Human resource development through technical and vocational education and trainings (TVET) system in Baluchistan: A critical SWOT analysis

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Abstract: Human resource development (HRD) through technical and vocational education and training (TVET) consists upon provision of different skill trades through provincial and federal TVET authorities/commissions and allied TVET departments in Baluchistan. The strength of TVET system include both technical education and vocational trainings, provincial TVET authority, TVET allied departments, TVET dissemination through private and public sectors, membership in TVET laws and protocol mechanism endorsed by ILO and UNESCO, trade testing boards, and many more attributes. TVET Weaknesses are present in administrative and legal issues among TVET authorities and departments, highly imbalanced and skewed skill trades among technical education and vocational trainings, skill trades deficiencies, gender-wise biased provision of skills, skill quality compromises, inadequate number of TVET institutions, traditional TVET skill trades, and non-collaboration among TVET institutions and authorities. The opportunities lie in newly emerging skill demand in projects of CPEC, international markets of Europe, Middle East, and neighboring Gulf states for decent work and earnings, national skill demands, HRD through skill development of labor force, provincial skill policies, and absorption of skills in mega projects. Probable threats to TVET system include slower and lower skill formation, skill shortages and biasness for females and rural areas, in-competitiveness of local skill provision regionally, imbalanced among technical education and vocational training, expected arrival of Chinese skilled labor force, expansion of TVET trades to highly demand driven skills, and lowest socio-economic indicators for the establishment and development of TVET system in Baluchistan. Policy recommendations implies for skill development and human capital formation through a set of strategically well-coordinated and comprehensive actions for the development of TVET system in Baluchistan.

Key words: *Baluchistan; Human resource development; SWOT analysis; TVET system*

1. Introduction

Empirically, the case of Baluchistan for human resource development (HRD) is more non-promising and problematic as compared to the national level statistics about labor force and its human capital formation. There is lack of adequate percentage of skilled labor force for the province of Baluchistan(Labor Force Survey, 2015-16).Similarly, the poverty based human development index (PHDI) for the whole province of Baluchistan is much lower in statistics than the worst performing districts in PHDI of the province Punjab as per PHDI statistics exposition by recently conducted surveys(Baloch, 2018). With the lowest HRD and inadequate status of skilled labor force in Baluchistan, the most backward province of Pakistan would not perform competitively in the wake of mega projects like, China-Pakistan Economic Corridor (CPEC). Multiplier effects of CPEC could be secured on economic fronts of prosperity, rising quality of life, and getting socioeconomic benefits only if adequate number of labor force are equipped and provided with technical skills and vocational trainings. The issue of skill deficiency of the labor force may pose serious threats for socioeconomic development of provincial people to lag its internal and external competitors especially, China, in the wake of CPEC projects in years to come. To cope with the problem of skill-deficient labor force and enhance their human resource and skilling competency for economic prosperity and development of the province, the inquiry convention of research requires to completely analyze both the internal and external mechanism of existing technical and vocational education and trainings (TVET) system of Baluchistan. It is justified for devising policy recommendations about the problems of insufficient number of technical colleges and vocational training centers, low enrollment, quality compromises, very skewed technical education, insufficient pass outs, less number of technical and vocational institutions, lower enrolment rates for TVET skilling, gender biasedness, urban centric, quality compromises in TVET courses and workshops, legal and administrative issues among TVET departments, and

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non-coordination and non-collaboration among TVET organizations for skilling and developing the human resource of local labor force in Baluchistan(Labor Force Survey, 2015-16, Pakistan Bureau of Statistics, 2015).

1.1. Problem statement

Skill deficiency in technical and vocational trades is one of the bigger problems for the HRD of labor force in Baluchistan. With less than national averages for statistics in technically skilled manpower, the province and its local people cannot win competitive and comparative advantages in domestic and expected CPEC based economic opportunities of labor market outcomes. The economy of Baluchistan will face potential economic threats in all its sub-sectors of industry, trade, agriculture, and services once Baluchistan gets engaged into upcoming CPEC mega projects and its multi-billion series of economic activities on its vast geographic landscape. Without developed human resource capital, particularly in technical and vocational skills, the socioeconomic targets of Vision-2025 and sustainable development goals (SDGs) may also not be met for the poor population of Baluchistan. The problem of technical skill deficiency of the provincial labor force presents the case of its internal and external analysis to recommend policy options for proper HRD and skill development.

1.2. Study objectives

Main objective of this study is confined to internally and externally analyze TVET sector of Baluchistan to shed light critically on its strength, weaknesses, opportunities, and threats for devising viable policy recommendations for the formation of human capital through technical and vocational skills.

1.3. Scheme of the study

The remaining part of this study is followed by a brief literature review. Theoretical framework and research methodology follow the section of brief literature review. A critical SWOT analysis through its four components applied on TVET system of the province is elaborated before the last section reserved for conclusion and policy recommendations.

2. Brief literature review

The TVET system consists upon provision of training trades for the duration of three months to three years by both the private and public sectors in both rural and urban areas in almost all the provincial districts of Baluchistan. It also consists upon three tiers of technical education, vocational training, and technical training with the help of polytechnic colleges, vocational training centers, technical training centers, urban and rural development sectors, and privately-owned training centers. The provincial TVET system work for the sole purpose of achieving the skilling targets, human resource development, and formation of human capitalism in technical and vocational skills to be inculcated the provincial labor force of Baluchistan (NAVTTC, 2018, Government of Balochistan, 2011, KP-TEVTA, 2018, P-TEVTA, 2018, S-TEVTA, 2018).

National TVET Policy (2015) documents eight objectives for skill development in case of Pakistan. These objectives are also extended for the provincial labor force. Among these eight objectives, skill development, particularly in unskilled youth of Baluchistan, is also aimed at achieving increased productivity, sustained economic growth, better job opportunities, up-skilling and re-skilling, export of skilled labor, and achieving labor market demand for skilled work force. All the provincial TVET authorities, directorates, and departments work for skill dissemination to the unskilled population for skilling Baluchistan, vocational and technology proliferation, skill development, human resource development, creation of job opportunities, reducing unemployment, prepare skilled youth for mega projects and economic corridors, manage and promoting TVET systems, collaborating TVET systems with linkages to labor markets, and many more purposes and functions related to TVET system strengthening for the province(Labor Force Survey, 2015-16, NAVTTC, 2018, Government of Balochistan, 2011, P-TEVTA, 2018, Khan and Ahmed, 2018).

For the case of Baluchistan, limited number and very conventional TVET skill trades are also provided with common and vulnerable segments of local population in towns and capital cities of six divisions of the province. Most of these skill programs are discontinuous, in the time of funds hunting from national and international donors, irregular, for funds raising and earnings, and work without provincial accreditations from the trade testing board in the province. Informal skilling, workshop-based skilling, home apprenticeship, and conventional programs for skill development in the province, which are like the case for skill development functional in other developing parts of the world(Glewwe and Kremer, 2006, Planning Commission, 2015).

The literature for human resource development through TVET lack the exploration of analyzing TVET sector of the province of Baluchistan. The policy mechanism for skilling the provincial labor force is devised based on studies and policy options not encompassing the existing nature of provincial skill development diaspora. The labor market outcomes of TVET system may not predicted unless a comprehensive analysis of the provincial TVET system is not undertaken. This study might have the likelihood of contribution to comprehensively analyze provincial TVET system through the framework of SWOT for human capital formation, skill development, and overall socio-economic

development in the lives of the local people in Baluchistan(Pakistan Bureau of Statistics, 2015, Asian Development Bank, 2009, Social Welfare Department, 2017, Asian Development Bank, 2002, Government of Pakistan, 2015, Kazmi, 2007, Khilji et al., 2012).

3. Theoretical framework

The famous theoretical framework of SWOT analysis is used for this study. Acronym "SWOT" is composed of the four components of S = strengths, W = weaknesses, O = opportunities, and T = threats. The first two components highlight and make known the internal mechanism of provincial TVET system. The latter two components explicitly show external environment of provincial TVET system. The SWOT approach will analyze in depth underpinnings for exploration, make knowing, understanding, formulating, ease to modification, designing, devising, and effectively implementing the true sense of TVET system for the broader causes of HRD, human capital formation and achieving skilling targets for the youth and labor force development in Baluchistan. This approach is commonly used to highlight the strengths, weaknesses, opportunities, and threats of any system or a program to efficiently analyze its existing mechanism for better policy formulations and options to better development TVET system for the socio-economic areas like manpower development, business, education, science and technology, and technological progress(Helms and Nixon, 2010, Houben et al., 1999, Grundy, 2006, Chen et al., 2014).

4. Research methodology

This study uses a baseline survey approach that includes field work, desktop survey, and content analysis of available policies and skill development documents at national and provincial levels. Field work includes personal visits to TVET departments, provincial authority for TVET, NAVTTC regional and apex offices, brain storming discussions with subject matter experts of TVET, and contacts with TVET diploma and certificate holders working in local labor markets. The desk top survey includes, browsing internet sources related to TVET sectors and TVET affiliated departments/institutions, both working at national and provincial levels in the province. Content analysis is derived from the texts of official TVET documents, TVET acts and rules and regulations, and TVET policy papers to critically highlight the SWOT analysis of TVET system for HRD via TVET system, following the combination of research conventions laid by (Grundy, 2006, Halcomb and Davidson, 2006, International Labour Organization, 2003, Hsieh and Shannon, 2005, Schulman et al., 1989, Tuckett, 2005, Khan and Ahmed, 2018), in Baluchistan.

5. SWOT analysis of TVET System for HRD in Baluchistan

It is critically discussed as per its four components in the following.

5.1. Strengths

The strengths include proper legislation and implementation of relevant Act (2007) and Rules of Business (2011) for provision of TVET system and it dissemination, provincial TEVTA, and allied technical boards and departments in the province of Baluchistan. Technical education exists in the form of engineering technologies and proper mechanism for its dissemination is in place through government technical colleges in the province. At provincial level, the working institutional structure of the colleges is poly technical. Private sector and NGOs', for the provision of technical education and trainings, are well established and functional. Technical education is further complemented by vocational trainings, both of which in return collectively constitute the whole TVET system in Baluchistan. The mechanism formulated for making sure the functionality of vocational education is well established and regulated properly in all the districts of Baluchistan. National level regulatory bodies like, NTEVTA, NAVTTC, NAVTEC, Skill Development Councils, and other TVET regulatory and apex bodies, have established their regional offices and directorates in the province(NAVTTC, 2018, Government of Balochistan, 2011, P-TEVTA, 2018, Abul Rauf, 2015, Khan and Ahmed, 2018).

Despite discontinuity, donors funded programs for skill development are also functional in Baluchistan. CPEC skill programs are designed and yet to be started in the province. The accessibility of technological education in Baluchistan on district level is quota based, and, that is why, wide range accessibility is made sure to almost all of the districts of the province, thus making it strength of the provincial TVET system. Technical boards, trade testing boards, vocational certifications are established for quality maintenance, examination system, diploma and certification systems in the province. B-TEVTA was established as the apex provincial body for regulating, promoting, and financing TVET sectors in the province. Establishment of NAVTTC regional directorates for skill development initiatives of the prime minister programs for skill development and skilling Pakistan in the province are present. Since, Pakistan is signatory of ILO, UNEVOC, GIZ, and UNESCO TVET Strategy (2016-2021), and other international bodies *"for technological development, achieving SDG4 and inclusive skill development for greening economies",* the provincial TVET system has also been directed to meet the targets mentioned at provincial level. There is an integrated and complementary mechanism established for the infrastructure of large number of NGOs and private sector TVET institutions across the whole province

for TVET system and TVET trades proliferation in Baluchistan. There are strong links between TVET systems and the labor market outcomes of employment generation, livelihood earnings, business start-ups, entrepreneurship, and other economic and labor market fortunes of all the diploma and certificate holders of technical education and trainings in Baluchistan. The strength of provincial TVET system lie in the fact that almost all the business and economic sectors of industry, services, agriculture and poultry, banking, building and roads, civil work and construction, petroleum-chemical industry, conventional and rural economy, computer science and IT, dot.com technology, e-business, and many more sub-sectors accommodate and demands for technically and vocationally expert labor force in the province. The ongoing and upcoming CPEC projects demands for project based TVET skill and trades in all the CPEC projects announced and planned for installation in Baluchistan(Labor Force Survey, 2015-16, NAVTTC, 2018, Government of Balochistan, 2011, Social Welfare Department, 2017, NAVTTC, 2016b, Planning Commission, 2016, German Federal Ministry for Economic Cooperation and Development, 2017-2019).

5.2. Weaknesses

Low levels of socio-economic indicators in Baluchistan are signs of its shortcomings and weaknesses as compared to other provinces of Pakistan. The rock bottom levels of education, health, economic fortunes, and other socio-economic signs present the case of Baluchistan as very weak and not a suitable one for technological progress and high ventures of technological and vocational knowledge. The numerical spectrum of technologies in engineering education and trainings present is limited in the province. According to NAVTTC (2018) the skill dissemination of technical knowledge is confined to only six in the province as compared to a handsome total of 29 to 32 technical technologies across Pakistan. The engineering diplomas are confined to traditional technologies of civil engineering, electronics, mechanical, computer and IT only in the province. No high technology based engineering diplomas, like Nano technology and micro-biology, are introduced TVET in the province. Similarly, no skill specifications in relevant TVET trades for the provincial CPEC projects are identified. Quality of the existing six diplomas in associate engineering technologies are compromising on low curriculum, quality assurance in theory and workshops, teaching capabilities, course contents, and no industrial space for internships and apprenticeships in the province. There is no unified system of quality assurance, in terms of quality measurement of vocational skill qualifications of different vocational certifications for vocational training centers across the province. There is no agreed upon curricula and course system for centralized examination in vocational trainings of

different TVET departments in the province. National qualification verification framework (QVF) for quality assurance of both the associate engineering diplomas and vocational certifications are not fully implemented accordingly by all the provinces in Baluchistan. Most of the technical colleges, technical training centers, vocational training centers, and other skill development sectors are poor of well-established workshops and they lack in practical rooms, laboratories for practical exposure and trainings for their trainees in most of the provincial TVET institutions. The conditions of physical infrastructure, including machinery, scientific equipment and tools for vocational trainings, are deplorable and pathetic in vocational training centers and polytechnic colleges of the province. One of the reports of Asian Development Bank (2011) mentions that the targets for TVET education promotion in the whole Baluchistan are not met by its TVET strengthening programs in Pakistan(Asian Development Bank, 2002, Government of Pakistan, 2015, NAVTTC, 2016a, Khan and Ahmed, 2018).

No memorandums of understandings (MoUs) are signed among provincial TEVTAs for TVET collaborations as mentioned in National Skill Strategy (2015). There is a lack of coordination at provincial levels among TVET programs and terms of references for TVET allied departments in Baluchistan. Strong traces and elements of trust deficit, legal, and administrative issues harbour in between TVET departments & provincial TEVTAs especially in the case of B-TEVTA and allied TVET departments in the provinces. Lack of coordination and collaboration is there among the B-TEVTA, NAVTTC, NAVTEC, Skill Development Councils, and other bodies for TVET system development in Pakistan. The are many technical, legal, administrative, and coordination problems and constraints among B-TVET authority, national level TVET organizations and ministries, provincial TVET departments, and public and private sector skill organizations for establishing one of the coordinated and well established TVET system in Baluchistan. The TVET system of the province falls short of capacity and fails to respond to the demands of technical and vocational skills in different trades that are needed in the national and international markets. The responses of labor market to those who have vocational and technical diplomas are low wages, unemployment, even lower female participation, and no regular jobs in the prevalent markets of national and neighboring Gulf States. NAVTTC has zero coordination with B-TEVTA for running its "Skilling Pakistan" program in the province. Same is the case with NAVTTC and other TVET allied departments, except Manpower Department of the province. Skill deficiency in Baluchistan is reported around 80%, 22%, and 40% in cases of technical trainings, technical education, and vocational trainings, respectively, as compared to national level skill dissemination in the mentioned three areas of TVET system. The legal and

administrative status of B-TEVTA to work and function as provincial authority for technical and vocational education and trainings in Baluchistan is not fully recognized as it is in the case of functionality status of P-TEVTA in Punjab(NAVTTC, 2018, Government of Balochistan, 2011, KP-TEVTA, 2018, P-TEVTA, 2018, NAVTTC, 2016a).

NAVTTC (2017) reports that TVET system in Federally Administered Tribal Areas (FATA) is far advanced than the TVET system in Baluchistan. Private sector and NGOs have very limited scope of the dissemination of vocational and technical trainings in Baluchistan. The private sector mostly provides computer and IT related certificates and diplomas and these skill trades very common and frequent among almost all the private sector and NGO based TVET institutions in Baluchistan. Since, these TVET sectors mostly depends upon donors and funds from NAVTTC, that is why their TVET programs are seasonal, discontinuous, and often for funds hunting purposes. So, investment in TVET from private sector is very limited and confined to only three to five cities and district towns in the province. No skill strategy, policy, and mapping has been devised for TVET skill needs and demands of labor market of the province: CPEC projects, and mega and mono projects. No study has yet been revealed in covering any of the socio-economic aspects of technical and vocational trainings for skill development, human capital formation, human resource development, linking TVET with economy and development, and exploring labor market outcomes for TVET systems in the province. TVET sector in Baluchistan is highly skewed in favor of vocational trainings as compared to technical education and trainings. Out of 189 total TVET trades, less than 50 skill trades are technical trainings, and out of which only six skill trades are offered as associate engineering diplomas in the province. The number of vocational trades is even less than 30, in the province, out of 140 total vocational skill trades that disseminate at national level in Pakistan(NAVTTC, 2018, P-TEVTA, 2018, S-TEVTA, 2018, Planning Commission, 2016, Khan and Ahmed, 2018).

5.3. Opportunities

TVET system is present with officially and legally recognized TVET departments, provincial TEVTA, and NGOs/private sector for TVET provision in Baluchistan. National Skill Policy (2015) is designed for quality skill development and training Pakistani youth to have internationally recognized and affiliated standards of technical education in the province. In Baluchistan, approximately, *"6% of the whole population acquires skills (Technical Vocational Education & Training). There are 1,647 public & private TVET institutes in Pakistan"*. The province and ownership-type wise TVET institute is highest in the province of Punjab and the least in Baluchistan. There are approximately hundred TVET institutions working for associate engineering technologies in

Pakistan, the ratio for Baluchistan is the lowest: only four, out of total eight, technical colleges are functional. NAVTTC has established its regional directorate in the provincial headquarters of Baluchistan for disseminating its "*Skilling Pakistan*" program of vocational skill development for the youth of the province. Prime minister programs of technical and vocational for all the five phases are successfully completed due to TVET system and its coordinating efforts exerted and initiated by NAVTTC in the province(NAVTTC, 2018, KP-TEVTA, 2018, S-TEVTA, 2018, Khan and Ahmed, 2018, NAVTTC, 2016a).

Private sector institutes in vocational and technical, NGOs, and some international bodies like UNESCO, ILO, UNICEF, GIZ, and UNHCR are also working in TVET in very purposive and selected areas and population of the province. Establishment of all the provincial B-TEVTA is no less than a blessing for the regularization of TVET system in the backward province of Pakistan. It may coordinate all the disparities and differences in almost all the sub segments such as course contents, workshops, diploma quality assurance, institutional development, teachers' trainings, technological levels, and other types of innovation for all the TVET skills and trades in the province. Vibrant labor markets for almost all kinds of TVET skills in almost all the sub-sectors of industries, agriculture, and services in the national economy are present to accommodate the influx of skilled labor force inside and outside of the province(S-TEVTA, 2018, Planning Commission, 2016, German Federal Ministry for Economic Cooperation and Development, 2017-2019, UNESCO-UNEVOC, 2016).

TVET skill trades are offered to both genders, male and female, in both rural and urban areas in all the districts of the province. Labor market opportunities for the provincial skilled labor force may get good opportunities in Arab & Gulf countries, Central Asian Economic Partners of Pakistan & China, and European Union for the export of TVET qualified & skilled labor force to earn handsome remittances and capital inflow to their families in Baluchistan. Similarly, CPEC projects, upcoming FIFA World Cup, Dubai Expo, and Gwadar Deep Sea Port, Energy infrastructure, and three economic corridors of rail, roads, buildings, and civil works inside the provincial territory are big and prospective opportunities for all the engineering technologies to be required and absorbed in these national and international economic projects. Human resource development needs the future and emerging sectors of our economy in the contexts of mega projects, CPEC projects, provincial economic activities, demographic dynamism, active youth, and labor market needs provide enough opportunities for TVET sector flourishing in Baluchistan(Government of Balochistan, 2011, Khan and Ahmed, 2018, Planning Commission, 2015).

5.4. Threats

Expert and skilled Chinese labor force and its arrival on the provincial soil and markets is one of the potential threats for unskilled and semi-skilled Baluch labor force to compete with them for skills, expertise, productivity, earnings, and employment opportunities. Less coordination between national and provincial TVET institutions also pose threats to the legal and administrative status of their present premises of working and functional authorities in Baluchistan. Very weak and insufficient working and funding status of B-TEVTA in the province also pose threats to the legal and administrative functions of this TVET authority for skill dissemination in the province. Similarly, there is less coordination and lack of uniform policy designed, devised, implemented, and executed for TVET skill development that comes through different sources of NAVTTC, Skill Councils, B-TEVTA, and TVET departments of the provincial government. Weak educational system and low literacy rate do not support enrollment in TVET education and trainings in the province. Female marginalization in TVET enrollment is also one of the potential threats to skill development in the province. Currently, less 6% of Pakistani labor force possess both technical and vocational skills, of which only 35 to 40% consists upon TVET skills in the province (NAVTTC, 2018, S-TEVTA, 2018, German Federal Ministry for Economic Cooperation and Development, 2017-2019, NAVTTC, 2016a, Khan and Ahmed, 2018).

TVET skills for female population are very limited. Very limited and conventional technical and vocational skills are allowed for females to take part in, due to some of the social, gender, political, tribal, and low mobility constraints and issues in tribal set ups of the province. Provincial TVET authority is not given full authority to work independently and focus labor markets and conduct independent collaborations with international markets and overseas foundations for TVET skill development, institutional collaboration, fund raising, financing high cost of technical workshops and technical laboratories development, teacher trainings, skill courses and practical up gradation, industry linkages, graduates enrollments, and recruitments of TVET qualified individuals for national and international markets. The treats also include some of the legal and administrative issues among TVET departments like B-TEVTA and allied TVET departments and directorates. The presence of red tape regulations, improper designing and implementation of TVET policies, fragmented TVET programs, lack of coordination between private and public sector TVET programs and sectors, and many more general issues are associated with overall TVET system in this least developed province of Pakistan. The threat of imbalanced TVET programs for male and females, inclination of TVET skills for vocational trades instead of technical education and trainings, imbalanced rural and urban distribution of TVET institutions and its enrollment practices, and

regional disparity do exist in the provincial TVET system. Modern, demand driven, and high-tech engineering skills and associate diplomas are needed in the province in the wake of CPEC projects and opening of provincial economy. The present low numbers of TVET diplomas in conventional technologies and vocational certification seem far from for fulfilling the economic and national demands for all the emerging and technology based market systems in the province and across the country. The threat of mismatch between demand and supply, and that of provision of employment opportunities to TVET qualified and supplying emerging skills to the market demand are not easy challenges for a backward province like Baluchistan(Government of Balochistan, 2011, S-TEVTA, 2018, Asian Development Bank, 2002, German Federal Ministry for Economic Cooperation and Development, 2017-2019).

Labor market information system for TVET system is one of the potential challenges for the provincial TEVTA and provincial government to establish in near future for knowing the potential, need, demand, and other aspects of labor force of the province. There is no skill mapping to highlight the scope and strength of skilled labor force and for different economic sectors of the province. Similarly, there is no purposeful web-portal designed for the information of skilled labor force to industry, local and international markets, TVET institutions, and all other stakeholders of TVET system in Baluchistan. The challenges and threats to TVET sector are also mentioned by GIZ (2016) and ADB Report (2011) identifies TVET institutional weaknesses as a big threat for the development and institutional strengthening of TVET system in Baluchistan(Government of Balochistan, 2011, Asian Development Bank, 2002, German Federal Ministry for Economic Cooperation and Development, 2017-2019, NAVTTC, 2016a, Khan and Ahmed, 2018).

6. Conclusion and policy recommendations

TVET system includes technical trainings and education in the province of Baluchistan. Provincial TEVTA is established under its legal act to work as an apex TVET authority for technical and vocational skills dissemination and regulate technical and vocational trainings with other stakeholders in the province. SWOT analysis of TVET system, generally, and that of technical and vocational training, particularly, has showed an opaque picture of overall TVET system existing in the province. Keeping in view the weaknesses and threats associated with provincial TVET system, following policy recommendations are suggested for the strengthening of TVET system in the least developed province of Pakistan:

1. A well-coordinated TVET system is required in the province.
2. The provincial B-TEVTA should be recognized equal in status regarding its legal, technical, and

administrative premises of authorities, on the one end, and more importantly, budget allocation deficiency and misallocation should be minimized and minimum level of fund allocation must be preserved.

3. National level of skill quality criteria must be ensured in all the TVET skills and trades, especially disseminated by NATTC in the province, in line with international framework and provincial needs.

4. The recommendations of ADB Report (2011) should be addressed, especially for the case of B-TEVTA in Baluchistan.

5. Introduction of more market driven technical and vocational trainings should be started with national and international collaborators in line with the ILO and UNESCO list of skill trades.

6. The introduction of emerging technical and vocational skill trades for upcoming CPEC projects as per mentioned by Ahmed and Khan (2018) for HRD development of the youth of province.

7. Technical colleges for poly or mono technologies, whichever is suitable, should be established for equitable access to labor force for skill development and human capital formation in technical skills in each district of the province.

8. Technical education and trainings must be enlarged and expanded from number to extensions for women segment of the population and to the rural areas of Baluchistan.

9. Private sector and NGOs should be encouraged through funds, subsidies, public-private partnerships, and other incentives for larger coverage of TVET skill acquisitions across rural, marginalized, and deprived segments of population in all the deprived areas of Baluchistan.

10. TVET system must be enlarged in scope and purpose of trainees' enrollment, skill acquisition, labor force skilling, man power development, human capital formation, managing human resource, and provision of skill development at mass levels for labor force of Pakistan.

References

ABUL RAUF. 2015. RE: Personal Communication. Type to AUTHOR.

ASIAN DEVELOPMENT BANK 2002. Technical Assistance to Pakistan for Restructuring of the Technical Education and Vocational Training System Project (Balochistan) Manila, Philippines.

ASIAN DEVELOPMENT BANK 2009. Education and skills: Strategies for accelerated development in Asia and the Pacific. Manila, Philippines.

BALOCH, A. H. 2018. Poverty, Social Sector and CPEC. CPEC: Exploring Opportunities & Prospects for Urbanization & Industrialization in Balochistan. BUITEMS Quetta Pakistan: C0E CPEC, PIDE, Islamabad

CHEN, W.-M., KIM, H. & YAMAGUCHI, H. 2014. Renewable energy in eastern Asia: Renewable energy policy review and comparative SWOT analysis for promoting renewable energy in Japan, South Korea, and Taiwan. Energy Policy, 74, 319-329.

GERMAN FEDERAL MINISTRY FOR ECONOMIC COOPERATION AND DEVELOPMENT 2017-2019. Supporting technical and vocational education and training (TVET) reform in Pakistan.

GLEWWE, P. & KREMER, M. 2006. Schools, teachers, and education outcomes in developing countries. Handbook of the Economics of Education, 2, 945-1017.

GOVERNMENT OF BALOCHISTAN 2011. B-TEVTA Act no. II of 2011. In: DEPARTMENT, S. A. G. A. (ed.). Quetta.

GOVERNMENT OF PAKISTAN 2015. National Skill Policy. Skills for Growth & Development: A Technical and Vocational Education and Training (TVET) Policy for Pakistan. Ministry of Federal Education and Professional Training, Islamabad.

GRUNDY, T. 2006. Rethinking and reinventing Michael Porter's five forces model. Strategic Change, 15, 213-229.

HALCOMB, E. J. & DAVIDSON, P. M. 2006. Is verbatim transcription of interview data always necessary? Applied Nursing Research, 19, 38-42.

HELMS, M. M. & NIXON, J. 2010. Exploring SWOT analysis—where are we now? A review of academic research from the last decade. Journal of strategy and management, 3, 215-251.

HOUBEN, G., LENIE, K. & VANHOOF, K. 1999. A knowledge-based SWOT-analysis system as an instrument for strategic planning in small and medium sized enterprises. Decision support systems, 26, 125-135.

HSIEH, H.-F. & SHANNON, S. E. 2005. Three approaches to qualitative content analysis. Qualitative health research, 15, 1277-1288.

INTERNATIONAL LABOUR ORGANIZATION 2003. Education and Training: Skills for Employability Including the Challenge of Youth Unemployment. Global Employment Forum. International Labour Organization.

KAZMI, S. W. 2007. Vocational education and skills development: A case of Pakistan. SAARC Journal of Human Resource Development, 3, 105-117.

KHAN, A. H. & AHMED, A. 2018. Identification of Relevant Technical & Vocational Skills for Job Growth & Human Resource Development in the Context of CPEC Projects for Balochistan. Research Paper ed. Baluchistan: CoE-CPEC, PIDE, Islamabad, Pakistan.

KHILJI, B. A., KAKAR, Z. K. & SUBHAN, S. 2012. Impact of vocational training and skill development on economic growth in Pakistan. World Appl Sci J, 17, 1298-1302.

KP-TEVTA. 2018. The Khyber Pakhtunkhwa Technical Education and Vocational Training Authority [Online]. Government of The Khyber Pakhtunkhwa. Available: http://kptevta.gov.pk/kptevta/ [Accessed 2/27/2018 2018].

LABOR FORCE SURVEY 2015-16. Labour Force Survey 2015-16. Pakistan Bureau of Statistics, Statistics House, 21-Mauve Area, G-9/1, Islamabad, Pakistan: Pakistan Bureau of Statistics, Statistics House, 21-Mauve Area, G-9/1.

NAVTTC 2016a. National Skill Information System. Sector F-5/1, Islamabad: NAVTTC.

NAVTTC 2016b. Skills Trend in Textile Industry Pakistan. A case study of Faisalabad district. F 5-1 Islamabad.

NAVTTC. 2018. National Vocational & Technical Training Commission (NAVTTC), Pakistan [Online]. Available: http://www.navttc.org/ [Accessed 2/27/2018.

PAKISTAN BUREAU OF STATISTICS 2015. PSLM (2013/14). Statistics Division, Government of Pakistan, Islamabad.

PLANNING COMMISSION 2015. Pakistan Vision-2025. In: DEVELOPMENT, F. M. O. P. (ed.). Islamabad.

PLANNING COMMISSION 2016. CPEC Related Press Release. In: COMMISSION, P. (ed.). Federal Ministry of Planning & Development, Islamabad.

P-TEVTA. 2018. Punjab Technical Education & Vocational Training Authority [Online]. Governmnet of Punjab. Available: http://www.tevta.gop.pk/ [Accessed 2/27/2018 2018].

SCHULMAN, P., CASTELLON, C. & SELIGMAN, M. E. 1989. Assessing explanatory style: The content analysis of verbatim explanations and the Attributional Style Questionnaire. Behaviour research and therapy, 27, 505-509.

SOCIAL WELFARE DEPARTMENT 2017. Social Welfare Department. Rules of Business, 2012. In: SOCIAL WELFARE DEPARTMENT, G. O. B. (ed.). Quetta.

S-TEVTA. 2018. Sindh Technical Education & Vocational Training Authority [Online]. Government of Sindh. Available: http://www.stevta.gos.pk/ [Accessed 2/27/2018 2018].

TUCKETT, A. G. 2005. Applying thematic analysis theory to practice: a researcher's experience. Contemporary nurse, 19, 75-87.

UNESCO-UNEVOC 2016. Strategies for Technical and Vocational Education and Training (TVET): (2016-2012)