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# The Economic Benefits of Vocational Education and Training in the Kingdom of Eswatini



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**Abstract.** *This study assesses the economic benefits of the Government of Eswatini's investment to technical vocational education and training (TVET) from 2005 to 2017. TVET Graduates from 12 public TVET Institutions have been tracked to uncover their absorbability in the labour market and, or self-employment. The study finds that the economic return of the Government of Eswatini's investment to TVET in 2017 is E1,51. This means that for every E1 invested by the Government of Eswatini to TVET, the economy generates E1,51 through the TVET graduates' activities in self-employment, formal employment, and part-time skills utilisation. With regards to highly demanded courses amongst the graduates, computer studies have been found to be highly demanded at 20.9%, while agriculture is lowly demanded at 6.3%. The study finds that 56.6% of the graduates are absorbed in formal employment, while 13.7% are engaged in self-employment, meaning that 29.9% are part of the 32.4% unemployed persons in the country. However, the level of unemployment is still high, 43.3%. Graduates who were not economically active before enrolling at the TVET colleges have been found to be formally employed, 35%, 14% are self-employed, 2.5% are both formally and self-employed, while 48.5% are unemployed. A majority (58.5%) of employed graduates are from Gwamile VOCTIM, while self-employment is high amongst graduates from Big Bend Rural Education Centre, 44.4%. Unemployment has been found to be very high among graduates from Ekululameni, 100%. The study recommends that the Government of Eswatini should consider promoting self-employment amongst graduates. This could be done through establishing links with financing agencies to increase the rate of self-employment and reduce unemployment.*

*Key Words:* Economic Benefits, TVET, Eswatini, Skills Development, Self-Employment Creation

## 1. Introduction

The most practical avenue for acquiring readily employable skills for the world of work is Technical Vocational Education and Training (TVET) (Afeti, 2019). Vocational Training and Skills Development is the main means by which the youth can be empowered to access labour markets in the country and the region as a whole. It is also a means to support entrepreneurial development and promote small and medium scale enterprise development (Poverty Reduction Strategy and Action Programme (PRSAP), 2006).

The European Centre for the Development of Vocational Training (CEDEFOP) (2013) highlights that the economic benefits derived from TVET produce positive economic benefits on society, companies and citizens. This indicates that benefits accrued to the individual who possesses the skills, the company they work for, government, and society as a whole. Individuals enjoy benefits from improved earnings, employment chances, mobility, capacity for lifelong learning, measures of working conditions, and job satisfaction. Employers' benefit mainly from apprentices' productivity increases. The state yields net benefits both in terms of social rents from both individual and public costs. It further accrues positive economic benefits from increased productivity due to better education, and in fiscal terms, which consists of education expenses versus increase in tax income from higher earnings from better educated individuals (OECD,2008).

The Government of Eswatini is cognisant of the fact that education is not only a national commitment, but an adherence to international development imperatives, such as the Sustainable Development Goals, and Agenda 2063, geared towards achieving holistic social development on a global scale and reduce youth unemployment (Ministry of Education, 2015). Whereas, the Sustainable Development Goals (SDGs) commit member states to “Substantially increase the number of youth and adults who have relevant skills including technical and vocational skills for employment, decent jobs and entrepreneurship”. In Eswatini, Technical Vocational Education and Training (TVET) forms part of the three education sub-sectors namely, upper secondary education, university education, and TVET. TVET was developed with a particular focus on meeting the economy’s requirements for trained man-power (Ministry of Education, 2015). The ministry of Education bridges the barriers between education and employment, and between the school, and society through the introduction of TVET in secondary, and tertiary education (Ministry of Education Report, 1977).

At a national strategic level, through the National Development Strategy (NDS), (2014), the Government of Eswatini implores the ministry of Education and Training to improve the efficiency and cost effectiveness of the education sector including all vocational training institutions. However, improving the efficiency and cost effectiveness of vocational training requires evidence-based knowledge on how the sector is currently performing. Such evidence-based knowledge is lacking not only in Eswatini but in the Southern Africa region and Africa as a whole. Whereas the government of Eswatini investment in TVET institutions dates back to 1974, when the National Handicraft Training Centre and the Eswatini College of Technology were established. As of today, public TVET institutions total up to 27 institutions, enrolling trainees every year (World Bank, 2014). However, it remains unknown what the current economic benefits of these TVET institutions are, where the graduates are absorbed after graduating, whether in formal employment or self-employment. Similarly, the TVET Policy (2010) does not address the importance of ensuring that the TVET system adds value to economic growth in Eswatini. Answers to these questions will help improve the investment of the government of Eswatini in TVET for employment creation of the youth.

The purpose of the study therefore was to investigate the economic benefits of TVET in Eswatini, covering 12 public TVET institutions. The objectives of the study were to; (i) determine the extent to which TVET graduates are using their TVET skills for self-employment; (ii) assess the rate at which TVET graduates are being absorbed by the formal labour market; (iii) assess the rate of continuous studying after graduating at the TVET institutions; (iv) quantify the value of investments of the government of Eswatini and development partners into TVET in the country.

The study closes the gap of the unavailability of literature on the economic benefits of technical vocational education and training in the Kingdom of Eswatini, Southern Africa, and the Africa region as a whole. It informs the ministries of, Education, Labour and Social Security, and Commerce, Industry, and Trade about the economic benefits of the government’s investment in TVET in order to know which subsector to invest in. The study further informs unemployed youth about the employment and self-employment opportunities available through enrolling in TVET institutions. It provides knowledge-based evidence to policy makers and decision makers on why they have to enact policies focusing on TVET transformation. The study informs development partners about the impact of the investment in TVET in with the view to commit funding for the sector’s development.

The target audience for the study is policy makers, funders of TVET, the Ministry of Education, which is the custodian of TVET in the country, and TVET development partners. As well, there are clear benefits that will accrue to the entire country from the study. Firstly, it will enhance decision-making to TVET institutions on the relevance of the courses they offer for promotion of self-employment. The results of the study are expected to generate insights that will guide Eswatini in developing economic policies that will support TVET and TVET-related economic activities geared toward maximising the benefits of TVET in Eswatini.

## **2. Functions of a TVET System**

TVET is a vital sub-sector of the education sector. Its purpose is to produce relevant skills that are necessary for improving economic performance, alleviating poverty, and reducing unemployment (SADC, 2011). Likewise, the Australian Development Agency (2016) suggests that a focussed and coherent vocational education and training framework can make a significant contribution to job creation, entrepreneurship, gender equality as well as to health, and environmental improvements. Therefore, courses offered in TVET must be formulated in such a way that they enhance employment opportunities for the graduates (TVET Policy, 2010). It further illustrates that the outputs must meet the labour market requirements in terms of creating jobs and sustaining existing employment. Meeting labour requirements speak to the curriculum offered to TVET students.

To ensure that the TVET curriculum design puts learners at the centre of the curriculum, USAID (2018) suggests three models that enhance the functionalisation of a TVET system. These are the; (i); Liberal Market Economy Model; (ii) State Regulated Bureaucratic Model; and (iii) Dual System Model. The Liberal Market Economy is widely used in Great Britain and Australia. It reflects the demands of the private market led by industries and firms. In this approach, industries decide on the types of occupational qualifications that industry and support firms need to train their workers. In this model, private industries and firms volunteer to pay for workers 'training and apprenticeships', the state only subsidises the training. Government's role is to fund research on occupational and industry demands for skills. The other role is to establish skills councils and national qualifications frameworks.

The State Regulated Bureaucratic model is widely used in France, Italy, Sweden and Finland. The national education system in this model determines the curriculum. Public-Private partnerships only contribute on a consultative basis. This means, TVET in this model is the extension of the education system. USAID (2018) demonstrates however that this model usually underperforms because graduates lack exposure to the workplace with hands on training. This model is widely used in developing countries like Eswatini where the delivery of TVET is supply driven as opposed to demand driven.

The Dual System Model is widely used in Germany, Austria, Switzerland, Denmark and Norway. The design of TVET in this model includes a wide range of public and private stakeholders, such as trade unions, state agencies and non-governmental organisations. It consists of strong public-private collaboration. These collaborations finance apprenticeship training and state agencies finance the TVET institutions. In developing countries (examples), where the State Regulated Bureaucratic model is widely used, TVET faces implementation challenges (University of Nairobi, 2019). These include; poor infrastructure, outdated curriculum which is irrelevant to industry needs, exodus of instructors to better paying jobs, inadequate financial resource allocation, outdated equipment and machinery, and limited supply of labour intensive skills, for example, food processing, mechanical and electronics technicians (World Bank, 2014). Addressing these challenges can make an economic difference in TVET delivery in Eswatini

through supplying industry relevant skills. The lack of data providing the benefits of vocational education and training in many countries is also a challenge for the effective improvement of the TVET sector (City & Guilds, 2017). The major cause for the lack of data is the weak national TVET management systems (SADC, 2015). In Eswatini, the weak national TVET management system can be strengthened through the establishment of the Directorate of TVET responsible for the coordination of TVET in Eswatini (ESEPARC, 2018).

### **2.1. TVET Provision Systems in the Southern Africa Development Community (SADC)**

Eswatini is a member of the Southern Africa Development Community (SADC), which has a mandate to deliver TVET using international standards. In ensuring that the international standards are realised, the SADC Region adopted top ten strategic priority indicators for regional cooperation, which are TVET Management Information Systems (MIS), Staff Development, Funding, Qualifications Frameworks, Provider Institution Development, TVET for the informal economy, Quality Assurance, Open and Distance Learning and Industry Involvement. Nine TVET indicators that are relevant to Eswatini have been identified, compared and contrasted in three countries in the SADC Region. The countries identified are; Namibia, which is regarded as one of the countries in SADC with the best practices in TVET, South Africa in view of the fact that is Swaziland's neighbouring country, and Botswana as a country that has been with Eswatini in the Botswana, Lesotho and Swaziland (BOLESWA) countries. The purpose is to identify best practices that could be replicated for the benefit of TVET systems and beneficiaries in Eswatini.

The indicators that are being compared and contrasted are; Legislation, Quality Assurance, Governance and Coordination, Role of the industry, Number of TVET providers, Instructor Training, Tracer Studies and graduates' employment rates two years after graduation. The contrast indicates that Eswatini's Vocational and Industrial Training Act, 1982, (VIT Act) is the oldest when compared to the three countries. Namibia's Vocational Education and Training Act (VET Act) was adopted in 2008, South Africa's Skills Development Act was adopted in 1998, and Botswana's Vocational Training Act adopted in 1998. With regard to quality assurance, Eswatini's National Qualifications Framework was adopted in 2018, whereas Namibia established the National Qualification's Authority in 1966, South Africa's Council on Higher Education (CHE) established in 1998, and the Botswana National Human Resource Council established in 2009 (United Nations Education Science and Cultural Organisation (UNESCO).

There are commonalities observed in the governance and coordination of TVET in the four countries as the Ministry of Education is playing a leading role, in collaboration with the Ministry of Labour in Eswatini, Botswana and South Africa, whereas the governance and coordination role in Namibia is played by the National Training Authority. In Eswatini, a low involvement of industry is observed, whereas industry involvement in the three countries is very high. The role of the industry includes; contributing to TVET policy making, development and implementation of strategies, payment of levies, funding the industry's based trainings, TVET standards settings and curriculum development. All four countries are observed to be employing qualified instructors who attend training in government established instructor's training colleges. In Eswatini, TVET instructors are trained at the Eswatini College of Technology (ECOT), and awarded an Instructor's Diploma. In Namibia, the National Polytechnic Training Programme offers Higher Certificates and Diplomas. In South Africa, instructor's training is offered in few Universities, whereas in Botswana is offered by the Francistown College of Vocational Education and Training (UNESCO,2013)

All three countries conduct timely tracer studies. In Namibia, for example, a tracer study conducted in 2008 shows that 48.9% of graduates are absorbed in the labour market, 60% in Botswana (2009), and 40.6% in South Africa in 2010. Eswatini is the only country that is not

conducting tracer studied. The lagging behind of the development of TVET in Eswatini as shown by the contrast compromises the development of the sector which has a major role in contributing to economic growth (UNESCO,2013)

## **2.2. TVET Provision Systems in Eswatini**

In ensuring that indicator number nine (recognition of diverse forms of delivery of TVET which may be formal or non-formal) of the Eswatini TVET Policy Performance is achieved in the country, ministries responsible for the implementation of TVET have positioned formal and non-formal TVET systems in strategic locations in the country. The positioning of TVET in Eswatini is such that it promotes accessibility and affordability to the target audience when considering its locations in the four regions of the country to enable both those who are out of school and in-school youth to utilise such opportunities (TVET Policy,2010). The Ministry of Education for example, provides TVET through formal and non-formal education centres. The formal institutions consist of 16 schools offering Pre-Vocational Education offered in 16 secondary schools, colleges and training centres including Eswatini College of Technology (ECOT), the Vocational and Commercial Training Centre (Gwamile VOCTIM), Eswatini Skills Centres, Ekululameni Vocational Training Centre for people living with disabilities and Mpaka Vocational and Training Centre. Non-Formal Education is delivered through Rural Education Centres (RECs) to students who dropped out of school. RECs are attached to schools and are administered by the Principals of the schools who work with REC Coordinators. The duration of the courses is six to nine months (Macwele, 2017)).

The Ministry of Commerce provides formal TVET through the National Handicraft Training Centre which has fulltime courses offered at the centre, while outreach courses are offered in the Constituencies. Whereas, the Ministry of Labour delivers non-formal TVET through the Directorate of Industrial and Vocational Training and the Vocational and Rehabilitation Services, targeting People with Disabilities. The Directorate of Industrial and Vocational Training (DIVT) is the only government institution that is responsible for conducting grade tests for the graduates of TVET institutions. The grade testing procedure is that interested graduates should register for testing after 2 years of graduation. Industry representatives form part of the DIVT Board which administers the tests. World Bank (2014), highlights that the enrolment in public TVET institutions has decreased between 2007 (2,858) and 2013 (2,482), which suggests that the institutions are under capacitated. This means there is room for improvement in the enrolment rates if TVET can be given the recognition it deserves when considering the economic benefits accrued by graduates.

## **2.3. Financing of TVET in the SADC Region**

In Eswatini, the total education expenditure in 2017 was E3.364 Billion representing 5.44% of Eswatini's GDP that year (Government Estimate Book, 2018 -2021), rising from 4.89% in 2015 (Mgabhi & Mohammed, 2017). The Government of Eswatini allocated E76, 089.793 to TVET (2.3%) rising from 2.12% in 2015, which is commendable. About 75% of the allocated budget is used for personnel costs. The remaining 25% caters for professional and special services, consumable materials and supplies, durable materials and equipment, and rentals for buildings, and computer equipment. However, the budget allocation to TVET is still very low when compared to the other countries in the region (Government Estimate Book, 2018 – 2021. There are similarities in the sources of TVET financing across countries. TVET financing sources include; government grants, development partners' contributions, church support, student fees, industry contribution, sale of services and other sources (ACEReSearch, 2015, UNESCO, 2013, and OECD, 2008). However, there are no set budget limits for TVET financing in the SADC region as a percentage of the education budget allocation. TVET financing is determined by the

number of institutions allocated annual budgets. In Samoa, Australia, for example, Development partners contribute 69% of the TVET budget which benefits 180 institutions (ACEReSearch, 2015). The total cost of the education budget allocated to TVET by South Africa was 2.5% in 2009, Malawi, 3.4%, and Namibia was 2.9% in 2010. A skills levy of 1% is set in Malawi, Namibia and South Africa based on a percentage tax of employer payroll. In as far as TVET costs incurred by private companies are concerned, Mauritius netted a total amount of MUR 1 billion (US\$33 million), Malawi MWK 300 million (US\$ 2 million) in 2009, while South Africa netted ZAR 7 billion (US\$ 1 billion) in 2009 (UNESCO 2013).

Since TVET forms part of national strategies for skills development and employment creation, government subsidies contribute more than all the other sources followed by student fees (UNESCO, 2013). Private businesses are less committed to completely fund TVET development unless there are direct profits to be gained. Considering education as a public benefit, financing public education can be expensive for individual companies whilst the benefits go to society as a whole rather than individual companies, and so subsidies play a crucial and necessary role in making TVET funding possible. The African Union (2014) however emphasises the importance of national, regional and continental level bodies to avail themselves and support TVET systems.

### **3. Methods**

A number of TVET studies have highlighted the benefits of vocational education for different countries. In Brazil, for example, students who have completed a technical education course at the tertiary level had an average hourly rate that is 71.4% higher than those who had only completed secondary education. This result shows that completing a technical education course at the tertiary level is much more beneficial than completing a general education course and not continuing with education (World Bank, 2015). In the United Kingdom (UK), economic benefits in TVET were increased after the government announced an implementation plan of a modern apprenticeship scheme in 1994 (City and Guilds, 2014). However, it has taken the UK Government 11 years to realise the results. People engaged in apprenticeships in 2015 were 14 times as many as in 1994 (City and Guilds, 2014). As a result of the investment in apprenticeships, an economic return of £16 - £21 for every £1 invested was yielded (City and Guilds, 2014). The economic return has been accomplished through the UK's huge investment in apprenticeship as in 2010/11, the Government invested £1.2billion and yielded an economic impact of £25.3billion in 2010 (City and Guilds, 2014).

In South Africa, available evidence shows that the economic return for individuals who acquire TVET skills may be high (City and Guilds, 2015). This is a result of the high enrolment rate in TVET institutions which is around 770 000 in public and private TVET colleges, 44 000 in technical schools, 130 000 in work-based learning and 280 000 in higher certificates and diplomas (City and Guilds, 2015). Though youth unemployment figures may remain high, it is undisputable that through supporting employers and benefitting individuals in a tangible way, TVET contributes to a positive difference in the economy as a whole (City and Guilds, 2015). In Eswatini, the value of investment in the National Handicraft Training Centre (NHTC) was found to be high at 1:4.66, demonstrating that for every E1 invested into the NHTC, E4.66 accrued to the economy of Eswatini (Mgabhi & Mohammed, 2017). Since this study covered only 1 TVET institution as a baseline study, this study therefore investigated the economic benefits of TVET in Eswatini. Adapting the Benefit Cost Analysis (BCA) model used in the United Kingdom, Brazil, South Africa, and other countries, the study estimates the economic returns of the government of Eswatini into TVET in the country.

To investigate the economic benefits of TVET in Eswatini, the study used a survey. This study is an extension of the study on “The Economic Benefits of TVET in Eswatini: A case of the National Handicraft Training Centre”, conducted by Mgabhi and Mohammed (2017). It covers a wider population. The researcher therefore improved the questionnaire from the previous study to collect primary data from the graduates on their demographics before enrolment at TVET colleges, course enrolment, employment status and skills utilisation after graduation, income from part-time skills utilisation, full-time self-employment and formal employment, and the level of skills upgrading beyond TVET college. A sample of 458 graduates was drawn from a population of 5753 using Slovin’s Formula to draw a sample at 5% margin of error. Secondary data was sourced from the TVET colleges’ records where a list of former graduates and key informants was identified. Data for the period 2005 to 2017, i.e. a 12-year period, was sourced from the graduates. The study is limited to the graduates that were traced through the training colleges’ records dating back to 2005. Excel was used to analyse the data on the courses and employment status of graduates to come up with descriptive statistics.

The National Centre for Vocational Education Research (NCVER, 2017) asserts that different models apply to different situations and may suit specific types of data. NCVER (2017) also suggests the Benefit Cost Analysis (BCA) model as one of the models used to calculate the return on investment of a particular project. The BCA assigns monetary value to the costs of a project to determine the cost benefit ratio (NCVER, 2017). The Benefit Cost Analysis (BCA) model by Johnson (2018) has been used to calculate the economic benefits of TVET in the economy of Eswatini using the cost of training from 12 TVET institutions and the TVET graduates’ income covering a period of 12 years (2005 to 2017). Johnson (2018) defines the Benefit Cost Analysis as a financial ratio used to determine whether the amount of money made through a project will be greater than the costs incurred in executing the project. This means that the BCA is constituted by two elements; the benefits of a project and the costs of that project. The BCA determines whether the amount of money (benefits) made through the investment in TVET in Eswatini is greater than the costs incurred during the execution of the project or less.

## **4. Results and Discussions**

### **4.1. Socio-Economic and Pre-enrolment Characteristics**

Table 4.1.1 below presents the socio-economic and pre-enrolment characteristics of the respondents. It shows that a majority of the respondents are females, 61.1%, compared to males, 38.4%. Of the total respondents 80.6% are married, while 19.4% are single. The highest age at enrolment is 56 years, 17 years lowest, and the average age is 17 years. In terms of the geographical location of the respondents, the results show that Lubombo and Manzini have the highest and equal number of respondents, 36.6%, followed by the Hhohho Region, 33.8%, while Shiselweni has the lowest number of respondents, at 15%. A majority of the respondents have high school level of education at 70.6%, those with secondary education are at, 15.9%, while primary level of education is at 4%, and the lowest number of respondents are those with non-formal education, at 1.1%. The table further shows the highest number of respondents with no tertiary certificates before enrolling at, 89.6%, while those with certificates are at 7.3%, diploma, at 2.4%, and the lowest are those with degrees at 0.7%. A majority of the respondents were schooling before enrolling at the TVET institutions (41.5%), 36% were doing nothing before enrolling, while a lowest number, 3.7% were self-employed. A majority of the respondents got funding for their training from family and friends, 45.9%, 24.3% received funding from Government scholarship, while 13.1% were supported by Non-Governmental Organisations.



**TABLE 4.1.1: DESCRIPTIVE STATISTICS AND OTHER BIOGRAPHICAL SKETCH OF THE SAMPLE (1995 – 2015)**

<b>Socio-economic and pre-enrolment characteristics</b>	<b>Statistics</b>
<b>Gender</b>	
Males	38.40%
Females	61.60%
<b>Marital Status</b>	
Married	19.40%
Single	80.60%
<b>Age at Enrolment</b>	
Minimum	17
Average	24.5
Maximum	56
<b>Regions</b>	
Hhohho	33.80%
Lubombo	36.60%
Manzini	36.60%
Shiselweni	15%
<b>Highest Level of Education</b>	
Primary	4%
Secondary	15.90%
High School	70.60%
Tertiary	8.40%
Non-Formal Education	1.10%
<b>Qualification level</b>	
Certificates	7.30%
Degrees	0.70%
Diploma	2.40%
None	89.60%
<b>Work Status Before Enrolling</b>	
Formally Employed Full-Time	11%
Formally Employed Part-Time	7.30%
Nothing	36.4
Schooling	41.50%
Self-employed	3.70%
<b>Sponsors</b>	
NGOs	13.10%
Family	45.90%
Government Scholarship	24.30%
Self	16.80%

Sources: Author's own representation using survey data

Notes: 56 years' maximum was enrolled in 1 of the Rural Education centres

#### **4.2. Summary of TVET Institutions**

Table 4.2.1 below profiles the twelve (12) TVET institutions sampled in the study. These include; the Eswatini College of Technology (ECOT), Gwamile VOCTIM, the National Handicraft Training Centre (NHTC), Manzini Industrial Training Centre (MITC), Siteki Industrial Training Centre (SITC), Nhlanguano Agricultural and Skills Training Centre (NASTIC) Big Bend Rural Education Centre, Ntfontjeni Rural Education Centre, Ngwane Rural Education Centre, Dvokolwako REC, Ekululameni Vocational Training Centre, and Mpaka Vocational Training Centre. It shows the year of establishment, the number of courses offered and their duration, the capacity, and certification. A majority of the TVET institutions were established in the 1970s (ECOT, NHTC, Ekululameni, and the Rural Education Centres). The number of courses offered range from 2 to 8, for a period of 2 to 3 years. The courses include mechanical and electrical engineering, computer studies, motor vehicle, carpentry, metal works, and sewing. However, the courses are not informed by the demand for industries, instead, they are supply driven, which is a contributing factor to a high number of unemployment amongst respondents and in Eswatini, which is at 32.4% for (15 - 35 years). In terms of capacity, ECOT enrolls the highest number of trainees (1,500), while Ekululameni, which is a centre for people living with disabilities, enrolls the lowest number of trainees (60). This indicates that TVET institutions have the capacity to enrol a high number of trainees but are limited by the availability of training equipment as each trainee has to have his/her own equipment. This is the reason why a low number of trainees enrol at TVET institutions resulting in the underutilisation of such structures. The certification is done locally and externally through City & Guilds. Grade-testing is another way of certification after 2 years of graduation, as shown at NHTC, MITC, and NASTIC.

**TABLE 4.2.1: SUMMARY OF TVET INSTITUTIONS SHOWING THE YEAR OF ESTABLISHMENT, NUMBER OF COURSES, DURATION, CAPACITY, AND CERTIFICATE**

TVET Institution	Year Established	No: of Courses	Duration	Capacity	Certification
1. ESCOT	1974	8	3 years	1500 trainees	National Diploma
2. Gwamile VOCTIM	1987	5	2 years	250 trainees	City & Guilds Local Certificates
3. NHTC	1974	6	12 months	155 trainees	Local Certificates Grade Testing
4. MITC	1984	8	2 years	400 trainees	Local Certificates Grade Testing
5. SITC	1998	6	2 years	150 trainees	Local Certificates
6. NASTIC	2005	6	2 years	150 trainees	Local Certificates Grade Testing
7. Big-Bend REC	1978	5	6 - 12 months	100 trainees	Local Certificates
8. Ntfontjeni REC	1978	5	6 - 12 months	100 trainees	Local Certificates
9. Ngwane REC	1978	5	6 - 12 months	100 trainees	Local Certificates
10. Dvokolwako REC	1978	5	6 - 12 months	100 trainees	Local Certificates
11. Ekululameni	1971	5	2 years	60 trainees	Local Certificates
12. Mpaka	1984	6	2-3 years	150 trainees	City & Guilds

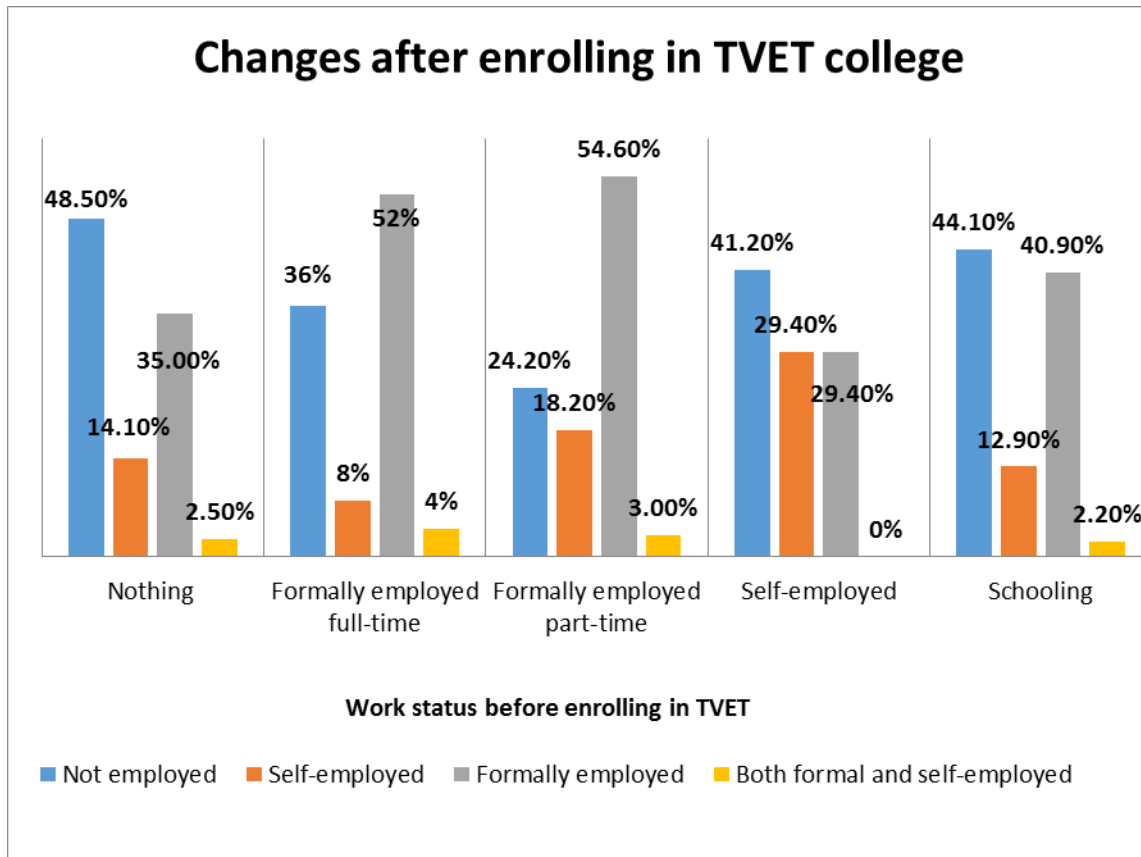
Source: Author's own representation of survey data

### 4.3. Graduates Changes Experienced after Enrolling in TVET Colleges

Figure 4.3.1 below shows how enrolling in a TVET course changed respondents lives regarding employment creation and formal employment. Of those doing nothing before enrolling at the TVET colleges, 35% are formally employed, 14.1% are self-employed, and 2.5% are both formally and self-employed. However, a large proportion of the respondents, 48.5% are unemployed. Of those who were formally employed full-time before enrolling at the TVET colleges, 52% are formally employed full-time and 8% are self-employed, while 4% are both formally and self-employed, 36% are not employed. About 54.6% of those who were formally employed part-time before enrolling are formally employed, 18.2% are self-employed, 3%, both formally and self-employed, while 24.2% are not employed. Of those who were self-employed before enrolling at a TVET college, those formally employed and self-employed share an evenly distributed number (29.4%), and those that are unemployed are a majority, at 41.2%. Of those who were schooling, 40.9% are formally employed, self-employment is at 12.9%, both formally and self-employed at 2.2%, while high number, 44.1% are unemployed. This indicates that enrolling at a TVET college has changed other respondent's lives through employment creation and self-employment. However, those that are unemployed, stand a better chance of getting

employment with time or engage in self-employment when compared to high school leavers without any form of training.

**FIGURE 4.3.1: GRADUATES CHANGES EXPERIENCED AFTER ENROLLING IN TVET COLLEGES**

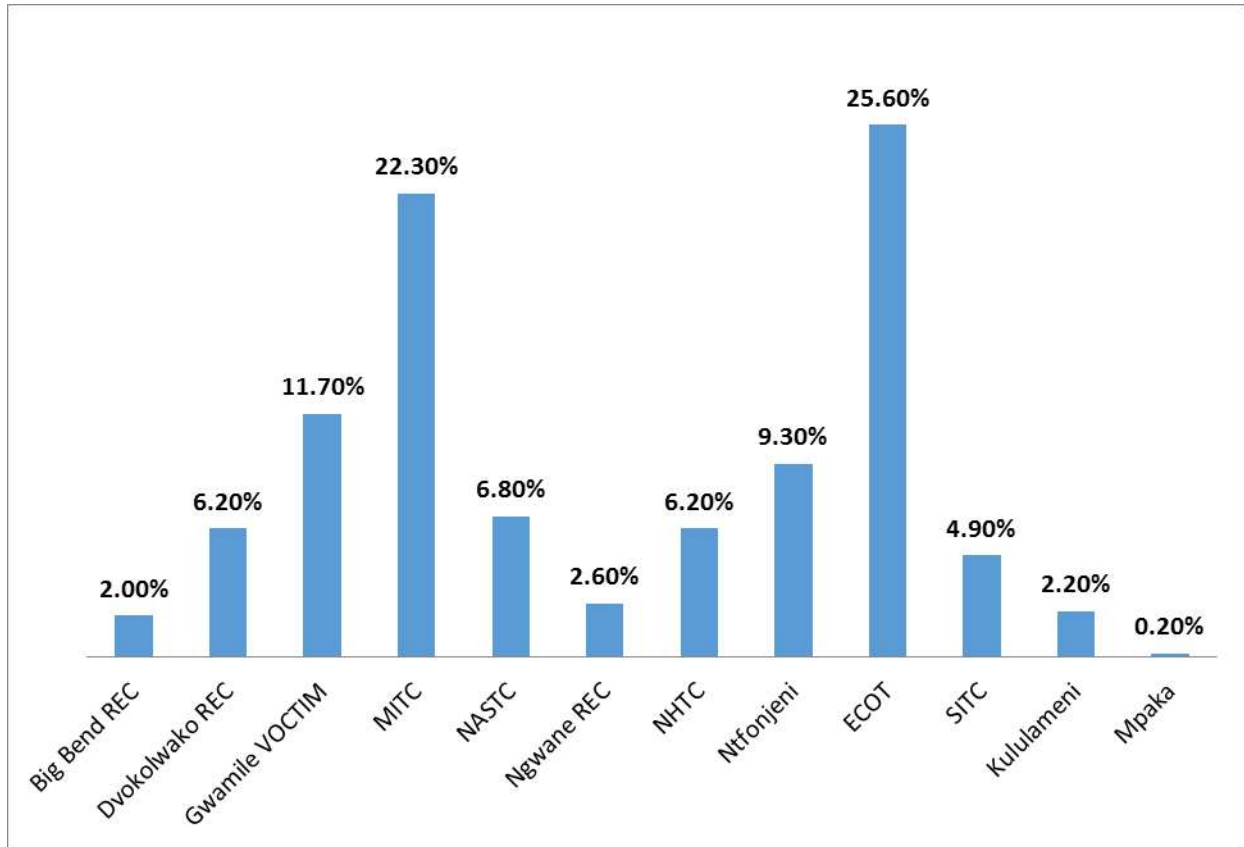


Source: Author's own representation of survey data

#### 4.4. TVET College Enrolled at and the Year of Enrolment

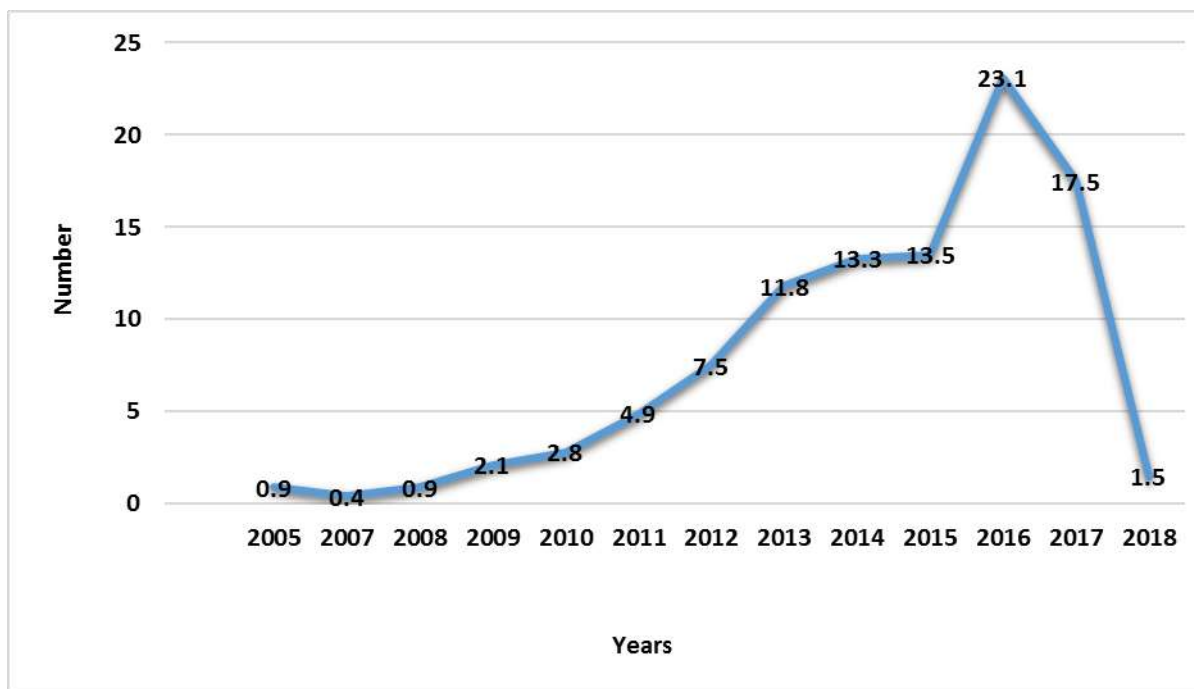
Figure 4.4.1 below shows the colleges respondents were enrolled at. It shows that a majority of the respondents (25.6%) were enrolled at ECOT, followed by MITC, 22.3%, and Gwamile VOCTIM, 11.7%. It further shows that Rural Education Centres, Big Bend and Ngwane had enrolments less than 2.0%, while Mpaka had the lowest percentage of enrolments (0.2%). Figure 4.4.2 presents the number of students enrolled between 2005 and 2018 in the different TVET institutions. A large proportion of the respondents enrolled in 2016 (23.1%), followed by 2017 with 17.5%. 2007, 2005 and 2009 had the lowest number of enrolments with 0.4% and 0.9% for both 2005 and 2008. This indicates that the demand for TVET amongst trainees was very low between 2005 and 2009 maybe due to the misperception TVET is subjected to. However, the enrolment improved from 2012 to 2017.

**FIGURE 4.4.1: TVET COLLEGE ENROLLED AT**



Source: Author's own representation using survey data

**FIGURE 4.4.2: YEAR OF ENROLMENT**

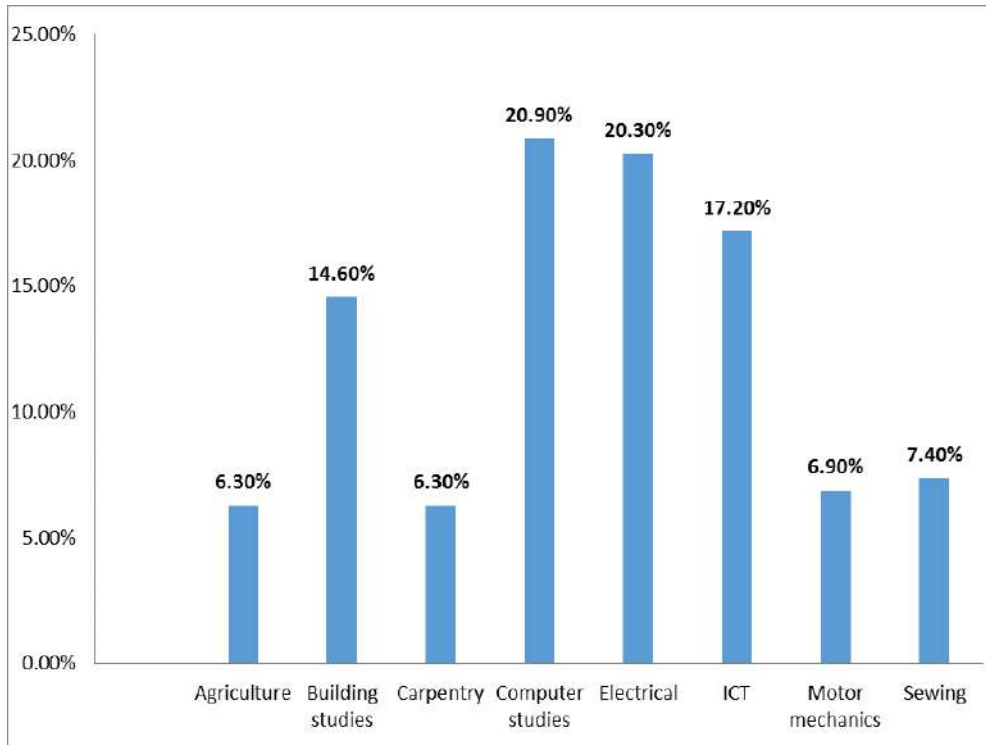


Source: Author's own representation using survey data

#### 4.5. Most Demanded Courses

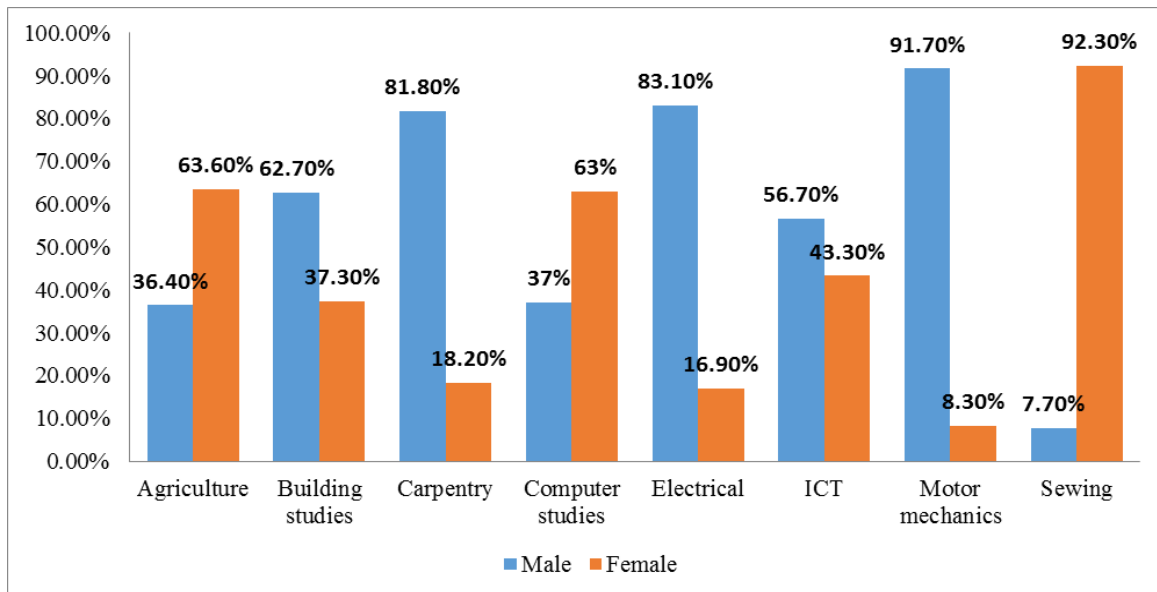
Figure 4.5.1 below presents the most demanded courses by the respondents. A total of 25 courses were identified by the study. However, only the best 8 courses are presented in figure 4.5.1 below. Computer studies are highly demanded at 20.9%, followed by electrical at 20.3% and ICT comes third, at 17.2%. Agriculture is lowly demanded at 6.3%. Figure 4.5.2 shows the demand for courses by sex category. It demonstrates that males dominate enrolment in courses perceived to be designed for them, being, motor mechanics, carpentry, building studies, and ICT, while females dominate courses perceived to be designed for them as they are mostly found in sewing, computer studies, and agriculture.

**Figure 4.5.1: Most demanded Courses**



Source: Author's own representation of survey data.

**FIGURE 4.5.2: DEMAND FOR COURSES BY SEX CATEGORY**

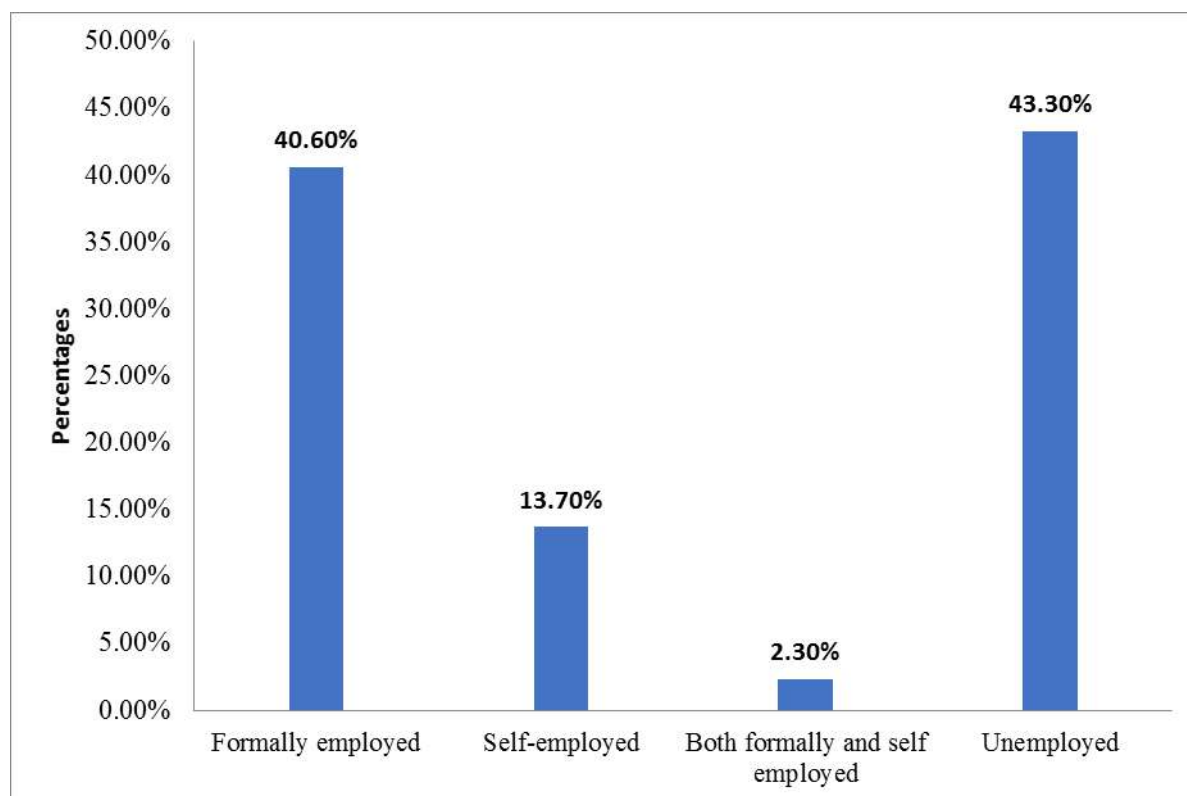


Source: Author's own representation of survey data

#### **4.6. TVET Skills Utilisation after Graduation**

Figure 4.6.1 below shows how TVET graduates utilise their skills after graduating at the TVET colleges. It shows that 40.6% are absorbed in formal employment, 13.7% are self-employed, while 2.3% are both formally and self-employed. This shows that 56.6% of the respondents are in productive employment. However, 43.3% are unemployed neither engaged in self-employment although the acquired skills could either be used for employment or job-creation. It indicates that the level of entrepreneurship training alongside the TVET skills acquisition is very low.

**FIGURE 4.6.1: TVET SKILLS UTILISATION AFTER GRADUATION**



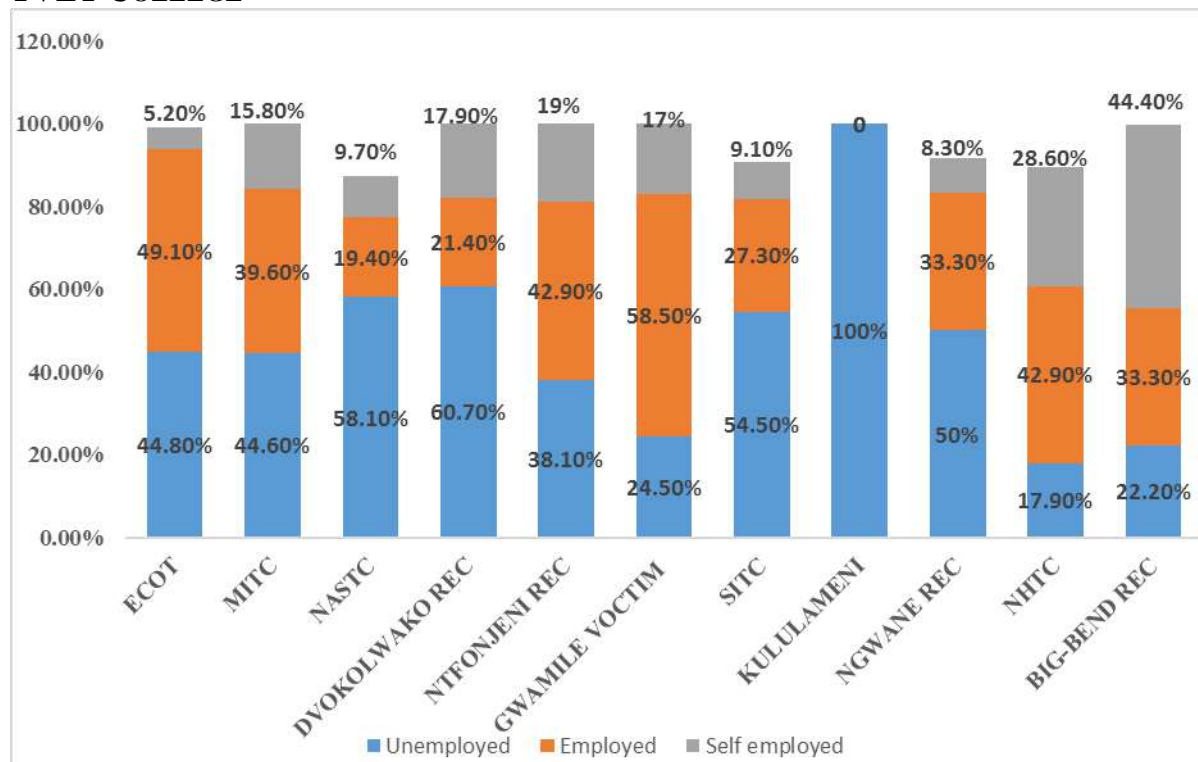
Source: Author's own representation using survey data

#### **4.7. Level of Employment, Self-Employment, and Unemployment per TVET College**

Figure 4.7.1 shows the level of employment, self-employment, and unemployment per TVET College. A majority of employed graduates are from Gwamile VOCTIM (58.50%), followed by ECOT, with 49.10%, while NHTC and Ntfonjeni share an equal number of employment (42.90%). The results indicate that these colleges have to be strengthened with more financial resources to enrol more trainees who are being absorbed by the labour market. The level of self-employment is high among respondents from Big Bend REC (44.40%), 28.60% for NHTC, and 17.90% for Dvokolwako REC. This shows that the respondents use the acquired skills for business development, which is the mandate of vocational education and training. ECOT's level of self-employment is very low, 5.2%, which is a cause for concern as TVET colleges' mandate is to provide skills for self-employment. Unemployment among the respondents remains high, such that the results show that 100% of Kululameni graduates are unemployed. 58.10% for NASTC, 54.50% for SITC, and 50% for Ngwane REC. The high unemployment level at Kululameni demonstrates that the level of integration of people living with disabilities in the labour market is very low. This is a cause for concern as this is the only skills development college for people living with disabilities.



**FIGURE 4.7.1: LEVEL OF EMPLOYMENT, SELF-EMPLOYMENT, AND UNEMPLOYMENT PER TVET COLLEGE**

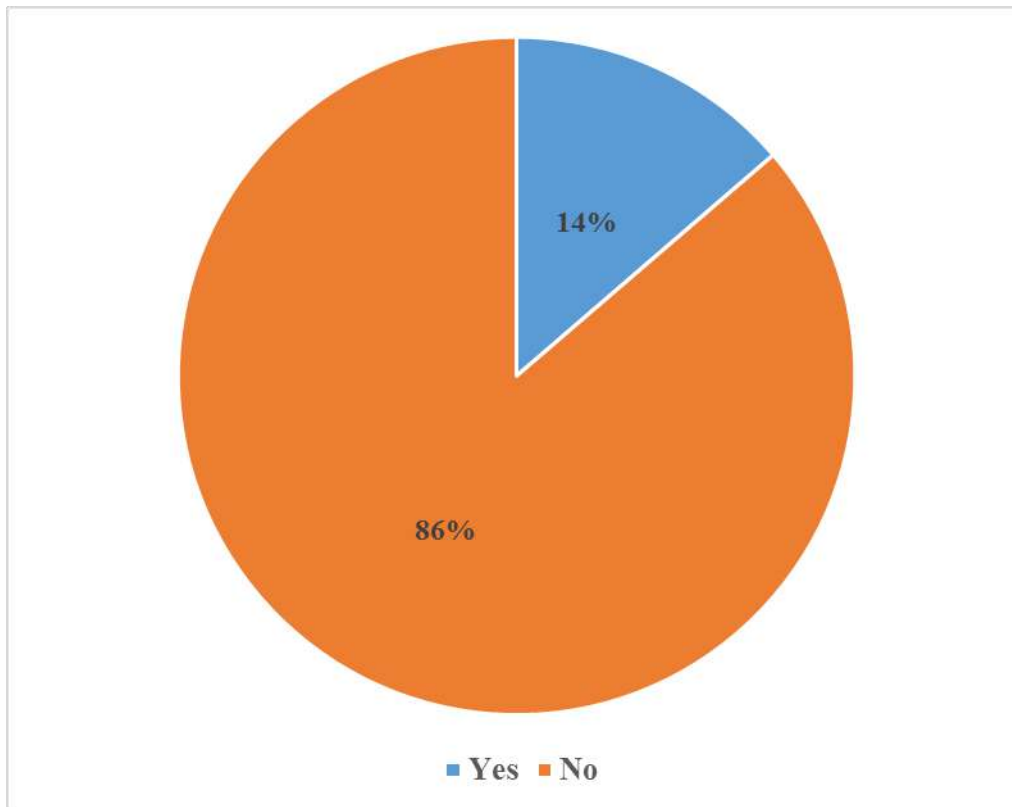


**Source:** Author's own representation of survey data

#### 4.8. Level of Study Continuation after graduating

Figure 4.8.1 below shows the level of study continuation after graduating at the TVET colleges. It shows that only 14% of the respondents continued upgrading their skills after graduating, whilst, 86% did not upgrade their skills after graduating. Those who continued upgrading their studies enrolled in institutions including University of Eswatini, Vaal University, Ngwane Teachers' Training College, Institute of Development Management, Tshwane University of Technology, CIT, ECOT, Southern Africa Nazarene University, U-Tech, Workers' College, and Computech College. This shows that institutes of higher learning recognise TVET qualifications without any formal arrangements with TVET colleges. Meaning it depends on the graduate whether to upgrade the skills or not.

**FIGURE 4.8.1: LEVEL OF STUDY CONTINUATION AFTER GRADUATING**

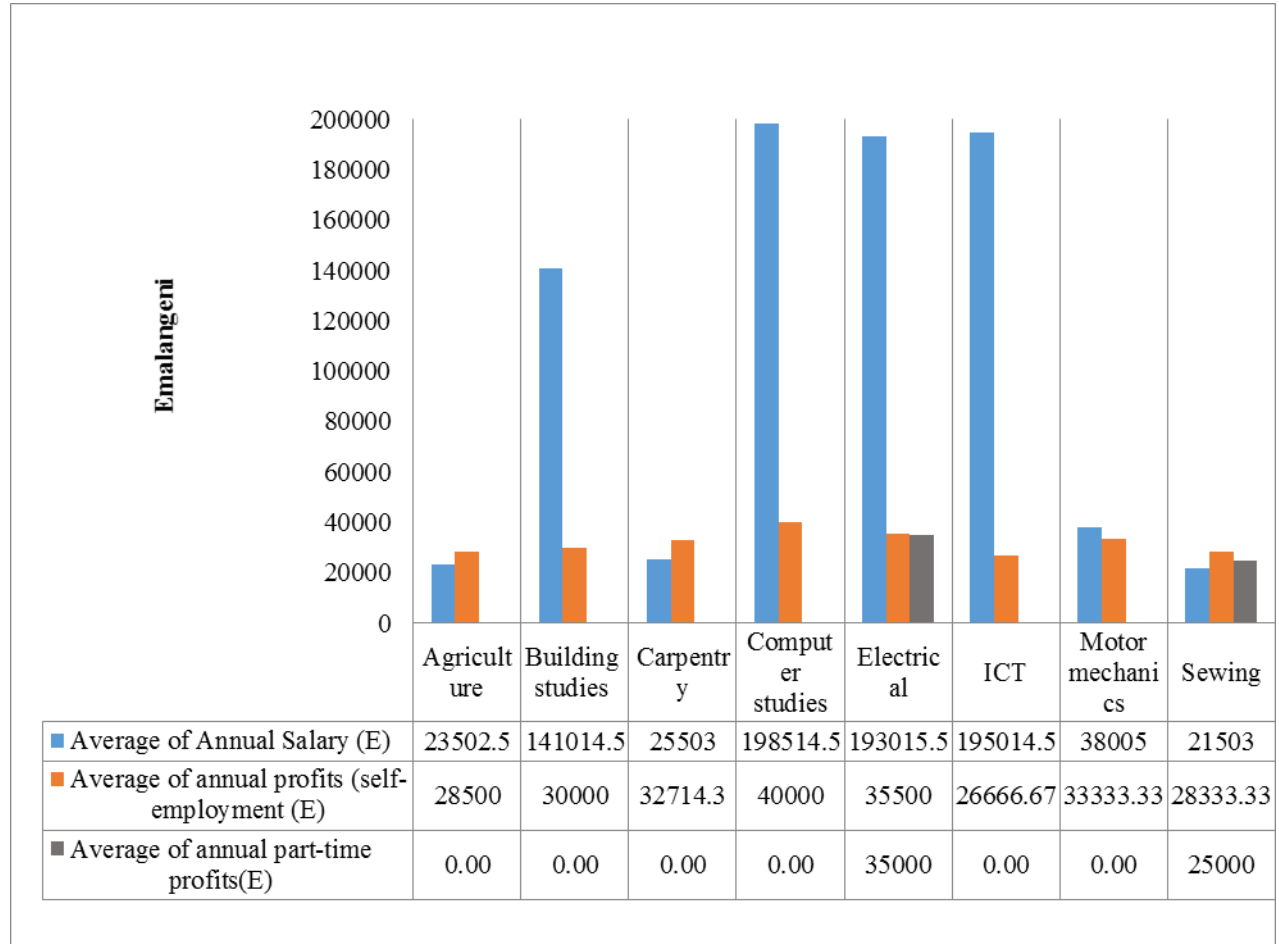


Source: Author’s own representation using survey data

#### **4.9. The Economic Benefits of TVET in Eswatini**

The results of the study show that the TVET respondents receive income through formal employment, self-employment, and part-time employment. Figure 4.9.1 presents apportioned average income generated through eight highly demanded courses, being, agriculture, building studies, carpentry, computer studies, electrical studies, ICT, motor mechanics, and sewing. The results reveal that respondents with computer studies receive the highest average annual earnings of E198, 514.5, followed by ICT with average annual salaries of E195, 014.5, and electrical comes third with, E193, 0015.5. Sewing respondents receive the lowest average annual salaries at, E21, 503.00. Respondents with computer skills also receive the highest average profits of E40, 000, followed by Electrical of, E35, 500.00 and third is Carpentry at E32, 714.3 per year. With average annual part-time profits, only respondents with electrical and sewing skills make profits on part-time basis. Respondents with electrical skills receive the highest profits, E35, 000.00 followed by sewing, at E25, 000.00.

**FIGURE 4.9. 1: AVERAGE ANNUAL EARNINGS PER TVET COURSE**



Source: Author’s own representation of survey data

**4.10. The Benefit Cost Analysis of TVET in Eswatini**

This section calculates the Benefit Cost Ratio of TVET in Eswatini using the income generated by TVET graduates in 2017 covering 835 graduates. Costs incurred by the Government in funding TVET Institutions also form part of this section. Table 4.10.1 demonstrates that the total benefit of TVET earned through formal salaries, part-time employment, and self-employment is E41,382,267.50. MITC earned the highest benefit of E30,006,866.50 generated by 249 graduates, whilst Ngwane REC earned the lowest benefit of E25,500.00 generated from 17 graduates. ECOT, Mpaka and Ekululameni have been excluded from the table since there were no 2017 respondents. Table 4.10.2 shows that the Government of Eswatini investment to TVET costs E27,441,355.38 in 2017. This figure includes students’ contributions amounting to E2,934,200.00. The highest budget amounting to E11,853,694.00 was allocated to Gwamile VOCTIM, whilst the lowest budget amounting to E500,000.00, was allocated to Ekululameni.

**FIGURE 4.10.1: STUDENTS ENROLMENT AND INCOME FROM THE 12 TVET INSTITUTIONS GRADUATES 2017**

<b>TVET Centre</b>	<b>Students Enrolled</b>	<b>Formal salaries</b>	<b>Part-time utilisation</b>	<b>Self-employment</b>	<b>Total</b>
Big-Bend REC	28				
Dvokolwako REC	42	E2, 940,042.00			E2'940 ,042.00
Gwamile VOCTIM	11			E440,000	E440,000
MITC	249	E18,303,616.5	E1,743,249.0	E9,960,000.0	E30,006,865.50
NASTC	133	E532,966.5			E532,066.5
Ngwane REC	17	E25,500.00			E25,500
NHTC	100	E2,350,300		E3,600,000	E5,950,030
Ntfonjeni REC	17	E17,501.50			E297,525.5
SITC	238	E5,001			E1'190, 238.00
<b>Total</b>	<b>835</b>	<b>E108,536</b>	<b>E1,743,249.0</b>	<b>E116,000</b>	<b>E41,382,267.5</b>

Source: Author's own representation of survey data

**TABLE 4.10.2: THE GOVERNMENT OF ESWATINI COST TO TVET CENTRES 2017**

<b>TVET Centre</b>	<b>Cost (E)</b>	<b>Students Contributions (E)</b>	<b>Total (E)</b>
National Handicraft Training Centre	6,108,985.38	800,000.00	6,908,985.38
Gwamile VOCTIM	E11,836,694.00	E187,000.00	E12,023,694.00
Nhlangano Agricultural Skills Training Centre	E1,034,088.00	E399,000.00	E1,433,088.00
Siteki Industrial Training Centre	E550,000.00	E714,000.00	E1,264,000.00
Manzini Industrial Training Centre	E2,388,368.00	E747,000.00	E3,135,368.00
Dvokolwako Rural Education Centre	E647,200.00	E15,800.00	E663,000.00
Big Bend Rural Education Centre	E647,200.00	-	E647,200.00
Ngwane Rural Education Centre	E647,200.00	E20,400.00	E667,600.00
Ntfontjeni Rural Education Centre	E647,200.00	E51,000.00	E698,200.00
<b>Total</b>	<b>E24,507,155.38</b>	<b>E2, 934,200.00</b>	<b>E27,441,355.38</b>

Source: Author's own representation using survey data and the Government Estimate Book, 2018-2021.

The BCR is calculated from the total income earnings of the graduates and cost of TVET in Eswatini as follows;

$$\text{TVET BCR} = \frac{\text{Income generated by TVET Graduates (2017)}}{\text{Total TVET Costs (2017)}}$$

$$\text{TVET BCR} = \frac{\mathbf{E41,382,267.50}}{\mathbf{E27,441,355.38}}$$

This means that the BCR for TVET in 2017 = E1,51, showing that for every E1 invested in TVET, the economy of Eswatini benefits E1,51. This indicates that TVET is a viable engine for economic growth in the country and has to be strengthened.

## **5. Conclusion and Recommendations**

### **5.1. Conclusion**

The purpose of the study was to investigate the economic benefits of Technical Vocational Education and Training in Eswatini using a sample from 12 TVET Centres. The objectives of the study were to; (i) determine the extent to which TVET graduates are using their TVET skills for self-employment; (ii) assess the rate at which TVET graduates are being absorbed by the formal labour market; (iii) assess the rate of continuous studying after graduating at the TVET institutions; (iv) quantify the value of investments of the government of Eswatini and development partners into TVET in the country. The study has demonstrated that the economic benefits of TVET in Eswatini among the respondents include; formal employment in the labour market, self-employment creation, earning part-time profits for those in full-time employment, and upgrading of skills with institutes of higher learning. A majority of the respondents (41.5%) were schooling before enrolling at the TVET colleges. In terms of geographical locations of the respondents, Manzini and Lubombo shared an equal number 36.6%. A majority of the respondents got funding for their training from family and friends.

With regard to the capacity to enrol more trainees, ECOT has been found to have the capacity to enrol more than 1,500 trainees per year. Even the large proportion of respondents is from ECOT, and is the only TVET College offering national diplomas. The results further show that a majority of graduates who were formally employed full-time before enrolling at a TVET college are formally employed full-time. Of those who were doing nothing before enrolling, 35% are formally employed, while 14.1% are self-employed. Although the study aimed at covering a period of 17 years (1990-2018), a majority of the respondents were enrolled in 2016.

The most demanded courses are computer studies (20.9%), electrical (20.3%), and ICT (17.2%), and are all demanded by males. Females have been found to dominate sewing (91.7%). Respondents with computer studies are receiving the highest average annual salaries at E198, 514, and highest average annual profits at E40, 000. Although a majority of the respondents are in productive employment (56.6%), the level of self-employment is still low (13.7%), and unemployment is still high (43.3%). Only 14% of the respondents continued upgrading their skills after graduating. A majority of employed graduates are from Gwamile VOCTIM (58.50%), followed by ECOT, 49.10%, while NHTC and Ntfontjeni share an equal number of employment (42.90%). The level of self-employment is high among respondents from Big Bend REC (44.40%), 28.60% for NHTC, and 17.90% for Dvokolwako REC. When calculating the economic return of the Government of Eswatini's investment in TVET, the study finds that for every E1 invested in TVET, the economy of Eswatini generates E1, 51 from the graduates' personal earnings. This indicates that, TVET yields positive economic benefits to the economy of Eswatini, and should be strengthened.

### **5.2. Recommendations**

The study recommends that:

- TVET centres should strengthen the courses that are in demand by the graduates to promote employment and wealth creation.
- The Government should consider promoting self-employment amongst graduates through establishing links with financing agencies to increase the rate of self-employment.
- Increase funding allocated to TVET Institutions to at least 3%, to match her SADC counterparts to make a provision for the development of the sector.
- The Government of Eswatini should formulate a TVET qualification framework that will clearly show pathways available when upgrading the TVET Skills.

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