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Technical and Vocational Educational Programs: Investigating the Effect on Poverty Reduction

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Abstract: *This study has been conducted to investigate the effect of the T&VE on Poverty Reduction. This was a Quantitative study conducted under the Positivist paradigm. The graduates of the 3-years DAE in Electrical & Mechanical programs and the graduates of 1-year Machinist and Computer Certification were selected with Cluster Sampling. It was decided to select 25% of the population as the sample for the study. In this way, there were 400 graduates who were selected for the study as a sample. There were 400 graduates from each institute. So, one institute was selected randomly to take an adequate sample size. The data was collected with a closed-ended questionnaire comprising 50 items under 6 factors. Based on the results, it is concluded that a significantly strong effect of T&VE is found on Poverty Reduction.*

Key Words: Technical Education, Vocational Education, Poverty Reduction

Introduction

The world is facing many serious challenges, and the removal of poverty is one of them. Pakistan is also working hard to eradicate poverty using several measures. The provision of technical and vocational education is one of the measures that have been taken to eradicate poverty (Siddiqui et al., 2019).

The Millennium Development Goals (MDGs) were established as the first worldwide agenda to eliminate poverty and hunger. Poverty can include not only the lack of material well-being necessities but also the denial of prospects to live a tolerable life (ADB, 2017). Thus, it cannot be measured simply by the volume of the income of the individual but must include numerous aspects of the life of an individual. Poverty cannot, therefore, be eliminated by a single

instrument (Audu et al., 2013). There is the only effective tool which can be useful to reduce poverty. That is the education of our children. If we teach individual skills useful in their adult and practical lives, it can be fruitful. Alongside the challenge of poverty reduction, the world has been confronted with severe concerns about jobs and broad work deficits (Comyn & Barnaart, 2010). TVET can provide expertise, information, and attitudes to work to reduce poverty and increase a country's economic growth (Haroon, 2017).

TVET is considered a system for developing skills and training for employees, enabling them to address the issues like people's migration, unemployment, and decreasing formal employment prospects and meet demands (Ferreira & Litchfield, 2012). This program empowers people to

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participate in society as active members, where an individual can be a more active member of society, benefiting himself and the rest of the country as a labour force. This system of education promotes the skills and knowledge needed to develop economically, but also their capabilities – agency freedom (what is worth in life). Thus, TVET is becoming a steady leader in the international arguments proceeding education to national development agendas as well as in the government's priorities ([Miankhail, 2014](#)).

TVET is described as a productive form of training intended to create employment in a single profession or a group of professions. This form of education consists of training or retraining and is aimed at developing the learner in a paid job or self-employment, which can be productive and beneficial in eradicating the poverty level of the individual in general and of society in particular ([Oudsia Saleem, 2018](#)). It not only aims at developing practical skills but to enhance attitudes and habits, which lead to the building of creative and resourceful recipients. The economic objectives of TVET are to provide qualified manpower by modifying the individuals and enabling them to use complex technology. Its emphasis in providing a skilled workforce for a static economy, particularly with changing societal and technological advancement needs ([Hillage & Pollard, 2012](#)).

Pakistan needs significant improvement in its education system, particularly in technical and vocational programs. It has to build a strong TVET structure to compete with world markets and meet the challenges of globalization. These are such projects which really can help to meet the MDGs. The training of better-skilled people and proficient employees who will be more productive, improve goods, increase revenue, and adapt to changing markets is key to economic and social progress ([Okon et al., 2016](#)).

It is not easy to define the word "poverty". When a Kenyan woman was asked the same question, she replied do not ask the question in this regard; rather, come to my home and count the number of holes. Look at the clothes which she was used to wearing. Look at all in the home and write what you observe;

that will be "poverty". Most experts define poverty as a nightmare without insufficient income or earnings ([Zhang, 2021](#)). In its severe kind, poverty is a scarcity of essential human needs such as clean water, something to food, clothing, shelter, and health facilities. It is different in all countries, but in all societies, it is accepted that poverty may be absolute or relative. Absolute poverty can be reduced or alleviated, but relative poverty cannot. Relative poverty means the comparison of people based on necessities and necessities. On the other side, absolute poverty is a standard that we set to define poverty ([Omoniyi, 2013](#)).

An individual spending a life with less than 2 US dollars can be said to be a poor one. Similarly, an individual living life with less than 2350 calories a day can also be declared a poor one. It has been reported that there are almost 30% of Pakistanis are living their lives up to the poverty line ([Pervez, 2014](#)). However, if the aforementioned ratio is compared to other countries like Sri Lanka, the Philippines and India, the Pakistanis are found to be better regarding poverty. Pakistan, like other developing countries, has the problem of severe poverty, having abundant people living below the poverty line. Pakistan is at 150th position among 189 developing countries of the world as per reported by UNDP in human development and prosperity. The question that arises here is what the main reasons for poverty are. In Pakistan causes of poverty are constant and complex. There are different prominent reasons for poverty in Pakistan and other rising countries; a deprived state of education is one of them ([Tushar, 2013](#)).

Poverty alleviation is an important goal in most modern societies. Different organizations like World Bank, UNDP, and UNICEF are trying to achieve this goal by direct and indirect measures. Nowadays, there are two main approaches to the effectiveness of education and poverty reduction: first, the Human Capital Approach, and second, the Basic Need Approach ([Pervez & Rizvi, 2013](#)).

The first one says that there is a pivotal role played by education regarding poverty reduction. Education, in the form of the

human capital approach, leads to an economic increase. There is a straight relationship between education and earnings. As per the latter approach, education is truly a basic need that must be provided to people alike, especially in rural zones. It is said if you think education is expensive, try ignorance. No doubt, education is the only way to prosperity and development ([Zamurrad & Kamal, 2011](#)).

Education affects, directly and indirectly, poverty alleviation. It not only enhances knowledge and skill, which promote earning but benefits in meeting social and basic needs from effective participation in democratic activities and appropriate use of health facilities, shelters, and sanitation. Education holds the key to expanded opportunity. It gives individuals the ability to escape poverty, impact choices that influence their jobs, and lead more secure and satisfying lives ([Melaiye et al., 2019](#)). Also, it prepares nations to achieve the Millennium Development Goals. The human capital theory has influential effects in the context of the analysis of the labour market. It is fruitful for society as well as individuals to invest in education and training. The result of investing in education will be talented workers that will empower and prosperous the country worldwide, while the individual will also get appropriate career ventures, better earnings, and consequently successful life ([Berg & Smith, 2016](#)).

Data from Tanzania shows that primary graduates earn double as compared to uneducated. Similarly, the salary increments between those with secondary and those with only primary education are much greater, at 732 Tanzanian Shilling per hour compared with 201 TSh. With time different changes emerged in the world ([Chaudhry & Rahman, 2009](#)). The needs and nature of education also changed according to the demand of the market and individuals. It was a time when reading and writing for a person were sufficient. But recently, it has been the era of competency, skills, and competition. The education to make the individuals skilled is fair enough. Technical and Vocational Education and Training with knowledge and attitudes are requisite for achievement in any useful occupation. The primary purpose of

TVET is the preparation of individuals for employment in familiar professions ([Dănăciță et al., 2010](#)).

TVET expands the talents, approaches, and information that are important for occupation or employment. As compared to general education, the aforementioned is more effective. The reason is that the graduates of general education seek jobs. They are not able to create employment for themselves. However, the graduates of the aforementioned are not only able to create their own businesses but rather create employment for others. In another aspect, TVET is a new era of education. It is above board reality that technical and vocational education and training contribute to reducing unemployment by creating employment as well as increasing productivity which ultimately alleviates poverty. Such type of education enables its graduates to earn a respectful livelihood fair enough to fulfil their needs in life ([Qudsia Saleem, 2018](#)). Such people have more occupational ventures as compared to others who have common education. So TVET decreases the differences as well as reduces poverty by providing the skills and competency of the people. TVE can change the fortune of the poor. Only this is a way to promote economic growth, national productivity, and innovation ([Adawo, 2011](#)).

TVET means an opportunity through which a person can get employment as well as progress easily. It is a fact that TVET is important to face to confront a vague future. Schools, as well as other formal institutions, cannot get long development ever in the context of human resources. TVET is regarded as the appropriate way of promoting economic growth ([Adawo, 2011](#)). TVET is the functional aspect of education that boosts the demonstrable talents or skills of individuals which eventually gives prosperity and well-being. Vocational education is the only way through which we can get well-educated and skilled persons who can work effectively not with their heads but with hearts and hands. VET is important not only for employment ventures but it is also based for better productivity of institutions. He further explains that vocational education is a significant instrument for enhancing work versatility, flexibility, and profitability, thus contributing to improving institutions"

effectiveness and restoring labour market inequities. Training and skills development improves individuals' creative ability as well as an essential part of human resource development ([Tushar, 2013](#)).

Emerging and rapid economic development requires a blend of talented workers, experts, technologists, engineers, and inventive researchers trained in the fields associated with national improvement and the need of the enterprises. The quickened monetary advancement of Asian Countries like China, Japan, Malaysia, and Australia is an incredible model in this context. TVET can assist people with generating wages and contribute to monetary development and social advancement ([Omoniyi, 2013](#)).

Education is a comprehensive concept, and not only in the meaning of academics but in the current scenario, there is an instant requirement for scientific and technical education for our nation to build up our economic future. We must keep in mind that the modern world is moving very fast toward technical and skills education, and if we want to achieve success and prosperity, we should align our direction ([Pervez & Rizvi, 2013](#)).

It is fact that TVET has been considered to assume an incredible job in the financial advancement of the nation. No doubt with trained employees, the highest welfare can be achieved. All developed countries made progress through technology. Similarly, developing countries have also recognized the significance of TVET ([Miankhail, 2014](#)).

Although we are a developing country, however, we have a satisfactory setup of the industry. In this regard, it is a need to give more attention to providing "TVET" with schooling to cope with the problem of scarcity of skilled workers ([Siddiqui et al., 2019](#)). At the national level, NAVTTC is responsible for TVE, whereas, at the provincial level, TEVTAs are performing their role ([Okon et al., 2016](#)).

NAVTEC of Pakistan developed a determining policy from 2009-2013. The main objectives were as below:

1. The arrangement of pertinent skills for industrial and economic improvement.

2. The upgrading of access, impartiality, and employability.
3. The guarantee of quality through an included approach.

In Pakistan, there are 1647 TVE institutions (Public) in which 315000 students are enrolled. In Punjab, 60 institutions were offering TVE at the secondary level in 2013, 2014, and 2015. A total of 815 students passed matric vocational & technical ([Haroon, 2017](#)). In light of all the above discussion, TVE is the way to change values, knowledge, and behavioural patterns. It develops skills, productivity, chances of jobs, socialization, etc., through which poverty can be alleviated (ADB, 2017). This study was conducted to see the effectiveness of technical & vocational educational Programs on Poverty reduction in Punjab Province.

Methodology

It was a quantitative study conducted under the Positivist paradigm. It was survey research that was conducted to investigate the effect of the T&VE on Poverty Reduction. There were 1600 T&V graduates from the T&V institutes across Punjab. The graduates who have completed the 3-years DAE in Electrical & Mechanical programs along with the graduates who have completed their 1-year Machinist and Computer Certification were the population for this study. It was Cluster Sampling which enabled the researcher(s) to select the individuals for this study. It was decided to select 25% of the population as the sample for the analysis. In this way, there were 400 graduates who were selected for the study as a sample. There were 400 graduates from each institute. So, one institute was selected randomly to take an adequate sample size. A closed-ended questionnaire (five-point Likert scale) comprising 50 items under 6 factors was used.

Results

Before proceeding with the investigation of the relationship between the variables, Skewness and Kurtosis were applied to the data to check the normality. The results are stated below:

Table 1. Descriptive Statistics

	M	SD	Skewness	Kurtosis
Technical & Vocational Education	154.29	37.83	-.52	-.84
Poverty Reduction	23.75	6.55	-.76	.42

Note. N = 400

The results of Table 1 show that the Mean score of the T&VE was 154.29 with the SD=37.83, followed by the Skewness=-.52 and Kurtosis=-.84. Similarly, the Means score of Poverty Reduction was 23.75 with SD=6.55, Skewness=-.76 and the Kurtosis=.42. The aforementioned values of the Skewness and the Kurtosis all were within ±2. Therefore, the data was found to be normally distributed.

RQ 1: Is there a significant effect of T&VE on poverty reduction?

Ho: There is no significant effect of T&VE in poverty reduction.

To answer the abovementioned Null hypothesis, Pearson's r was applied so that the relationship between the T&VE and Poverty Reduction could be investigated. The detail can be seen as under:

Table 2. Correlation of T&VE with Poverty Reduction

	Technical & Vocational Education	Poverty Reduction
Technical & Vocational Education	1	.613
Poverty Reduction		1

Note: N=400; $p < 0.05$; Correlation is significant at the 0.01 level (2-tailed)

It has been revealed by the results from Table 2 that a significantly positive and high correlation has been found between the

T&VE and the Poverty Reduction as $r=.613$ with the $p=.000$ ($p<0.05$).

Table 3. Regression Analysis Model Summary

R	R Square	Adjusted R Square	df	F	Sig
.613	.376	.374	1	239.31	.000

In the confirmation of the relationship between the T&VE and Poverty Reduction, Linear regression has been applied to the data for the investigation of the effect of the T&VE on Poverty Reduction. It is coming to known

that 61% variance was observed in the Poverty Reduction. The fitness of the model has been confirmed with the F value, which is 239.31 and the significance value, which is .000 and less than 0.05.

Table 4. Coefficient Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error			
(Constant)	11.72	1.70		6.87	.000
Technical & Vocational Education	.169	.01	.613	15.47	.000

The results taken from Table 4 reveal a significantly strong effect of the T&VE on Poverty Reduction as $\beta^{\wedge}=.61$, and p -value is

.000 ($p=0.05$). Therefore, based on the results,

Ho: "There is no significant effect of T&VE on poverty reduction." has been rejected. The normal distribution of the data is shown by the Histogram and the P-P plot.

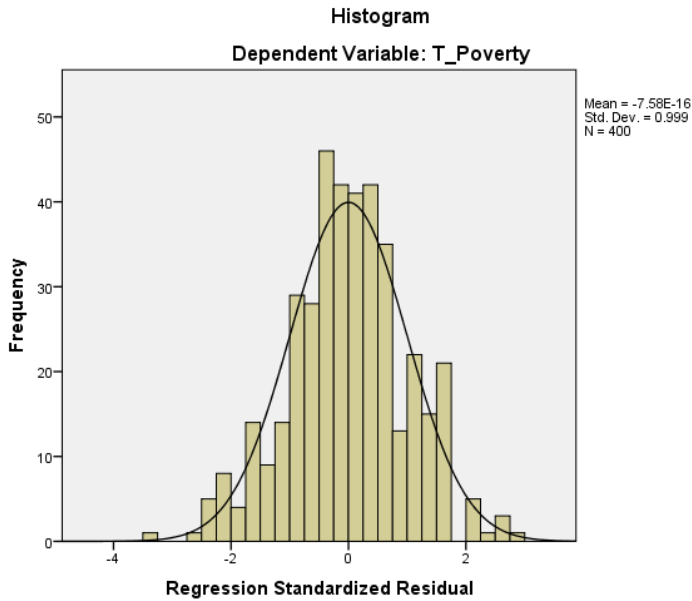


Figure 1: Histogram of Poverty Reduction

Normal P-P Plot of Regression Standardized Residual

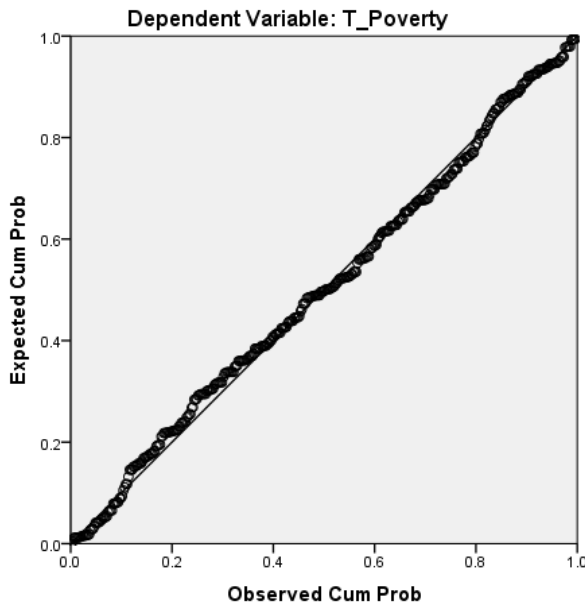


Figure 2: P-P plot of Regression Standard Residual

Conclusion & Discussion

This was a Quantitative study conducted under the Positivist paradigm. The graduates who have completed the 3-years DAE in Electrical & Mechanical programs along with the graduates who have completed their 1-year Machinist and Computer Certification were the participants. Descriptive statistics and inferential statistics, including Pearson's r and the Linear Regression. Based on the results, it is concluded that a significantly strong effect of T&VE is found on Poverty Reduction. These results have supported the results from [\(Pervez, 2014; Siddiqui et al.,](#)

[2019; Zhang, 2021\)](#), who all have concluded that Technical & Vocational Education plays a significant and positive role in poverty reduction.

Recommendations

Based on the results, it has been recommended that T&VE education should be promoted across the country so that poverty may be reduced on a large scale. Furthermore, it is also recommended that Mixed Methods research may be conducted on a similar topic for a comprehensive and in-depth view of the phenomenon.

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