in GDP. As this industry is a high contributor to GDP, therefore, government should pay attentions towards revival to make it "Green Shipbreaking" industry and match it with the international standards for country's betterment. The performance of this industry goes up and down due to political instability. The main reason due to which this industry is getting slower in competition is its high import duties after 1980. In 1997, high import duties were imposed on this sector and in 2002 its performance was improved due to some relaxation in imports duties. In 2009-2010, records of 107 ships were broken at Gadani and in 2008-2009 86 ships were broken into scraps where most of the scraps are sold locally. The very interesting fact is that a ship with 5,000 LDT is broken in 30-45 days at Gadani, whereas the same weight ship was broken in almost 6 months' time in India[3].

The main motivation of the study is the gradual decrease in efficiency, the incidents which are taking place day by day and the ignorance to such an important sector

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2   Ship breaking and recycling industries in Bangladesh and Pakistan
3   Research Paper on shipbreaking industries in by Asghar Shah

both by government and private business stakeholders. Our interest is to figure out the reasons of decrease in efficiency of this sector and the incidents which are taking place. If we take a look from 1980 to 2016; instead of development, this sector is going towards a downfall. As in 1980, Gaddani was the

Figure 8: Employment in Shipbreaking industries in Pakistan

world largest ship breaking yard with the employees more than 30,000 as labours. But as it came in competition with Alang, India and Bangladesh, its output is reduced to almost 1/5 as compared to the output of 1980. The main reason of this inefficiency is high import duties which were imposed in 1997. The sector contributes well to the GDP and pays a high volume of tax as earlier mentioned. As Government show a little reliability in reduction of tax on scrap, as a result the industry now employ 6,000 workers. This industry also fills the unemployment gap on Baluchistan level as 20-25% of the labour force is engaged in this sector.

Due to less interest of government and private bodies, lack of protective measures and less skilled work force serious incidents are taking place As shipbreaking is a hazardous sector, so there is need of skilled work force, labour security and other medical facilities.

Highest demand Driven Trades in Shipbreaking
The above graph shows the result of demand driven trades in shipbreaking sector.

The safety in-charge trade emerges as the highest demand driven trade with 24% followed by 21% demand for electrician, 19% for cutter/binder and 16% for wielding cutter and 6% for computer operator as the least trade in terms of consumption of skilled workforce. The urgent need

Figure 9: Highest demand driven trades in Shipbreaking

has arisen to chalk out a plan for its implementation in the technical and vocational institutes to meet the trade demand of various sectors[4].

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4   NSIS Cell demand side collection

Shoes making and Foot wear in Quetta

Small and medium level enterprises of Shoes/ chappal making is playing very important role in the local economy of Baluchistan. The quality of the p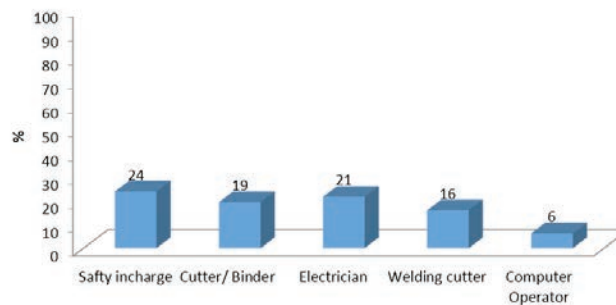roduct is much higher than the multinational footwear industries. Support in this area with respect to providing quality skills through technical and vocational education and linkages with other cities and countries can provide employment to thousands of young people.

Cluster of Balochi Chappal is present in most of the markets of Quetta, however in some markets the local population purchases raw material from market and produce various types of shoes domestically for further supply to the market. In shoes, only pure leather is used with its different designs and sole is made up car tyre. In shoes making, the potential point of view is the very area of the technical and vocational education. Such initiatives can play a significant role in reduction of poverty.

The annual potential of the shoes making industries is around 1,000, which can be raised with a multiplier effect with meaningful intervention in the area of quality and market linkages. The brand is already famous in whole Baluchistan, Afghanistan, some areas of FATA and Khyber Pakhtunkhwa. On the other hand, the Baloch Chappal is already very famous in Baluchistan due to its links with Baloch tribe's civilization

Skills Gap Analysis

Off all the trades, the tailoring cutting is the only trade in which skill gap between supply and demand is recorded as the highest with 6,055 followed by welder with 1,405, which means that demand of skilled workforce is more than the supply. The trades such as mason, safety officer, helper, boat maker, boiler operator, bar ruling, warehouse technician, chain repairing, jall maker, moulding helper, waiter, crane operator, vertical operator gas welder, generator mechanic, cook, dispenser, denter, purifier, cutter binder etc. have zero supply of skilled workforce due to which demand has risen to higher level, which needs to be met by increasing supply against rising demand. The other trades like carpenter, computer operator, auto mechanic, plumber, machine operator, AC technician, solar technician, arts of painting, telecom technician, quality controller, accountant etc. have limited supply of skilled workforce against higher demand. Though supply of skilled workforce has been started in such trades but rising demand of skilled workforce requires to be abridged through decreasing demand and increasing supply by reducing the skill gap. Conversely, there

are certain trades such as draftsman, IT technician, graphic designer, Auto CAD, compressor operator, purse making, basket making beautician, handicraft, dying master etc., which have supply of skilled workforce more than its demand and are showing more efficiency than those having more demand than supply. Such trades need to maintain the existing demand side gap for productivity.

Recommendations

1. The existing skilled workforce in shipbreaking industries are employed on daily basis so these workers are not fully trained and due to this reason the chances of injuries and death are much more.
2. The Shipbreaking industries have high potential of employment, if government imposes normal tax and also provide subsidy to this sector in order to motivate the production process of this sector.
3. Proper safety and protective equipment's should be provided for the engaged work force.
4. The policy makers in Baluchistan need to take steps to balance labour market.
5. TVET is a good tool for poverty reducation; the household income can rise through demand based skills training.
6. A controlling authority needs to be established for monitoring the performance of the private TVET institutes or to ensure the reporting line between the provincial TVETA's for provision of skilled workforce on the basis of rising demand
7. All the Boards of Technical Education (BTE) and Trade Testing boards (TTB), should be linked with national database for the purpose of planning, research and employability of the TVET graduate.
8. The Web based linkage of the National database and provincial TVETA's data-base are essential to reduce skilled workforce supply and demand gaps.
9. All the TVET stakeholders, policy makers, training providing institutes, employ-ers, immigration bureau, and job seekers should use the platform to reduce the gaps between skilled supply and demand gaps.
10. The performance of the high proportion private TVET institutes can be im-proved through imparting training to produce the skilled workforce on sustain-able basis.
11. TVET stakeholders and the policy makers in short term should collect and analyse data about labor market needs; set the vision, goals and targets for the TVET system; initiate design of occupational standards, curricula, and student qualification requirements, with involvement of employers and other social part-ners.
12. Sector wise digital classification should be addressed in order to prepare uni-form list of vocational and technical education to reduce the variations.

13. All the provincial TEVTA's need to establish job placement office in each industrial zone to link the job seekers, training providers with employment and need to address the labour market demand.
14. The economic transections effects should be addressed prior to its negative impact on labour market, for this purpose each TEVTA's should establish a research cell.

Annex 1

Table 4: Skills gaps Analysis

Province	Trade	Supply	Demand	Gaps	
Baluchistan	AC Technician	12	60	🔴	(48)
Baluchistan	Aluminium Fixer	280	88	🔴	(192)
Baluchistan	Arts of Painting	25	220	🔴	(195)
Baluchistan	Auto Electricion	10	55	🔴	(45)
Baluchistan	Auto Mechanic	25	350	🔴	(325)
Baluchistan	AutoCAD	112	46	🟢	66
Baluchistan	B Pharmacy	0	125	🔴	(125)
Baluchistan	Bag ,Purse Making	120	0	🟢	120
Baluchistan	Bar Rulling	0	13	🔴	(13)
Baluchistan	Baskets Making	51	0	🟢	51
Baluchistan	Beautician	489	0	🟢	489
Baluchistan	Boat maker	0	455	🔴	(455)
Baluchistan	Boiler Operator	0	230	🔴	(230)
Baluchistan	Caping Operator	0	10	🔴	(10)
Baluchistan	Carpenter	240	520	🔴	(280)
Baluchistan	Chain Repairing	0	14	🔴	(14)
Baluchistan	CharaBafi	8	0	🟢	8
Baluchistan	Chief	0	48	🔴	(48)
Baluchistan	Civil Survayer	24	160	🔴	(136)
Baluchistan	Compressor Operator		50	🔴	(50)
Baluchistan	Computer Operator	23	860	🔴	(837)
Baluchistan	Cooling Plant Machanic	0	32	🔴	(32)
Baluchistan	Crane Operator	0	18	🔴	(18)
Baluchistan	Cultural Heritage	15	0	🟢	15
Baluchistan	Cutter/ Binder	0	150	🔴	(150)
Baluchistan	DAE Chemical	24	80	🔴	(56)
Baluchistan	DAE Civil	22	280	🔴	(258)
Baluchistan	DAE Electrical	48	55	🔴	(7)
Baluchistan	DAE Electronics	58	0	🔴	58
Baluchistan	DAE Information Technology	47	60	🔴	(13)
Baluchistan	DAE Mechanical	15	150	🔴	(135)
Baluchistan	Denter	0	28	🔴	(28)
Baluchistan	Diesel Pump Maker	0	13	🔴	(13)
Baluchistan	Doffers	0	16	🔴	(16)

Province	Trade	Supply	Demand	Gaps	
Baluchistan	Driver	0	495	🔴	(495)
Baluchistan	Dying master	21	0	🟢	21
Baluchistan	Electrician	76	675	🔴	(599)
Baluchistan	English Language	480	0	🟢	480
Baluchistan	Exavator operator	0	40	🔴	(40)
Baluchistan	Fabricanter	0	40	🔴	(40)
Baluchistan	Finshing Supervisor	0	50	🔴	(50)
Baluchistan	Fitter	0	80	🔴	(80)
Baluchistan	Fruit Processing	19	0	🟢	19
Baluchistan	Gas Welder and Cutter	0	20	🔴	(20)
Baluchistan	Gems Cutting	20	0	🟢	20
Baluchistan	Generator Mechanic	0	40	🔴	(40)
Baluchistan	Glass Workers	0	40	🔴	(40)
Baluchistan	Graphic Designer	280	22	🟢	258
Baluchistan	Handicraft	899	0	🟢	899
Baluchistan	Helper	0	270	🔴	(270)
Baluchistan	House Keeping	0	120	🔴	(120)
Baluchistan	Injection Modling	0	80	🔴	(80)
Baluchistan	Italian Dhow	45	0	🟢	45
Baluchistan	Jall Maker	0	20	🔴	(20)
Baluchistan	Kenchi Man	0	60	🔴	(60)
Baluchistan	Koresha	13	0	🟢	13
Baluchistan	Lab Assistant	0	138	🔴	(138)
Baluchistan	Language C++	12	0	🟢	12
Baluchistan	Lattice Making	4	0	🟢	4
Baluchistan	Leath Machine Operator	0	124	🔴	(124)
Baluchistan	Machine Operators	6	250	🔴	(244)
Baluchistan	Mason	0	615	🔴	(615)
Baluchistan	Mechanical Operator	0	10	🔴	(10)
Baluchistan	Mechine Operator	0	71	🔴	(71)
Baluchistan	Mobile Repairing	20	230	🔴	(210)
Baluchistan	Mono Rams Operator	0	80	🔴	(80)
Baluchistan	Moulding Helper	0	20	🔴	(20)
Baluchistan	Painter & Dentor	0	56	🔴	(56)
Baluchistan	Pharmasists	0	80	🔴	(80)
Baluchistan	Plumbers	38	180	🔴	(142)
Baluchistan	Polisher	9	100	🔴	(91)
Baluchistan	Press machine Operator	13	214	🔴	(201)
Baluchistan	Purifier	0	32	🔴	(32)
Baluchistan	Quality Controlar	15	95	🔴	(80)

Province	Trade	Supply	Demand	Gaps	
Baluchistan	Radio Mechanic	67	0	🟢	67
Baluchistan	Respcianist	0	156	🔴	(156)
Baluchistan	Ruller Mechanic Operator	0	32	🔴	(32)
Baluchistan	Safty officer	0	625	🔴	(625)
Baluchistan	Sharma	24	0	🟢	24
Baluchistan	Solar Technician	19	56	🔴	(37)
Baluchistan	Tailoring,Cutting	0	12	🟢	(12)
Baluchistan	Tailoring,Cutting	6129	74	🔴	6,055
Baluchistan	Telecome technician	23	200	🔴	(177)
Baluchistan	Textile Spinning	5	76	🔴	(71)
Baluchistan	Textile Weaving	71	123	🔴	(52)
Baluchistan	Traditional Cap Making	91	0	🟢	91
Baluchistan	Turner	0	160	🔴	(160)
Baluchistan	Typing Short Hand	81	0	🟢	81
Baluchistan	UPS technician	32	78	🔴	(46)
Baluchistan	Vertical Operator	0	22	🔴	(22)
Baluchistan	Warehouse technician	0	14	🔴	(14)
Baluchistan	Web Developing	10	230	🔴	(220)
Baluchistan	Weight machine Operator	0	50	🔴	(50)
Baluchistan	Welder	176	1560	🔴	(1,384)
Baluchistan	Workshop Maintenance Manager	0	30	🔴	(30)

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.No.	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.No.	Trade name	Level (use codes)	Number
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

Codes: 1: Degree2: B.Tech3: DAE, 4= short course, 5=Certificate, 6= Diploma, 7= others (Specify)

3. Future Skills Requirement

S.No.	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: Degree2: B.Tech3: DAE, 4= short course, 5=Certificate, 6= Diploma, 7= 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:

_____
_____
_____
_____