# <u>ARTICLES</u>

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# Ethiopian Direct Tax System; the Reform of 2016 and Perception of business and employment income taxpayers

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**Abstract**

*The objective of the study is to analyse the Ethiopian direct tax system taking the reform of the 2016 and perception of the taxpayers towards the fairness of direct tax system. To achieve the objective of the study descriptive research design and mixed research approach was adopted. As a data source both primary and secondary data sources were consulted. Primary data was gathered from 768 employment and business income taxpayers found in Addis Ababa via a standard questionnaire. While secondary data from 2007/08 to 2020/21 were gathered regarding all the components of direct and indirect taxes from ministry of finance and economic cooperation (MoFEC). The collected data were analyzed by using descriptive data analysis tools. In order to compare the perception of the taxpayers based on type of tax paid and gender the Mann Whitney U test was conducted. To compare the change in the tax revenue before and after the reform of the paired samples t-test was conducted. The major findings of the study show that there is a significant variation between employment and business income taxpayers on the fairness of the Ethiopian direct tax system. The employment income taxpayers didn't believe that the current income tax system of Ethiopia is fair from the different dimensions of fairness while the business income taxpayers agreed to most of the dimensions. The paired samples t-test confirmed that the direct tax revenue shows a significant mean increment after the reform of the 2016 than before at 5% level of significance. The paired sample t-test shows that direct tax and specifically personal income tax, business income tax, rental income tax shows a significant (at 5% level of significance) increment in the proportion to the total tax revenue collected after reform than before the reform of 2016.*

***Key word: Ethiopian direct tax; taxpayers perception; direct tax fairness; tax reform of 2016***

## 1. Background and justification of the study

Government is expected to play an allocation, stability and redistribution roles within a country. To fulfill the expenditure requirements of the public that is to play these all roles the government needs finance from different sources. Obviously the provision of public goods is the sole responsibility of the government and finance these expenditures government can raise funds through compulsory imposition of taxation on the citizens of a country to support provision of it in addition to the other possible sources by which government could use to generate the finance.

Government can use tax and nontax revenues to finance its basic operations. The tax revenue can be classified into direct and indirect tax. The direct tax describes taxes that are levied on income, wealth and capital, whether personal or corporate. Indirect tax on the other hand comprises taxes that are not levied on income or property. It includes VAT, excise duties, import levies and energy and other environmental taxes. The fundamental principle in international taxation is that indirect taxes on consumption are charged in the country in which the goods and services are consumed. The consumers bear the burden of these taxes, in principle, as part of the market price of the goods or services purchased (Birhanu, 2018).

From the above findings, the Ethiopian taxation system especially the direct taxes are basically imposed on the civil servant as an employment income tax (dully under the control of the government) and the corporates who properly observe the taxation requirements. This is evidenced by the study of Bekana, Bayissa, & Medihin, (2014) who said that "it is a common

phenomenon, in Ethiopia also, that those that earn a significantly better amount of income do not pay taxes or pay an amount far less than their actual tax liabilities. Giant business houses are allegedly accused of keeping three books of accounts—one for their own business decisions (a genuine one), one for banks (with exaggerated assets and profits), and another for cheating the tax authority (with highly understated assets and profits)—and pay less than they would have otherwise paid".

The Ethiopian tax structure was dominated by indirect taxation. Dependency on foreign trade taxes would put revenue challenges to domestic resource mobilization in the long term perspective because the expansion of globalization in the form of regional integration and joining multilateral organizations entails more openness of the external sector. Hence due efforts should be exerted to raise tax revenues from direct taxes and domestic indirect taxes to have fiscal sustainability in a long run perspective (Mamo, 2017).

Ethiopia has been reforming its tax system for more than 20 years. Comprehensive tax reforms started in 2002/03 as an integral part of economic reforms. The main objective of the tax reforms was to mobilize tax revenues with special focus on increasing the share of direct tax contribution to total tax revenues to ensure fiscal sustainability and to reduce dependency on foreign trade tax which is volatile due to free trade agreements and regional integration from long term perspective (Daba & Mishra 2014). Though reforms are undertaken to enhance the contribution of taxation to the economy the tax to GDP ratio as compared to the 2005 of 12.5% remained low at 13.4 percent in 2015 after 10 years of efforts (which below the sub Saharan having 18 % share and emerging economies having 20 % share as well the developed economies beyond 30% contribution to the economy).

Since the proportion of tax revenue to GDP as depicted above is by far less as compared to the peer African countries and even the target proportion planned to be achieved in the year 2020 (17% tax to GDP) the government in coordination with the responsible stakeholders should work to enhance the contribution of tax towards the GDP of the country. Comprehensive studies should be conducted as why this deviation has been happened and what appropriate measures should be undertaken to enhance the contribution of tax revenue to the GDP.

In addition to this, since taxpayers' perceptions of tax fairness influence taxpayers' compliance, a study on items that influence taxpayers' perceptions on the fairness of a tax system is important because fairness of the tax system will instill compliant behavior among taxpayers. Understanding taxpayers' motivation and developing tax policies and strategies that can influence compliance will bring more revenue and less administrative cost to the tax authority (Azmi & Perumal, 2008).

Taking into consideration the above observations and facts discussed above, the current study will answer the following research questions

- What is the perception of the taxpayers (employment and business income taxpayers) towards the fairness dimensions of direct tax system of the Ethiopia direct tax system?
- What is the current status of direct tax in Ethiopia taking the reforms made into consideration?

## Objective of the study

### General objective

The general objective of the study is to assess the Ethiopian direct tax system

### Specific objective

➢ To assess the perception of the taxpayers (employment and business income taxpayers) towards the fairness dimensions (general fairness, exchange with the government, self-interest, special provision and tax rate structure) of direct tax system of Ethiopia.

➢ To assess the current status of direct tax in Ethiopia taking the reforms made into consideration

## 2. Review of related literature

### Assessment of tax performance and reforms

*Peter, Buttrick, & Duncan (2010),* conducted a study to assess the **Global reform of personal income taxation** that has been undertaken in the periods 1981-2005: taking 189 countries into consideration. As per this study different reforms that have been undertaken in different period by different countries are reviewed. As per this study low income countries are not found to alter the tax bracket by taking the effect of inflation into consideration while significant share of high and middle income countries alter tax brackets with no corresponding change in statutory rates adjusting their tax schedules for inflation. the study assured that without such an adjustment the tax structure is going to be less equitable since the taxpayer is pushed to a higher tax bracket with no accompanying increment in the real income. The study confirmed that there is a slow adjustment of tax bracket in low income countries but this adjustment is likely to be related to widespread evasion, weak enforcement, and little revenue collected from **personal income tax.**

According to this study actual personal income tax rates are declining over the study period for high and upper middle income countries while the least developed countries had either no change or an increase in rates. Entrepreneurs and high skilled workers are most likely to be subject to the increase in average and marginal rates in poor countries.

The study conducted by **Claus, (2007)** on Tax Policy Reform and Economic Performance in New Zealand shows that taxation can have important economic effects. The paper develops a stylized model for New Zealand to evaluate the effects of reducing higher-income tax rates. A reduction in higher-income tax rates would improve New Zealand's long-run economic performance if it were financed by a decline in (non-productive) government spending and/or increases in revenue from other less distortional taxes. A reduction in higher-income tax rates would have distributive effects but would not undermine the overall distributive character of the tax system. Higher-income taxpayers would continue to pay a substantially larger proportion of the tax burden. The results suggest that the introduction of a payroll tax would not only produce the most income inequality but also cause a net fall in welfare. The imposition of a uniform income tax rate of 20 percent should therefore be financed either by lower government consumption or a higher consumption tax rate.

The study of **Daba & Mishra, (2014) which covers** the period of 1974/75 to 1912/13 (39 years) were computed and analyzed. In addition comparison has been made between pre and post-tax reforms to compare tax system flexibility in terms of raising tax revenues during the EPRDF regime. The period after 2002/03 was considered as post comprehensive tax reforms years. The result shows that the comparison of two governments' different categories of tax ratios shows a slight increment from an average 3.77 percent to 9.95 during EPRDF period. Comparing pre and post-tax reforms during the period 1991/92 to 2012/13 the ratios of different category tax revenues show insignificant change for post comprehensive tax reform period. Comparing direct versus indirect tax categories, direct tax shows the tendency of

declining contrary to the comprehensive tax reform main objective which gave due attention to increase the share of the direct tax to total revenues. The overall analysis reveals that tax reforms failed to boost total tax revenues and to bring tax structure change from indirect tax to direct tax. Since the structure of the tax revenues which have been dominated by indirect taxes in general, foreign trade taxes in particular during the Derg regime continued in the same trend. The share of indirect tax in total tax revenues has increased from 63 percent to 66 percent while foreign trade tax revenues increased from 33percent to 44 percent in average with change of economic policy from the centrally planned economic policy to market oriented one.

## Taxpayers' perception on taxation system

**Blaufus & et.al (2015)** studied to assess the Perception of income tax rates in German. In this study, subjects are asked to estimate how high their tax burden is, and to give their opinion if, or to what extent, they would consider this perceived tax rate as fair. The findings of the study shows that the perceived income tax rates significantly deviate from the objective tax rates for the majority of taxpayers. The degree of misperception can be partly explained by the individual's level of education, income, and whether the individual included social security contribution in their income tax rate estimation. Comparing the perceived tax rate with the tax rate that is regarded as fair, they find that the individual's level of education and age influence their estimate.

The other study conducted by **Benk, Budak & Cakmak, (2012)** in Turkey assesses the perception of tax fairness from the perspective of the tax professionals study with the aim to investigate whether the dimensions of tax fairness exist in Turkey. A survey questionnaire on tax fairness developed by Gilligan and Richardson was administered to a sample of 180 tax professionals (Certified Public Accountants and Sworn-in Certified Public Accountants). Factor analysis and reliability analysis identify six robust tax fairness dimensions. Namely general fairness, middle income earners tax share and tax burden, exchange with the government, tax rate structure, special previsions, tax system equality and inequality. As the above study the 5 tax fairness dimensions which are **general fairness**, **tax rate structure**, **exchange with the government**, **self-interest** and **special provisions of the wealthy was used**. The survey questionnaire on tax fairness which was developed by Gerbing (1988) was administered to 390 respondents. The result of the factor analysis identified three slightly different tax fairness dimensions. They are general fairness, tax structure and self-interest.

The area of taxation is rich in theories and the practice in implementation while designing policies and introducing reforms resulted in difference in perception of the taxpayers over the appropriateness and fairness of the system. The current study aimed at investigating the perception of business and employment income taxpayers towards the fairness of the direct tax system of Ethiopia.


Since as it has been shown in the literature review there are limited studies conducted in the area while the tax collection performance of Ethiopia in particular and the developing countries in general is limited. For this the perception of the taxpayers towards the fairness of the tax system contributes to the level of tax compliance of the taxpayers. In addition to this evaluating the effect of the reform made to the income tax also deserves an investigation to see if it results in significant change and achieves the objective of the reform (that is enhancing the total tax revenue collection and specifically improving the level of domestic tax collection). Since little is known about the contribution of the reform.

## 3. Research methodology

**Research design and approach:** To achieve the objective of the study that is to assess the existing direct tax system and the perception of the taxpayers towards the same descriptive research design and mixed research approach was adopted as per the nature of the data that are gathered to achieve the objectives of the study.

**Data source and Methods of data collection:-** Both primary and secondary data sources were the main sources of data for the achievement of the objectives. The primary data was collected from the employment and business income taxpayers via questionnaire. The questionnaire is developed by Gilligan and Richardson (2005) and used again by (Azmi, & Perumal, 2008) as well as Benk, Budak & Cakmak, (2012) which uses five dimensions of fairness. While secondary data from 2007/08 to 2020/21 were gathered regarding all the components of direct taxes is collected from MoFEC.

**Sampling design:-** The employment income tax payers and business income tax payers (category 'A' taxpayers) are the population of the study. From this using sample size determination formula for unknown number of population, equal amount of sample size from category 'A' taxpayers (384) and employees (384) of public universities found in Addis Ababa was taken as a sample size. Then a simple random sampling method was applied and Addis Ababa is purposively selected as study area (homogeneity nature of the respondents and convenience for the researcher).

**Method of data analysis: -** To analyse the data collected from both primary and secondary data sources; basically the descriptive data analysis tools were used. In order to compare the perception of the taxpayers based on type of tax paid and gender the Mann Whitney U test was conducted. While to compare the change in the tax revenue before and after the reform of the paired samples t-test was conducted.

**Validity and reliability**: - To maintain the validity standard questionnaire was used and the secondary data was collected from official data sources. In addition to this to conduct the paired samples t-test, normality assumption of the difference and original observation were conducted.

## 4. Data Analysis, Presentation and Discussion

To achieve the objectives of the study, to assess the perception of business and personal income taxpayers towards the dimensions of fairness of Ethiopian direct tax, 768 questionnaires were distributed. Out of this 698 questionnaires were properly filled and used for the analysis which constitute 91% response rate.

Among the 698 properly filled questionnaires; 357 (51%) were business income
taxpayers and 341 (49%) employment income tax payers. In terms of gender 475 (68%) were men while 221 participants were women tax payers. 56% of the respondents are found in the age bracket of 31-40 years while the most (46%) of the respondents hold first degree followed by masters holder and PhD holders. Implying that the questionnaires are responded by on average both type of gender, productive age bracket as well educated participants that can contribute to the reliability and representativeness of the data obtained.
Source: survey, 2022

## Background information of respondents
As per the different dimensions of fairness developed by Gilligan and Richardson (2005) and used again by Benk, Budak & Cakmak, (2012) and other scholars in different parts of the world; in this study an effort were made to see the perception of the tax payers towards the five dimensions of tax fairness. These dimensions are general fairness; Exchange with the Government; Special Provisions: Tax-Rate Structure and self-interest.

**General fairness dimension**
The first question to assess the perception of the taxpayers toward the general fairness of Ethiopian direct tax was to select the level of agreement to 'For the average taxpayer, I think that the income-tax system is fair'. As shown on the table below, 28% of the business income tax payers and 76% of employment income tax payers don't believe that for the average tax payer the income tax system is fair. While 62% of business income taxpayers and 20% employment income taxpayers agree that the income tax system is fair for the average tax payers.

| | For the average taxpayer, I think that the income-tax system is fair | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **business income tax** | Agreement level | Frequ | % | Cumulat % | | Frequency | % | Cumulat % |
| | strongly disagree | 23 | 6.4 | 6.4 | | 121 | 35.5 | 35.5 |
| | Disagree | 34 | 9.5 | 16.0 | | 112 | 32.8 | 68.3 |
| | slightly disagree | 43 | 12.0 | 28.0 | | 25 | 7.3 | 75.7 |
| | don't know | 36 | 10.1 | 38.1 | | 12 | 3.5 | 79.2 |
| | slightly agree | 69 | 19.3 | 57.4 | | 18 | 5.3 | 84.5 |
| | Agree | 98 | 27.5 | 84.9 | | 53 | 15.5 | 100.0 |
| | strongly agree | 54 | 15.1 | 100.0 | | | | |
| | Total | 357 | 100.0 | | **Employment income tax** | 341 | 100.0 | |

To assess the perception of tax payers on the general fairness the **second** question raised was; for me personally, I believe that the income tax system is fair. Accordingly 34% of the business income tax payers and 80% of the employment income taxpayers didn't agree. While 60% business income taxpayers and 20% of the employment income taxpayers agree that to the above statement.

| For me personally, I believe that the income tax system is fair | | | | | |
|---|---|---|---|---|---|
| | Freque | Cumu % | Freque | % | Cumulative % |
| strongly disagree | 31 | 8.7 | 105 | 30.8 | 30.8 |
| Disagree | 32 | 17.6 | 131 | 38.4 | 69.2 |
| slightly disagree | 61 | 34.7 | 35 | 10.3 | 79.5 |
| don't know | 20 | 40.3 | | | |
| slightly agree | 57 | 56.3 | 31 | 9.1 | 88.6 |
| Agree | 99 | 84.0 | 39 | 11.4 | 100.0 |
| strongly agree | 57 | 100.0 | | | |
| Total | 357 | | 341 | 100.0 | |

(Left section labeled **business income tax**, right section labeled **Employment income tax**)

The third question that is asked to the respondents to assess the perception of the taxpayers regarding the general fairness is 'Generally, I believe that the manner in which the income-tax burden is distributed across tax payers is fair'. Accordingly 31% of the business income taxpayers and 85% of the employment income taxpayers didn't agree that the manner by which the income tax burden distributed across taxpayers is fair, while 54% of the business income taxpayers and 6% of the employment income taxpayers didn't agree.

**Generally, I believe that the manner in which the income-tax burden is distributed across tax payers is fair.**

| | Agreement level | Freque | % | Cumul % | | Freque | % | Cumul % |
|---|---|---|---|---|---|---|---|---|
| business income tax | strongly disagree | 29 | 8.1 | 8.1 | Employment income tax | 86 | 25.2 | 25.2 |
| | Disagree | 31 | 8.7 | 16.8 | | 178 | 52.2 | 77.4 |
| | slightly disagree | 54 | 15.1 | 31.9 | | 27 | 7.9 | 85.3 |
| | don't know | 43 | 12.0 | 44.0 | | 14 | 4.1 | 89.4 |
| | slightly agree | 80 | 22.4 | 66.4 | | 16 | 4.7 | 94.1 |
| | Agree | 74 | 20.7 | 87.1 | | 17 | 5.0 | 99.1 |
| | strongly agree | 46 | 12.9 | 100.0 | | 3 | .9 | 100.0 |
| | Total | 357 | 100.0 | | | 341 | 100.0 | |

**Source: survey 2022**

The **fourth** question raised to assess the perception of the taxpayers about the general fairness of the direct tax system of Ethiopia is to express the level of agreement to the question 'Generally, I feel that the income tax is a fair tax'. Accordingly 34 of business income taxpayers and 75% of employment income taxpayers didn't agree while 59% of business income taxpayers and 23% of employment income taxpayers did agree on the general fairness of the Ethiopian direct tax system.

The **fifth** question raised to assess the perception of the direct taxpayers towards the general fairness of the direct tax system is to express the level of agreement to the question 'I believe that everyone pays their fair share of income tax under the current income tax system'. As depicted in the table below, 35% of business i9ncome taxpayers and 74% of the employment income taxpayers didn't agree on the above statement while 54% of the business income taxpayers and 15% of the employment income taxpayers believe that every taxpayer pays the fair share of income tax under the current direct tax system in Ethiopia.

| | Agreement level | Freque | % | Cumul % | | Freq | % | Cumul % |
|---|---|---|---|---|---|---|---|---|
| **business income tax** | strongly disagree | 47 | 13.2 | 13.2 | **Employment income tax** | 75 | 22.0 | 22.0 |
| | Disagree | 39 | 10.9 | 24.1 | | 117 | 34.3 | 56.3 |
| | slightly disagree | 40 | 11.2 | 35.3 | | 59 | 17.3 | 73.6 |
| | don't know | 37 | 10.4 | 45.7 | | 40 | 11.7 | 85.3 |
| | slightly agree | 92 | 25.8 | 71.4 | | 24 | 7.0 | 92.4 |
| | Agree | 68 | 19.0 | 90.5 | | 26 | 7.6 | 100.0 |
| | strongly agree | 34 | 9.5 | 100.0 | | | | |
| | Total | 357 | 100.0 | | | 341 | 100.0 | |

Table title: I believe that everyone pays their fair share of income tax under the current income tax system.

Source: survey, 2022

The **sixth question** asked to assess the perception of the taxpayers about the general fairness of the Ethiopian direct tax was to show the level of agreement to the question: 'the way employment income tax (business income tax) calculated (example: the tax rate applied, the tax bracket used, deductions provided ........) is fair'. As shown in the table below 37% of the business income taxpayers and 70% of the employment income taxpayers didn't agree of the fairness of the way income tax is calculated while 57% of the business income taxpayers and 19% of the employment income taxpayers agree on the fairness of the way income tax is calculated.

| the way employment income tax calculated (example: the tax rate applied, the tax bracket used, deductions provided ........) is fair | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agreement level | Frequence | % | Cumuu% | | Frequence | % | Cumula% |
| business income tax | strongly disagree | 46 | 12.9 | 12.9 | | 56 | 16.4 | 16.4 |
| | Disagree | 39 | 10.9 | 23.8 | | 135 | 39.6 | 56.0 |
| | slightly disagree | 46 | 12.9 | 36.7 | | 45 | 13.2 | 69.2 |
| | don't know | 24 | 6.7 | 43.4 | | 42 | 12.3 | 81.5 |
| | slightly agree | 62 | 17.4 | 60.8 | | 28 | 8.2 | 89.7 |
| | Agree | 107 | 30.0 | 90.8 | | 24 | 7.0 | 96.8 |
| | strongly agree | 33 | 9.2 | 100.0 | | 11 | 3.2 | 100.0 |
| | Total | 357 | 100.0 | | Employment income tax | 341 | 100.0 | |

Source: survey 2022

## Exchange with the Government

The second dimension of fairness of taxation is exchange with the government. To assess the perception of the taxpayers with this dimension of fairness three questions were raised;

The **first question** used to assess the perception of the taxpayers with this dimension is 'I get fair value for my income-tax payments in terms of benefits received from the government example, education, medical, and infrastructure…'. As depicted in the table below 32% of business income taxpayers and 72% of the employment income taxpayers didn't agree that they are getting fair value from the income tax payments in terms of the benefits received from the government like education, medical and infrastructure while 53% of business income taxpayers and 23% of the employment income taxpayers agree that they are getting fair benefit for the income tax paid.

| | I get fair value for my income-tax payments in terms of benefits received from the government example, education, medical, and infrastructure…... | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agreement level | Frequency | % | Cumula % | Frequenc | Perc | Cumu % |
| business income tax | strongly disagree | 35 | 9.8 | 9.8 | 104 | 30.5 | 30.5 |
| | Disagree | 37 | 10.4 | 20.2 | 99 | 29.0 | 59.5 |
| | slightly disagree | 43 | 12.0 | 32.2 | 42 | 12.3 | 71.8 |
| | don't know | 54 | 15.1 | 47.3 | 16 | 4.7 | 76.5 |
| | slightly agree | 79 | 22.1 | 69.5 | 44 | 12.9 | 89.4 |
| | Agree | 72 | 20.2 | 89.6 | 29 | 8.5 | 97.9 |
| | strongly agree | 34 | 9.5 | 99.2 | 7 | 2.1 | 100.0 |
| | Missing | 3 | 8 | 100.0 | | | |
| | Total | 357 | 100.0 | | 341 | 100.0 | |

(Employment income tax column group on the right)

Source: survey, 2022

The **second** question asked to assess the perception of the taxpayers from the dimension of exchange with the government was to show the level of agree to 'the income taxes that I have to pay are unreasonably high considering the benefits provided by government'. As depicted in the table below, 25% of business income taxpayers and 32% of employment income taxpayers didn't agree while 51% of business income taxpayers and 63% of the employment income taxpayers agree that the income tax paid is unreasonably high considering the benefits provided by the government.

| | The income taxes that I have to pay are unreasonably high considering the benefits provided by government. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agreement level | Frequence | % | Cumula % | | Frequenc | % | Cumu % |
| **business income tax** | strongly disagree | 19 | 5.3 | 5.3 | | 18 | 5.3 | 5.3 |
| | Disagree | 36 | 10.1 | 15.4 | | 45 | 13.2 | 18.5 |
| | slightly disagree | 36 | 10.1 | 25.5 | | 45 | 13.2 | 31.7 |
| | don't know | 83 | 23.2 | 48.7 | | 17 | 5.0 | 36.7 |
| | slightly agree | 83 | 23.2 | 72.0 | | 61 | 17.9 | 54.5 |
| | Agree | 67 | 18.8 | 90.8 | | 95 | 27.9 | 82.4 |
| | strongly agree | 33 | 9.2 | 100.0 | | 60 | 17.6 | 100.0 |
| | Total | 357 | 100.0 | | | 341 | 100.0 | |

(Employment income tax — right-hand columns)

**Source: survey, 2022**

**The third** question used to assess the perception of the taxpayers towards the exchange with the government dimension of direct tax fairness is 'the benefits I received from the government in exchange for my income-tax payments are reasonable'. As shown in the table below, 35% of business income taxpayers and 70 % of the employment income tax payers didn't agree that they are getting reasonable benefit from the government in line with the amount of income tax paid while 52% of the business income taxpayers and 24% of the employment income taxpayers agree that they are getting reasonable benefit from the government in line with the amount of income tax paid.

| | Agreement level | Frequ | Percent | Cumu % | | Freque nc | Perc | Cum % |
|---|---|---|---|---|---|---|---|---|
| **business income tax** | strongly disagree | 27 | 7.6 | 7.6 | | 67 | 19.6 | 19.6 |
| | Disagree | 55 | 15.4 | 23.0 | | 122 | 35.8 | 55.4 |
| | slightly disagree | 45 | 12.6 | 35.6 | | 50 | 14.7 | 70.1 |
| | don't know | 45 | 12.6 | 48.2 | | 21 | 6.2 | 76.2 |
| | slightly agree | 86 | 24.1 | 72.3 | | 40 | 11.7 | 88.0 |
| | Agree | 65 | 18.2 | 90.5 | | 37 | 10.9 | 98.8 |
| | strongly agree | 34 | 9.5 | 100.0 | | 4 | 1.2 | 100.0 |
| | Total | 357 | 100.0 | | **Employment income tax** | 341 | 100.0 | |

Source: survey, 2022

## Special Provisions

**The third** dimension of fairness of direct taxation is a special provision. To assess the perception of the direct tax payers two questions were asked that can reflect the perception on the special provisions of the direct tax of the taxpayers

The **first question** was 'some legal tax deductions are not fair because only the wealthy (example: large business income tax payers, rental income tax payers.....) are in a position to use them'. As depicted below in the table below, 31% of business income taxpayers and 21% of employment income taxpayers didn't agree while 69% of the business and 79% of the employment income taxpayers agree that some of the tax deductions are not fair because only the wealthy are in a position to use them.

| | agreement Level | Frequue | Percent % | Cumul % | Frequu | % | Cum % |
|---|---|---|---|---|---|---|---|
| **business income tax** | strongly disagree | 38 | 10.6 | 10.6 | | | |
| | Disagree | 19 | 5.3 | 16.0 | 45 | 13.2 | 13.2 |
| | slightly disagree | 55 | 15.4 | 31.4 | 29 | 8.5 | 21.7 |
| | don't know | 62 | 17.4 | 48.7 | 66 | 19.4 | 41.1 |
| | slightly agree | 77 | 21.6 | 70.3 | 40 | 11.7 | 52.8 |
| | Agree | 70 | 19.6 | 89.9 | 135 | 39.6 | 92.4 |
| | strongly agree | 36 | 10.01 | 100.0 | 26 | 7.6 | 100.0 |
| | Total | 357 | 100.0 | | 341 | 100.0 | |

Source: survey, 2022

The second question used to assess the perception of the taxpayers to the special provisions is 'Compared to the amount paid by more wealthy taxpayers, I pay more than fair share of income taxes'. As shown below, 32% of business income taxpayers and 15% of employment income taxpayers didn't agree while 44% of business income taxpayers and 75% of employment income taxpayers believe that they are paying more than the fair share of direct tax compared to more wealthy taxpayers.

| | Compared to the amount paid by more wealthy taxpayers, I pay more than fair share of income taxes. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agreement level | Frequ | % | Cumu % | | Frequen | % | Cumu % |
| business income tax | strongly disagree | 21 | 5.9 | 5.9 | | 23 | 6.7 | 6.7 |
| | Disagree | 29 | 8.1 | 14.1 | | 16 | 4.7 | 11.4 |
| | slightly disagree | 64 | 17.9 | 32.1 | | 13 | 3.8 | 15.2 |
| | don't know | 86 | 24.1 | 56.3 | | 34 | 10.0 | 25.2 |
| | slightly agree | 62 | 17.4 | 73.8 | | 35 | 10.3 | 35.5 |
| | Agree | 57 | 16.0 | 89.9 | | 122 | 35.8 | 71.3 |
| | strongly agree | 35 | 9.8 | 99.7 | | 98 | 28.7 | 100.0 |
| | Missing | 3 | .9 | 100.0 | | | | |
| | Total | 357 | 100 | | Employment income tax | 341 | 100 | 100.0 |

Source: survey 2022

## Tax-Rate Structure

**The fourth** dimension of tax fairness is the perception of tax payers towards the tax structure of the direct tax system. **The first question raised was about the perception of taxpayers on the level of agreement to the statement: '**High-income earners have a greater ability to pay income taxes, so it is fair that they should pay a higher rate of than low-income earners'. As shown below, 30% of business income taxpayers and 17% of the employment income taxpayers didn't agree while 58% of business income taxpayers and 82% of employment income taxpayers agree that high income earners have a greater ability to pay income taxes, so it is fair that they should pay a higher rate of than low-income earners.

| High-income earners have a greater ability to pay income taxes, so it is fair that they should pay a higher rate of than low-income earners. | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agreement level | Frequ | % | Cumu% | Frequen | % | Cumul% |
| business income tax | strongly disagree | 24 | 6.7 | 6.7 | 4 | 1.2 | 1.2 |
| | Disagree | 48 | 13.4 | 20.2 | 17 | 5.0 | 6.2 |
| | slightly disagree | 36 | 10.1 | 30.3 | 40 | 11.7 | 17.9 |
| | don't know | 45 | 12.6 | 42.9 | 21 | 6.2 | 24.0 |
| | slightly agree | 96 | 26.9 | 69.7 | 47 | 13.8 | 37.8 |
| | Agree | 65 | 18.2 | 88.0 | 166 | 48.7 | 86.5 |
| | strongly agree | 43 | 12.0 | 100.0 | 46 | 13.5 | 100.0 |
| | Total | 357 | 100.0 | | 341 | 100.0 | |

Source: survey, 2022

**The second statement** to assess the perception of income taxpayers on the tax rate structure dimension is **'**It is fair that high- income earners pay proportionately more tax than low-income earners'.

As depicted below, 30% of business income taxpayers and 28% of the employment income taxpayers didn't agree while 59% of business income taxpayers and 66% of employment income taxpayers agree to the statement 'It is fair that high-income earners pay proportionately more tax than low-income earners'.

| | It is fair that high-income earners pay proportionately more tax than low-income earners. | | | | | |
|---|---|---|---|---|---|---|
| | Agreement level | Frequency | Cumulative % | | Frequency | % | Cumu % |
| business income tax | strongly disagree | 30 | 8.4 | Employment income tax | 18 | 5.3 | 5.3 |
| | Disagree | 32 | 17.4 | | 39 | 11.4 | 16.7 |
| | slightly disagree | 47 | 30.5 | | 40 | 11.7 | 28.4 |
| | don't know | 39 | 41.5 | | 19 | 5.6 | 34.0 |
| | slightly agree | 73 | 61.9 | | 39 | 11.4 | 45.5 |
| | Agree | 94 | 88.2 | | 154 | 45.2 | 90.6 |
| | strongly agree | 42 | 100.0 | | 32 | 9.4 | 100.0 |
| | Total | 357 | | | 341 | 100 | |

Source: survey, 2022

**The third** statement used to assess the perception of the taxpayers towards the tax structure was 'A fair tax rate should be the same for everyone, regardless of their income level'. As shown below 36% of business income taxpayers and 75% of employment income taxpayers didn't agree while 50% of the business income taxpayers and 22% of the employment income taxpayers agree that a fair tax rate should be the same for everyone, regardless of the level of income.

| A fair tax rate should be the same for everyone, regardless of their income level. | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agreement level | Frequ | % | Cumulat % | Frequency | % | Cumul % |
| business income tax | strongly disagree | 20 | 5.6 | 5.6 | 104 | 30.5 | 30.5 |
| | Disagree | 41 | 11.5 | 17.1 | 120 | 35.2 | 65.7 |
| | slightly disagree | 67 | 18.8 | 35.9 | 33 | 9.7 | 75.4 |
| | don't know | 51 | 14.3 | 50.1 | 11 | 3.2 | 78.6 |
| | slightly agree | 60 | 16.8 | 66.9 | 3 | .9 | 79.5 |
| | Agree | 93 | 26.1 | 93.0 | 53 | 15.5 | 95.0 |
| | strongly agree | 22 | 6.2 | 99.2 | 17 | 5.0 | 100.0 |
| | Missing | 3 | .8 | 100.0 | | | |
| | Total | 357 | 100. | | 341 | 100. | |

Source: survey, 2022

**The fourth statement** used to assess the perception of the taxpayers to the tax rate structure is 'It is fair for individuals with similar amounts of income to pay a similar amount of income tax'. As shown below, 30% of the business income taxpayers and 20% of the employment income taxpayers didn't agree while 59% of the business income taxpayers and 73% of the employment income taxpayers do agree that 'It is fair for individuals with similar amounts of income to pay a similar amount of income tax'.

| | It is fair for individuals with similar amounts of income to pay a similar amount of income tax | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agreement level | Frequeue | % | Cum % | | Frequeue | % | Cumula % |
| business income tax | strongly disagree | 45 | 12.6 | 12.6 | Employment income tax | 15 | 4.4 | 4.4 |
| | Disagree | 22 | 6.2 | 18.8 | | 34 | 10.0 | 14.4 |
| | slightly disagree | 38 | 10.6 | 29.4 | | 17 | 5.0 | 19.4 |
| | don't know | 44 | 12.3 | 41.7 | | 27 | 7.9 | 27.3 |
| | slightly agree | 78 | 21.8 | 63.6 | | 37 | 10.9 | 38.1 |
| | Agree | 106 | 29.7 | 93.3 | | 149 | 43.7 | 81.8 |
| | strongly agree | 24 | 6.7 | 100.0 | | 62 | 18.2 | 100.0 |
| | Total | 357 | 100.0 | | | 341 | 100.0 | |

**Source: survey, 2022**

## Self interest

To assess the perception of the taxpayers towards the **self- interest dimension of fairness of taxation** the following 3 questions were asked**:**

The **first** question used to assess the perception of direct taxpayers towards self-interest is **'I** believe that the income-tax system is the fairest kind of system that the government could use to collect revenue'. Accordingly 27% of the business income taxpayers and 53% of the employment income taxpayers didn't believe that the income tax system is the fairest kind of tax government can use to collect revenue. While 60% of the business income taxpayers and 39% of employment income taxpayers didn't believe.

| | I believe that the income-tax system is the fairest kind of system that the government could use to collect revenue. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agreement level | Freque | % | Cumul% | | Freque | % | Cumu% |
| business income tax | strongly disagree | 30 | 8.4 | 8.5 | Employment income tax | 61 | 17.9 | 17.9 |
| | Disagree | 19 | 5.3 | 13.9 | | 73 | 21.4 | 39.3 |
| | slightly disagree | 47 | 13.2 | 27.2 | | 48 | 14.1 | 53.4 |
| | don't know | 45 | 12.6 | 39.9 | | 27 | 7.9 | 61.3 |
| | slightly agree | 88 | 24.6 | 64.9 | | 83 | 24.3 | 85.6 |
| | Agree | 95 | 26.6 | 91.8 | | 36 | 10.6 | 96.2 |
| | strongly agree | 29 | 8.1 | 100.0 | | 13 | 3.8 | 100.0 |
| | Missing | 4 | 1.1 | | | | | |
| | Total | 357 | 100.0 | | | 341 | 100.0 | |

Source: survey, 2022

The **second** question used to assess the perception of taxpayers towards self-interest dimension of fairness of taxation is express the agreement level to the question 'Current income tax laws require me to pay more than my fair share of income taxes'. As depicted in the table below, 34% of business income taxpayers and 28% of the employment income taxpayers didn't agree while 58% of business income taxpayers and 64% of the employment income taxpayers agree that the current income tax laws requires them to pay more than the fair share of the income tax. This shows that majority of the taxpayers are believe that they are paying tax beyond their ability.

| | Current income tax laws require me to pay more than my fair share of income taxes. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Agreement level | Freq | % | Cum % | Frequen | % | Cumu % |
| business income tax | strongly disagree | 21 | 5.9 | 5.9 | 41 | 12.0 | 12.0 |
| | Disagree | 24 | 6.7 | 12.6 | 45 | 13.2 | 25.2 |
| | slightly disagree | 77 | 21.6 | 34.2 | 10 | 2.9 | 28.2 |
| | don't know | 28 | 7.8 | 42.0 | 28 | 8.2 | 36.4 |
| | slightly agree | 94 | 26.3 | 68.3 | 31 | 9.1 | 45.5 |
| | Agree | 83 | 23.2 | 91.6 | 92 | 27.0 | 72.4 |
| | strongly agree | 30 | 8.4 | 100.0 | 94 | 27.6 | 100.0 |
| | Total | 357 | 100 | | 341 | 100 | |

*(Row-label "Employment income tax" spans the right-hand Frequency/%/Cumu% columns.)*

Source: survey, 2022

The **third question** used to assess the self-interest of the taxpayers was 'Compared to other taxpayers of direct tax, I pay less than my fair share of income taxes'. Accordingly 51% of business income taxpayers and 88% of the employment income taxpayers didn't agree while 37% of the business income taxpayers and 7% of the employment income taxpayers believe that they are paying less than their fair share of income tax comparing to the other direct taxpayers.

**Summary of the dimensions of fairness vis a vis the type of tax payers**

**Ranks**

| | Type of tax you pay | N | Mean Rank | Sum of Ranks |
|---|---|---|---|---|
| General fairness | business income tax | 357 | 452.15 | 161416.00 |
| | employment income tax | 341 | 242.04 | 82535.00 |
| | Total | 698 | | |
| Exchange with gov't | business income tax | 357 | 454.51 | 162259.50 |
| | employment income tax | 341 | 239.56 | 81691.50 |
| | Total | 698 | | |
| Special provisions | business income tax | 357 | 292.84 | 104543.50 |
| | employment income tax | 341 | 408.82 | 139407.50 |
| | Total | 698 | | |
| Tax rate structure | business income tax | 357 | 306.83 | 109538.50 |
| | employment income tax | 341 | 394.17 | 134412.50 |
| | Total | 698 | | |
| Self interest | business income tax | 357 | 439.03 | 156733.00 |
| **Test Statistics** | employment income tax | 341 | 255.77 | 87218.00 |
| | Total | 698 | | |
| Mann-Whitney U | | | | |
| Wilcoxon W | | | | |
| Z | | | | |
| Asymp. Sig. (2-tailed) | | | | |
| a. Grouping Variable: T | | | | |

As a summary the median of the five dimensions of fairness was calculated and compared the level of agreement using the Mann- Whitney U test. Regarding the **general fairness** of the direct tax system, the business income tax payers highly and significantly agree with mean rank of 452.15 than the employment income taxpayers with mean rank of 242.04 at 1% level of significance.

Regarding the **exchange with the government** the business income tax payers highly agree with mean rank of 454.51 than the employment income tax payers with mean rank of 239.56 at 1 % level of significance.

Regarding the third dimension of fairness that is the **special provision**, the employment income tax payers highly agree with mean rank of 408.82 on the special provisions provided in the direct tax system is not considering the poor and the employment income taxpayers rather it is targeted the rich and the business tax payers than the business income taxpayers with mean rank of 292.84. The difference in perception is significant at 1% level of significance.

Regarding the **tax rate structure**, which is the 4$^{th}$ dimension of fairness, still there is significant (at 1% level of significance) difference between employment and business income taxpayers. The employment income taxpayers highly agree on the tax rate structure of direct tax with mean rank of 394.17 that the business income tax payers with mean rank of 306.83.

Regarding the last dimension of fairness, self-interest, still there is a significant variation between the taxpayers at 1% level of significance. The business income tax payers highly agree with mean rank of 439.03 on the questions raised to assess the self-interest of the taxpayers that the employment income taxpayers with mean rank of 255.77.

**Ethiopian Direct tax system and the reform of 2016**

In order to achieve the second specific objective of the study: i.e. To assess the current status of direct tax in Ethiopia taking the reforms made into consideration and in comparison with indirect tax secondary data was collected from Ministry of finance and economic cooperation. Time series data from 2007/08 up to 2020/21 was the total revenue; direct tax revenues and about the components of direct tax. The following section will discuss about these in detail.

| | Total tax | Direct Tax | Personal income | Business income | Rental income |
|---|---|---|---|---|---|
| Mean | 160776.6 | 64050.25 | 22518.25 | 32268.36 | 1156.768 |
| Median | 149197.8 | 53584.63 | 17113.98 | 28674.67 | 894.5050 |
| Maximum | 388763.5 | 173965.5 | 66032.05 | 87012.64 | 3315.515 |
| Minimum | 23800.68 | 7015.290 | 2667.490 | 3040.320 | 54.32000 |
| Std. Dev. | 112572.2 | 50986.89 | 19452.92 | 25237.76 | 1022.697 |
| Skewness | 0.500740 | 0.726411 | 0.883443 | 0.700039 | 0.705716 |
| Kurtosis | 2.260042 | 2.540750 | 2.786686 | 2.599769 | 2.439591 |
| Jarque-Bera | 0.904459 | 1.354268 | 1.847643 | 1.236901 | 1.345283 |
| **Probability** | **0.636208** | **0.508071** | **0.396999** | **0.538779** | **0.510359** |
| Sum | 2250872. | 896703.5 | 315255.5 | 451757.0 | 16194.76 |
| Sum Sq. Dev. | 1.65E+11 | 3.38E+10 | 4.92E+09 | 8.28E+09 | 13596813 |
| Observations | 14 | 14 | 14 | 14 | 14 |

Source: researcher's computation based on MoFEC data

Table 2: test of normality for the difference before and after the reform

| | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| Difference tax revenue | .304 | 5 | .148 | .787 | 5 | .063 |
| difference direct tax | .285 | 5 | .200* | .897 | 5 | .394 |
| difference personal income tax | .214 | 5 | .200* | .969 | 5 | .867 |
| difference business income tax | .285 | 5 | .200* | .855 | 5 | .210 |
| difference rental income tax | .196 | 5 | .200* | .958 | 5 | .796 |

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

## Comparative analysis of tax revenue and components vis a vis the reform of 2016

The trend analysis, as depicted in figure 1 below, shows that the overall tax revenue of Ethiopia from the year 2007/08 to 2020/21 shows increment from time to time with mean value of 160776.6 (ETB in millions) and minimum of 23800.68 and maximum of 388763.5. The overall direct tax of Ethiopia starting from the years 2007/08 to 2020/21 shows an improvement with mean of 64050.25, minimum of 7015.290 and maximum of 173965.5

figure 1: trend analysis of tax revenue and components
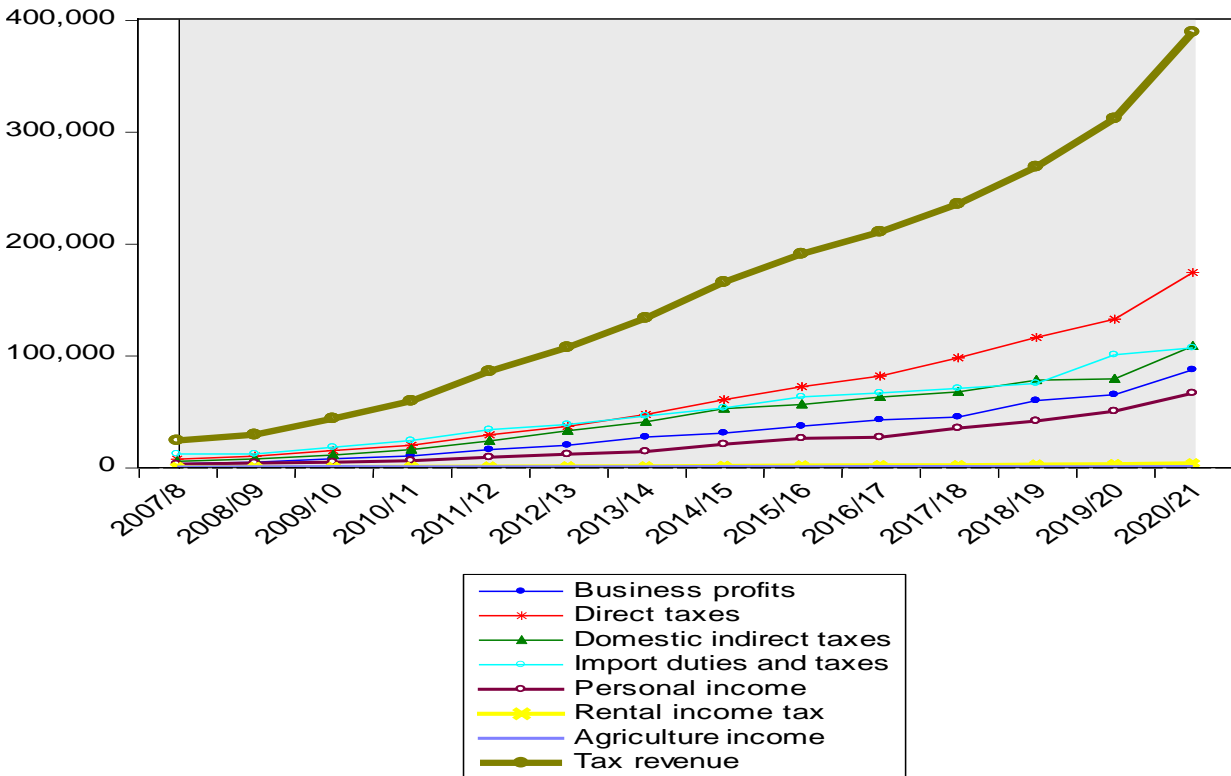
**Source: based secondary data collected from the MoFEC**

To analyze the effect of the reform on the total tax revenue; three main components of tax revenue and the three main components of direct tax, paired sample t-test was conducted to see if there is significant difference before and after the reform of 2016. To proceed with the paired sample t-test the normality assumption was checked by using the Jarque-Bera test for the original observations as depicted in table 1 and for the difference as shown in table 2 above, of the values before and after the income tax law reform of 2016. The result of the tests shows the null of normality is not rejected with probability of greater than 5% for the original observations  (Probability of 0.636208, 0.508071, 0.711909, 0.685098,  0.396999, 0.538779 and 0.510359 for total tax revenue, direct tax, domestic indirect tax, import duties and taxes, personal income tax, business income tax and rental income tax respectively) and for the difference (both the shapiro wilk and Kolmogorov test shows more than 5% sig value still implying there is normality issue in the data under consideration.

As per the paired samples t-test there is a significant difference (sig value of < 0.001) between the mean total revenue before the reform (136,333.07) and after reform (282,819.8). As can be shown from the mean values, the tax revenue after the reform is significantly greater than the mean revenue before the reform. To clearly distinguish which components of the tax revenue are significantly improve/changed after the reform of the 2016, different comparative analysis between the different components of the tax revenue were conducted by using the paired samples t-test. The following section discussed on these issues.

**Table 3: Descriptive Statistics of the proportion of components of taxation to the total tax revenue before and after the reform**

| | N | Proportion to total tax revenue, before | Proportion to total tax revenue, after | Percentage change |
|---|---|---|---|---|
| Direct tax | 5 | .3542 | .4212 | 6.7 % |
| Personal income tax | 5 | .1149 | .1516 | 3.67 |
| Business income tax | 5 | .1882 | .2088 | 2.06% |
| Rental income tax | 5 | .0059 | .0080 | 0.29% |

Source: computed by the researcher based on the data from MoFEC

To analyze if there is a significant difference in the mean value of the **direct tax**, **domestic indirect tax**, and **import duties and taxes**, the paired sample t-test was conducted. Accordingly the equality of mean is rejected between **direct tax** before the reform (with mean of 48,852.6) and after the reform of 2016 (120,220.1) at 5% level of significance. The direct tax revenue after the reform of 2016 is significantly (sig value of 0.001) greater than the direct tax before the reform of 2016. In addition to the overall comparison of the mean value of the figures in the components of tax revenue, an effort were made to analyse the change in the components of the taxation with respect the proportion (percentage) of the tax components to the total tax revenue generated before and after the reform of the 2016. As shown in appendix c and table 3 above, the proportion of direct tax to total tax revenue is significantly (sig value of less than 0.001) increased from 35% (mean percentage before reform) to 42% (mean percentage after the reform of 2016)

As depicted in the **table** 1 above, the first main category of direct tax is the employment income tax. In the trend analysis shows that the amount of personal income tax is increasing from time to time with minimum of 2667.490 and maximum of 66032.05 and over all mean of 64050.25. The second main category of direct tax is business income tax. The business income tax also shows an increment from time to time throughout the study period with over all mean of 32268.36, minimum of 3040.320 and 87012.64. The third main category off direct tax is the rental income tax. The rental income tax shows a mild movement in the trend analysis depicted in figure 1 above with average collection of 1156.768, minimum of 54.32 and maximum of 3,315.515.

To analyse if there is any significant difference before and after the income tax reform of the 2016 paired samples t-test was conducted. The assumption of normality was not violated both the original variables and differences as depicted in tables 1 and 2 above which proves appropriateness of proceeding with paired samples t- test to analyse if there is significant difference in the collection of the three categories of direct tax before and after the income tax reform of the 2016.

**Paired Samples Correlations**

**Accordingly the** paired sample t-test of the **personal income tax** shows a significant difference (sig value of 0.002) in the amount of personal income tax before and after the reform. The mean value of personal income tax before the reform (with mean value of 16,087.9) is significantly lower than after the reform of 2016 (with mean value of 43,698.8) at 5% level of significance. This implies that the personal income tax shows a significant increment after the reform of the 2016. While analyzing the change in the proportion of personal income tax to the total tax revenue, the paired sample t-test shows a significant (at sig value of 0.001) increment of the mean proportion of 11.49% before reform to 15.16% of total tax revenue after the reform of 2016.

To evaluate the effect of the reform on the **business income tax**, the paired sample t-test was conducted. The paired samples t-test shows that there is significant difference (sig value of 0.002) in the amount of business income tax before (with mean value of 25,772.5) and after the reform of 2016 (with mean value of 59616.1). This shows that the tax collection from the business income tax is significantly higher after the reform than before the reform on average. From the perspective of the contribution of business income tax to the overall tax revenue, the paired sample t-test shows a significant (at sig value of 0.006) increment from 18.82% before the reform to 20.88% after the reform of 2016.

Regarding the **rental income tax**, the paired samples t- test shows that there is a significant (at sig value of 0.001) increment of the rental income tax from average of 833.7 (ETB, in millions) before the reform to 2293.5 after the reform. The proportion of the rental income taxation to the total revenue is also shows a significant improvement from 0.5% before the reform to 0.8% after the reform.

**Paired Samples Statistics**

| | | Mean | N | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Pair 1 | Tax revenue | 136333.07 | 5 | 42437.5 | 18978.6 |
| | after reform Tax revenue | 282819.8 | 5 | 70345.5 | 31459.5 |
| Pair 2 | Direct taxes | 48852.6 | 5 | 17425.6 | 7792.9 |
| | after reform Direct taxes | 120220.1 | 5 | 35590.4 | 15916.5 |
| Pair 3 | Personal income | 16087.9 | 5 | 6882.4 | 3077.9 |
| | after reform Personal income | 43698.8 | 5 | 15125.7 | 6764.4 |
| Pair 4 | Business profits | 25772.5 | 5 | 8422.8 | 3766.8 |
| | after reform Business profits | 59616.1 | 5 | 18018.5 | 8058.1 |
| Pair 5 | Rental income tax | 833.7 | 5 | 378.4 | 169.2 |
| | after reform Rental income tax | 2293.5 | 5 | 684.3 | 306.0 |

Source: SPSS output based on MoFEC data

|  |  | N | Correlation | Sig. |
|---|---|---|---|---|
| Pair 1 | Tax revenue & after reform Tax revenue | 5 | .979 | .004 |
| Pair 2 | Direct taxes & after reform Direct taxes | 5 | .982 | .003 |
| Pair 3 | Personal income & after reform Personal income | 5 | .988 | .002 |
| Pair 4 | Business profits & after reform Business profits | 5 | .972 | .006 |
| Pair 5 | Rental income tax & after reform Rental income tax | 5 | .982 | .003 |

Source: SPSS output based on MoFEC data

**Discussion of the finding**

The assessment of the taxpayers about the attributes of direct tax which includes High-income earners have a greater ability to pay income taxes, so it is fair that they should pay a higher rate of than low-income earners'; 'It is fair that high- income earners pay proportionately more tax than low-income earners'; 'A fair tax rate should be the same for everyone, regardless of their income level'; 'It is fair for individuals with similar amounts of income to pay a similar amount of income tax'. These statements were highly agreed by employment income taxpayers in line to the theories of taxation than the business income taxpayers. This shows that the employment income taxpayers do have awareness about the attributes the attributes of fair tax system. Though the employment income taxpayers agreed upon the tax rate structure dimension of the direct tax system, they strongly disagree and have a significant difference in the remaining dimensions of fairness of the Ethiopian direct tax system.

From the general fairness dimension perspective the employment income taxpayers significantly didn't agree that the current income tax system is fair than the business income taxpayers. In addition to this the employment income taxpayers also perceive that they are not getting fair share of benefit from the government in line to the tax paid. Not only this the employment income taxpayers believe that the special provisions and deductions incorporated in the income tax law is not targeting the employment income taxpayers. Rather these deductions and exemptions are targeting the rich as well the business income taxpayers.as a result of the above perceptions generally the employment income taxpayers didn't believe that the current income tax system is not fair system to collect tax revenue.

These differences in perception may result from different sources. the Ethiopian taxation system especially the direct taxes are basically imposed on the civil servant as an employment income tax (dully under the control of the government) and the corporates who properly observe the taxation requirements. This is evidenced by the study of Bekana, Bayissa, & Medihin, (2014) who said that "it is a common phenomenon, in Ethiopia also, that those that earn a significantly better amount of income do not pay taxes or pay an amount far less than their actual tax liabilities. Giant business houses are allegedly accused of keeping three books of accounts—one for their own business decisions (a genuine one), one for banks (with exaggerated assets and profits), and another for cheating the tax authority (with highly understated assets and profits)—and pay less than they would have otherwise paid".

The United Nation Financing for Development Conference held in Addis Ababa (July 2015) highlighted the crucial role of domestic revenue mobilization in developing countries to achieve the post-2015 sustainable development goals (Ebeke & Rota-Graziosi. 2016). While The Ethiopian tax structure was dominated by indirect taxation. Dependency on foreign trade taxes would put revenue challenges to domestic resource mobilization in the long term, Hence due efforts should be exerted to raise tax revenues from direct taxes and domestic indirect taxes to have fiscal sustainability in a long run perspective (Mamo, 2017). In addition to this to reduce dependency on foreign trade tax which is volatile due to free trade agreements and regional integration from long term perspective (Daba & Mishra 2014; Mamo, 2017). The output of the secondary data shows that the direct tax is significantly increased as total lump sum and in terms of the proportion to the total tax revenue collected after the reform of the 2016. The personal income tax (with 3.67% change), followed by business income tax (2.06% change) and then the rental income tax (0.29% change) contribute to the increment of the direct tax contribution to the total tax collection. The domestic indirect tax shows an significant increment while comparing the total revenue collected before reform and after reform of 2016.

However while analyzing the change in percentage contribution to the total tax revenue collected it shows a reduction after the reform of 2016 (though not statistically significant at 5%) shows a reduction though expected to be enhanced as a result of the reforms of the 2016 since the objective was to increase the domestic tax revenue. In addition to this import duties and taxes shows a significant increment in terms of the total collection before and after the reform of the 2016, while it shows a significant reduction in the percentage contribution to the total tax collection. This reduction can be associated with the effect of the COVID 19 pandemic which affects the economy as a whole and political situation in Ethiopia specifically.

# Conclusion and Recommendation

## Conclusion

The business income taxpayers perceive that the Ethiopian direct tax is generally fair while the employment income taxpayers perceive that the Ethiopian direct tax is not fair with respect to the general fairness of dimension of taxation

Regarding the second dimension of tax fairness, i.e. exchange with the government, business income tax payers perceive that they are receiving reasonable benefit from the government in line with the amount of income tax paid while employment income taxpayers didn't.

Regarding the third dimension of fairness of direct tax, special provision, the employment income taxpayers highly believe that they are not using the special provisions provided in the direct tax policies and regulation since they are targeting the wealthy as well they perceive that they are paying more than the fair share of the direct tax compared to the wealthy taxpayers as compared to the business income taxpayers

The fourth dimension of the fairness which is the perception of taxpayers towards the tax rate was found to have a significant difference between business income taxpayers and employment income taxpayers. The attributes of the direct tax rate was highly agreed by employment income taxpayers than the business income taxpayers.

Regarding the fifth dimension of fairness of taxation, i.e., the self-interest, there is a significant difference across taxpayers. The business income taxpayers highly believe that the income tax system is a fair system to collect tax revenue while majority of the taxpayers did believe that they are paying more than the fair share of the income tax though there is a significant difference across the type of tax paid.

The analysis made to evaluate the components of taxation was made in two perspectives taking the reform made in 2016 into consideration. The first analysis was based on the change in the values of each of the variables considered. The finding of the study shows that there is an improvement in the amount of the different components of taxation throughout the study period from 2007/08 to 2020/21. The paired samples t-test also confirmed that the total tax revenue, the direct tax revenue, the personal income tax revenue, the business income tax revenue and the rental income revenue shows a significant mean increment after the reform of the 2016 than before at 5% level of significance.

The other analysis made was based on the change in the contribution of the components of taxation to the overall tax revenue collected before and after the reform. The paired sample t-test shows that direct tax, personal income tax, business income tax, rental income tax shows a significant (at 5% level of significance) increment in the proportion after reform than before the reform of 2016.

**Recommendation**

The overall analysis and conclusion of the study shows that though the employment income taxpayers understand the attributes of direct tax system they believe that the Ethiopian direct tax system is not a fair tax system to collect tax revenue. This perception and the analysis of the secondary data which shows the employment income tax revenues contribution increases much more higher than the other components of taxation both direct and indirect taxes seems their perception is true or they are highly contributing to the overall tax revenues of Ethiopia. This claim is also supported from the perspective of the efficiency of the tax collection system of Ethiopia. So this calls for deep investigation and identification of the real causes such a deviation and takes corrective action accordingly.

Therefore the Ethiopian direct tax system needs a major revision or reform to enhance the contribution of business income tax revenue, rental income tax revenue (which is the least contributor to the overall tax collection with slight increment form time to time) and other taxes. While for the employment income tax, there is a need to revisit the employment income tax rates and the exempted amount of income levels.

Regarding the domestic indirect tax, there is a need to enhance the contribution of domestic indirect tax to the overall tax collection as well to the economy since the indirect taxes are assumed to have less collection cost and are not directly paying by the individuals who are registered for which results in high level of compliance (less compliance cost). Therefore the tax authority should employ sound administration and controlling system for the collection of domestic indirect tax.

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## 2. THE ETHIOPIAN EDUCATIONAL QUALITY ASSURANCE STANDARDS & EXPERIENCES OF SOME SELECTED COUNTRIES

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Abstract:

Today, globalization of the world socio-political and cultural trends brought about a tremendous impact on educational systems of any country. This wave of globalization and fast dynamism in information technology calls for "Standardization" of products and services to assure competitiveness in the global market places. Setting standard and standardization helps to be competitive both at national and international arenas. To realize this idea, Ethiopia started practice of standard setting since 2009 for its Higher Education Institutions (for both public and private institutions). Standards can be taken as important aspects of ensuring that products and/or services are delivered in a harmonized and consistent way where customers or users can satisfy their needs. In Ethiopia, the issues of educational or product quality assurance arises from the fact that global competitiveness and customer behavior demand forces product or service providers to have quality services or products. The urge for quality product and quality education by large depends on existence of standards and system of standardization. A standard is a harmonized, agreed, repeatable, and documented way of doing something, where standards contain technical specifications and other precise criteria designed to be used consistently as a rule, or guideline for a better improvement and then towards perfection. Therefore, this paper tries to analysis the national standards to assure educational quality and assesses some best experiences of some selected countries. The methodology deployed was qualitative research approach, where theoretical and empirical documents were reviewed; historical method and review of secondary data from national and international sources were made. Comparative analysis was done to know the level of Ethiopian educational quality standards and then forwarded some possible solutions.
**Keywords:** ABET, Educational Quality, Standards, Quality Assurance, ISO, Washington

**Acronyms/Abbreviations**

**ABET**= Accreditation Board for Engineering and Technology

**ASG-QA** = African Standards and Guidelines for Quality Assurance in Higher Education

**HEIs** = Higher Education Institutions

**HERQA** = Higher Education Relevance and Quality Agency

**IES** = Institute of Ethiopian Standards **ETA** = Education and Training Agency **ISO** = International Standard Organization**QA** = Quality Assurance
**QMS** = Quality Management System

**WA** = Washington Accord

## 1. Introduction:

Globally, producers and consumers make daily use of goods and services either with awareness or without awareness of standards and quality. Quality of products or services is based on a number of components and standards.

Today, quality is achieved through the interaction and integration as well as coordination of a series of activities such as quality assurance, standardization, certification and accreditation by a national accreditation body (example, IES, HERQA/ETA...) or international accreditation organization (ISO, UNIDO, ICSCA[2]....)

Accreditation is the procedure by which an authority/organization gives formal or legal recognition that an organization or a person is competent to carry out specific tasks. It is a formal conformation based on national and/or international standards by an independent body (organization).

The role of modern business is to provide ever better goods and services in a way that is standardized, profitable, and ethical and respects the environment, individuals and the community in which it operates[3], where ISO 14000 (Environmental Management System) playsa crucial role.

The primary focus of quality management is to meet customer requirements and to strive to exceed customer expectations. Sustained success is achieved when an organization attracts and retains the confidence of customers and other relevant interested parties[4].

## 2. Definitions:

A Standard is a published specification that establishes a common language, and contains a technical specification or other precise criteria and is designed to be used consistently, as a rule,a guideline or a definition[5].

Standards are published documents that set out specifications, procedures and guidelines that are designed with the aim of ensuring appropriate quality and reliability of a product or a service. Standards make it possible to evaluate and compare the products, processes and/or services for which they have been developed. Standards provide the basis of and determine the direction and purpose of products and processes to achieve the outcomes. Therefore, standards serve animportant role in aligning inputs and processes in achieving the desired outcomes

Standards are the specifications or yardsticks for the inputs, processes and outcomes of an education system. There is a combination of resources (inputs) and processes that support the acquisition of knowledge (and other higher order) and skills to create learning (outcomes). Therefore, there is a need for input standards, process standards and outcome standards. There are, however, common elements across the three categories of standards. For example, pupil- teacher ratio can be seen as both a part of an input standard as well as a component of a process

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[3] Geetha J. (2010) Green Management Theory and Applications

A standard is a repeatable, harmonized, agreed and documented way of doing something. Standards contain technical specifications or other precise criteria designed to be used consistently as a rule, guideline, or definition.

**3.** Importance of Standards and standardization[7]:

- Standards will improve the quality of education[8];
- Performance of the education sector will be evaluated in a more systematic manner;
- Standardization will help to develop harmony between the public and private sectors;
- Common standards will bring intra- and inter- organizational compatibility; and
- Common standards will diminish the impacts of parallel systems of education.

*(Source: ISO Quality Management Standards)*

3.1. Quality Management System and the ISO Standards

ISO 9001 is the most successful standard for quality management system in the world.

The ISO 9000 family of standard can be applied to all organizations regardless of type, size and product or services provided[9].

ISO 9001:2015 defines quality management as "Management with regard to quality"[10], where the emphasis is on understands and meeting customer requirements and expectations and at the same time getting it in the required standard on the right time. ISO 9001:2015 contains the organizational structure, rules, regulations, procedures, processes and resources needed to implement quality management. It establishes quality policy, quality objectives and allocates responsibilities within the organization for achieving the stated quality policy and objectives.

9001:2015
[10] Ibid p.10

The means used to implement the quality policy and attain objectives are quality control, qualityassurance, quality improvement[11] and educational quality development.

3.2. ISO definitions of Quality:

➢ Fitness for the purpose (Juran)
➢ Compliance with specified requirements (Crosby)
➢ Meeting customers satisfaction
➢ Degree to which a set of inherent characteristics of an object fulfills requirements (ISO 9001: 2015

3.2.1. What are the benefits of implementing ISO 9001:2015?

The potential benefits of an organization that implements ISO 9001: 2015 Quality ManagementSystem are:
➢ Puts greater emphasis on leadership engagement to assure and enhance quality,
➢ The ability to consistently provide products/services that meet customer & regulatory requirements,
➢ Address the problem of supply chain management more effectively,
➢ Facilitating opportunities to enhance customer satisfaction,
➢ Addressing risks and opportunities associated with its context and objectives,
➢ Uses simplified language and common terms and structure

Table 3.1: Standards in the ISO 9000 family

| No. | ISO Type | Standard |
|---|---|---|
| 1 | 9000: 2015 | Quality Management System –Fundamentals & Vocabulary |
| 2 | ISO 9004: 2009 | Managing for sustained success of an organization |
| 3 | ISO 9001:2015 | Quality Management Systems & Requirements |
| 4 | ISO 19011: 2011 | Guideline for Auditing Management System |
| 5 | ISO 14001 | Environmental Management |
| 6 | ISO 50001 | Energy Management |

Table 3. 2: The ISO 14000 Family

| No. | ISO Type | Standard |
|---|---|---|
| 1 | ISO 14001 | Specification document for requirements for certification |
| 2 | ISO 14004 | General guidelines |
| 3 | ISO 14010 | Guidelines and general principles |
| 4 | ISO 14011 | Guidelines and auditing procedures |
| 5 | ISO 14012 | Qualification criteria for environmental auditors |
| 6 | ISO 14020-14024 | Environmental labeling standards |
| 7 | ISO 14031 | Evaluation guideline for environmental performance |
| 8 | ISO 14040-14043 | Tools for environmental evaluation |
| 9 | ISO 14050 | Terms and definitions |
| 10 | ISO 14062 | Improvements to environmental impact goals |
| 11 | ISO 14063 | Environmental communication guidelines |

Source: Author's compendium from Geetha J. (2010) Green Management Theory and Applications,p.330

Table 3.3: The Ethiopian Standards Institutional Quality Audit (10 Focus Areas)

| Area | Standard | Reference points | Threshold Des |
|---|---|---|---|
| Focus Area 1 | VMGs | 4 | 4 |
| Focus Area 2 | GMS | 4 | 6 |
| Focus Area 3 | I & LS | 4 | 9 |
| Focus Area 4 | Aca & SS | 7 | 14 |
| Focus Area 5 | SA & SS | 4 | 12 |
| Focus Area 6 | PR & C | 3 | 6 |
| Focus Area 7 | TL & Assessment | 8 | 11 |
| Focus Area 8 | SP & GO | 5 | 8 |
| Focus Area 9 | R & OA | 5 | 5 |
| Focus Area 10 | IQA | 6 | 9 |

Source: Author's Compilation from HERQA'S IQA 2007

**Educational Quality Assurance Model: HERQA/ETA**
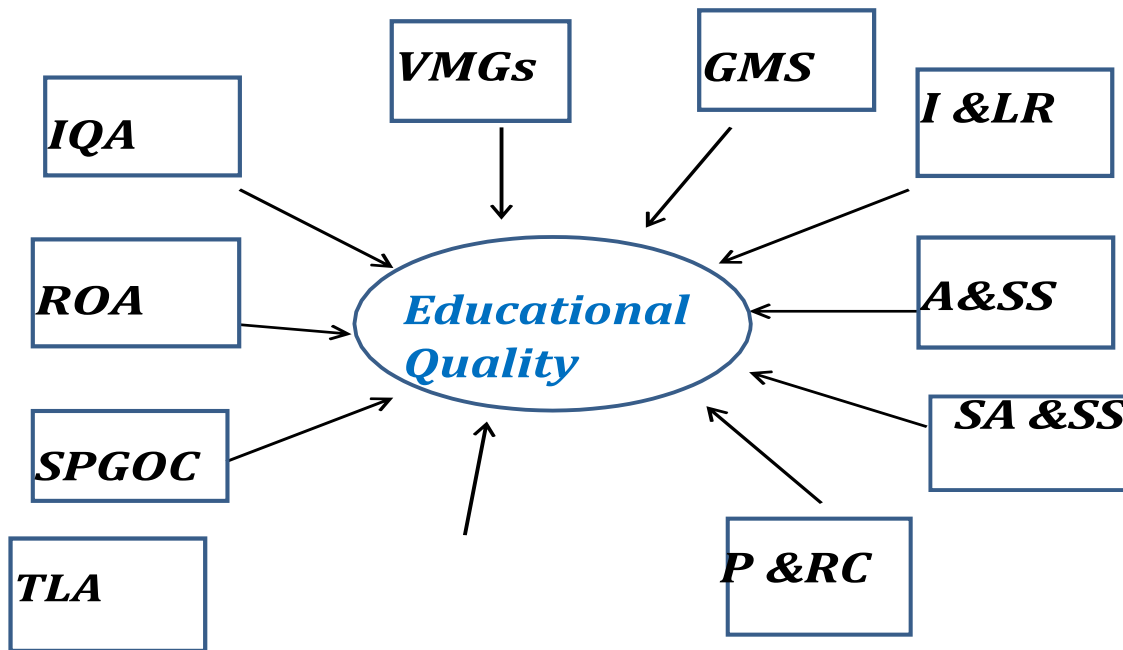


*Fig.3.1. Conceptual Framework of Educational Quality Assurance in Ethiopia*

**The 10 Focus Areas of HERQA/ETA are the following:**

1. Vision, Mission & Educational Goals (VMGs)
2. Governance & Management System (GMS)
3. Infrastructure & Learning Resources (ILS)
4. Academic & Support Staff (ASS)
5. Student Admission & Support Services (SASS)
6. Program Relevance & Curriculum (PRC)
7. Teaching, Learning & Assessment (TLA)
8. Student Progression & Graduate Outcomes (SPGOC)
9. Research & Outreach Activities (ROA)
10. Internal Quality Assurance (IQA)

## 3.3. Standards for Program Level Quality Audit

A program is a coherent set of academic courses or modules leading to the qualification of Bachelors, Masters or Ph.D. degrees. Program accreditation is the assessment of these academic programs in accordance with HERQA's/ETA's program accreditation criteria or standards[12]. The quality of a program is ultimately assessed by the ability of its graduates to apply skills, knowledge and attitudes in real life situations.

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[12] Tesfaye T.(2015) Higher Education Quality Assurance in Ethiopia: Achievements, Challenges & Some Ways Forward

Table 3.4: The Ethiopian Standards Program Level Quality Audit (10 Focus Areas)

| Area | Standard | Reference pts. |
|---|---|---|
| Focus Area 1 | Program Aims, Goals,  Los | 7 |
| Focus Area 2 | Governance, Leadership, & Admin | 19 |
| Focus Area 3 | Educational Resources | 10 |
| Focus Area 4 | Academic and Support Staff | 13 |
| Focus Area 5 | Student Admission & Support Services | 28 |
| Focus Area 6 | Program Relevance and Curriculum | 14 |
| Focus Area 7 | Teaching, Learning and Assessment | 26 |
| Focus Area 8 | Student    Progression,    Graduate Outcomes | 11 |
| Focus Area 9 | R & D and Educational Exchanges | 15 |
| Focus Area 10 | Continual Quality Assurance | 10 |

Source: Author's compilation from Program Level Quality Audit Manual (2013)

3.3.1. African Standards & Guidelines for Quality Assurance in Higher Education (ASG-QA)[13]

Harmonization seeks a shared view on quality criteria and standards, and an equivalent way of assessing the quality. It is crucial to harmonize the standards and criteria so that all universities will be regulated according to comparable standards.
The ASG-QA will support HEIs and quality assurance agencies (QAAs) in Africa in implementing good quality assurance (QA) practices by guiding them in the application of standards and guidelines in higher education, helping them to develop adequate internal QA mechanisms that fit international best practices and assisting them in assessing their own qualitythrough self-assessment[14].

[13] http://hdl.handle.net/2445/126939
[14] Ibid

Table 3.5: African Standards & Guidelines for Quality Assurance Audit (13 Focus Areas)

| Standards | Focus Area | Guidelines |
|-----------|-----------|------------|
| Standard 1 | Vision, Mission& Strategic Goals | 7 |
| Standard 2 | Governance and Management | 14 |
| Standard 3 | Human Resources | 7 |
| Standard 4 | Financial Resources Management | 5 |
| Standard 5 | Infrastructure & Facilities | 9 |
| Standard 6 | Student Recruitment, Admin. CSS | 8 |
| Standard 7 | Design, Approval, M&E | 7 |
| Standard 8 | Teaching-Learning & Assessment | 8 |
| Standard 9 | And Innovation | 7 |
| Standard 10 | Community Engagement | 5 |
| Standard 11 | Information Management System | 6 |
| Standard 12 | Public Communication | 19 |
| Standard 13 | Collaboration, Staff & Student Mobility | 5 |

Source: http://hdl.handle.net/2445/126939

**4. What is Washington Accord (WA) why?**

The Washington Accord (WA) is an international agreement between bodies responsible for accrediting engineering degree programs and it is specifically focuses on academic programs which deal with the practice of engineering at the professional level.

This multinational agreement set in motion the progression toward the mutual recognition of engineering accreditation. Initiated in the UK by the Engineering Council, the Washington Accord, signed in 1989, is an international agreement among bodies responsible for accrediting engineering degree programs. It recognizes the substantial equivalency of programs accredited by those bodies and recommends that graduates of programs accredited by any of the signatory bodies be recognized by the other bodies as having met the academic requirements for entry to the practice of engineering.

The Washington Accord recognizes that there is substantial equivalence of programs accredited by those signatories. Graduates of accredited programs in any of the signatory countries are recognized by the other signatory countries as having met the academic requirements for entry to the practice of engineering. Recognition of accredited programs is not retroactive but takes effect

only from the date of admission of the country to signatory status[15].

The Washington Accord focuses specifically on careers that culminate in the professional practice of science-based engineering. The graduate attributes are indicators of the potential of the graduate to acquire the necessary skills for the practice of engineering profession.

Table 4.1: The Washington Accord Program Level Quality Audit (12 Focus Areas)

| Criterion | Standard/Focus Area | Reference pts. |
|---|---|---|
| Criterion 1 | Purposes | 1 |
| Criterion 2 | Integrity | 1 |
| Criterion 3 | Graduate Profile | 3 |
| Criterion 4 | Curriculum | 9 |
| Criterion 5 | Connection with the Environment | 5 |
| Criterion 6 | Organization& Administration | 6 |
| Criterion 7 | Faculty | 8 |
| Criterion 8 | Infrastructure & Learning Resources | 7 |
| Criterion 9 | Participation & Student Welfare | 1 |
| Criterion 10 | Communications | 4 |
| Criterion11 | Effectiveness & Results of Educational Process | 10 |
| Criterion 12 | Self-Regulation & Continuous Improvement | 4 |

*Source: Compiled by the author from Master Manual for the Washington Accord Accreditation*

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[15] http://en.wikipedia.org/wiki/washington

### 4.1. ABET Program Accreditation Principles

ABET is recognized as the worldwide leader in assuring quality and stimulating innovation in Applied and Natural Sciences, Computing, Engineering, and Engineering Technology Education[16]. ABET is the primary organization responsible for monitoring, evaluating, and certifying the quality of engineering, engineering technology, applied and natural science, and computer science education in the United States and abroad[17].

Table 4.2:  The ABET Program Level Quality Audit (8 Focus Areas)

| Criterion | Standard/Focus Area | Reference pts. |
|---|---|---|
| Criterion 1 | Students | 4 |
| Criterion 2 | Program Educational Objectives | 2 |
| Criterion 3 | Student Outcomes | 7 |
| Criterion 4 | Continuous Improvement | 1 |
| Criterion 5 | Curriculum | 6 |
| Criterion 6 | Faculty | 7 |
| Criterion 7 | Facilities | 4 |
| Criterion 8 | Institutional Support | 4 |

### 5. Why we bother for standards and then for quality? There are various reasons:

- ➤ Competition… ............................................................ Survival
- ➤ Customer satisfaction… ............................................ Value for money and Time
- ➤ Maintaining standards…............................................. Improvement over time
- ➤ Accountability .......................................................... Stake-holders expectation
- ➤ Improve employee morale & motivation…................. Internal customer satisfaction
- ➤ Credibility, Prestige & status…................................ Status, brand and Value
- ➤ Image and Visibility .................................................. Attract better stake-holders

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[16] ABET 101 ABET Accreditation http://www.abet.org 2019
[17] Ibid, 2019

## 6. The Benefits of Education Standardization

The main benefits from educational standardization are the following:

- Increased customer satisfaction
- Enhanced reputation of the organization
- Increased customer value
- Improved customer/stake-holder loyalty
- Sustainability of programs and also the organization
- Increased competitiveness
- Invention/innovation (good practice)
- Quality assurance and  enhancement
- Improvement and development
- Internalization of the academic programs that increases employability of graduates

*Source: Quali1y Assurance in Higher Education, National Assessment and Accreditation Council, India, 2007*

## 7. Conclusion:

➢ The quality of educational program depends on the objectives and attributes to be evaluated, and also on its design, the resources committed, the teaching and learning process and the evaluation of the students, including the confirmation that the graduate attributes are satisfied.

➢ Standardization will help to develop harmony between the public and private sectors at the national level.

➢ Harmonization and standardization will help all HEIs to be regulated according to comparable standards.

➢ Standardization of products and services assure competitiveness not only in the national podium, but also on the global market places.

➢ National standardization will lead to internationalization and competitiveness of the national economy.

## 8. The way forward:

➢ Rigorous work on quality assurance and enhancement must be in place in a consistent manner for better improvement and then development of quality,

➢ Develop culture of standardization to assure quality of products & services nationally and internationally in the long-run perspectives,

➢ Strengthen all the national standard organizations such as the Institution of Ethiopian Standards (IES), the Education and Training Agency (ETA) of Ethiopia and other organizations and/or institutions working on quality and standardization.

➢ Customize international best practices and experiences to national standards for internationalization.

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# 3. The Regulation of Crypto currencies under Ethiopian Legal Norms

Messay Asgedom Gobena (Ph.D.)[♣]

**Abstract**

Cryptocurrencies are a subset of virtual currencies that have been devised for anonymous payments made entirely independent of governments and traditional financial institutions. The payment system of cryptocurrencies is expanding at a rapid pace and has reached Ethiopia. This article examines the extent to which cryptocurrencies are regulated under Ethiopia's national payment system and anti-money laundering legal norms. The study has employed doctrinal research supported by in-depth interviews. In the last decade, Ethiopia has adopted several legal frameworks that govern different aspects of the payments landscape, most notably regarding payment services and electronic money. The country has anti-money laundering legal norms that are embodied in domestic laws and international and regional instruments ratified by Ethiopia. However, these legal norms have strategic deficiencies in regulating cryptocurrencies. Thus, the government of Ethiopia should consider enacting a comprehensive law that regulates the payment system of cryptocurrencies.

**Keywords:** Virtual Currencies, Cryptocurrencies, Bitcoin, Legal Norms

1. **Introduction**

In ancient societies, individuals conducted trade by barter, an exchange of an item for an item. Through time currency emerged to play a dominant role in world trade. In addition to coins and paper currency, several types of negotiable instruments have also been used in the exchange of items. Gradually, due to the advent of globalization and information technology, currency notes started to be replaced by electronic currency, e-money. In line with this, credit cards, debit cards, automated electronic payments, pose machines, mobile banking, and internet banking are currently facilitating transactions. More recently, specifically after the world economic crisis of 2008, the issue of cryptocurrencies has become an agenda in the international arena.[1] Cryptocurrencies developed and expanded at a rapid pace, and have reached Ethiopia. Several activities are being undertaken in Ethiopia to expand the payment system of cryptocurrencies in general and Bitcoin in particular.

This article examines the regulation of cryptocurrencies under the Ethiopian legal norms. Specifically, the article examines whether Ethiopia's legal norms adequately regulate the payment system of cryptocurrencies. The second section of the article discusses the general features of cryptocurrency, including its meaning, characteristics, and type. Section 3 explains the nexus between cryptocurrencies and criminality. Section 4 deals with the regulation of cryptocurrencies by raising the experience of some jurisdictions. Sections 5, 6, and 7 discuss cryptocurrencies and their regulation in Ethiopia, followed by a conclusion.

2. **Understanding Cryptocurrency**

Cryptocurrency is a subset of virtual currencies. Scholars and multilateral bodies have defined the concept of virtual currencies differently. This article uses the definition provided by the Financial Action Task Force (FATF).[2] FATF defines virtual currency as a "digital representation of value that can be digitally traded and functions as (1) a medium of exchange; and/or (2) a unit of account, and/or (3) a store of value, but does not have legal tender status in any jurisdiction".[3] Virtual currency is distinguished from fiat currency (real currency). Fiat (sovereign) currency is the coin and paper money of a country that is designated as its legal tender and which circulates, and is customarily used and accepted as a medium of exchange in the issuing country.[4] However, virtual currencies are neither issued nor

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[1] Steven David Brow (2016), 'Cryptocurrency and Criminality: The Bitcoin Opportunity', *The Police Journal: Theory, Practice and Principles*, Volume 89, Issue 4, P. 328 http://dx.doi.org/10.1177/0032258X16658927

[2] FATF is an independent inter-governmental body that was created in 1989 by G-7 industrialized countries. It is the leading international standard setter against money laundering, terrorist financing, and the financing of proliferation of weapons of mass destruction. The FATF developed 49 Recommendations. These recommendations are recognized as the global anti-money laundering and counter-terrorist financing standard. See more at FATF (2012-2019), '*International Standards on Combating Money Laundering and the Financing of Terrorism & Proliferation*,' FATF, Paris, France.

[3] See more at FATT (2014), '*FATF Report on Virtual Currencies – Key Definitions and Potential AML/CFT Risks,*' FATF, Paris, France, p. 4.

[4] Ibid

guaranteed by any jurisdiction and they fulfill the above functions only by agreement within the community of users.[5] Virtual currency is also distinct from e-money. E-money is the digital representation of fiat currency used to electronically transfer value denominated in fiat currency.

Virtual currencies have revolutionized the financial world by creating a form of currency that is not backed by any government and allows encrypted, and anonymous transactions.[6] By nature, virtual currencies allow direct peer-to-peer transactions and eliminate the need for a bank or other intermediary to facilitate financial transactions.[7] There are different types of virtual currencies. Some virtual currencies are convertible while others are non-convertible.[8] Also, virtual currencies could be either centralized or decentralized.[9] Cryptocurrencies are decentralized and convertible virtual currencies that are protected by cryptography.[10] These currencies are convertible to fiat currencies but unlike fiat-money, they are not administered and issued by a central authority. The ultimate objective of cryptocurrencies would be to become a payment system substituting, complementing, or competing with conventional payment systems.

Cryptocurrencies have three core characteristics: decentralized, unregulated, and quasi-anonymity.[11] *Decentralization* is the prime feature of cryptocurrencies. This refers to the absence of central administrating authority, and central monitoring or oversight body.[12] Cryptocurrencies are created over the Internet and there is no central authority that issues and regulates them.[13] The second key characteristic of cryptocurrencies is the *lack of regulation*.[14] No government has any full control or say over any cryptocurrency. Because no one is regulating the transactions, no intermediary such as lawyers, banks, or payment service providers is needed in the user-to-user system.[15] However, this does not mean that cryptocurrencies do not have self-regulation protocols. Cryptocurrencies such as Bitcoin have their own self-regulating protocol.The third key characteristic of cryptocurrencies is that they are *quasi-anonymous* and difficult to trace. Cryptocurrencies are "traded online and are characterized by non-face-to-face customer relationships whereby users are only identified by their encrypted public addresses".[16] When a transaction occurs on the blockchain network, each user involved in that transaction has a specific personal key, similar to a user name. Once that transaction is completed and verified, those personal keys are also completed and can never be used again.[17] Every time a user engages in a transaction, a unique and untraceable personal key is generated. Moreover, there is no need for the user to engage a bank account or a credit card for the transaction, thereby keeping the anonymity. This anonymity characteristic also opens the door to more potential problems for cryptocurrencies.

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[5] Ibid

[6] Chad Albrecht and Kristopher McKay Duffin, Steven Hawkins and Victor Manuel Morales Rocha (2019), 'The Use of Cryptocurrencies in the Money Laundering Process,' *Journal of Money Laundering Control*, Volume 22, Issue 2, p. 220, https://doi.org/10.1108/JMLC-12-2017-0074

[7] Gareth W. Peters and Efstathios Panayi (2015), 'Trends in Crypto-Currencies and Blockchain Technologies: A Monetary Theory and Regulation Perspective', *Journal of Financial Perspectives*, volume 3, Issue 3, P. 2.

[8] Convertible (or open) virtual currency has an equivalent value in real currency and can be exchanged back-and-forth for real currency. These include Bitcoin; e-Gold; Liberty Reserve; Second Life Linden Dollars; and WebMoney. Non-convertible (or closed) virtual currency is intended to be specific to a particular virtual domain or world, cannot be exchanged for fiat currency. Examples include: Project Entropia Dollars; Q Coins; and World of Warcraft Gold. See more at FATT, *infra* note 3 p. 4; Niels Vandezande (2017), 'Virtual Currencies Under EU Anti-Money Laundering Law', *Computer law & security review* Volume 33, Number 3, pp. 340 & 341, http://dx.doi.org/10.1016/j.clsr.2017.03.011

[9] All non-convertible virtual currencies are centralized, in contrast, convertible virtual currencies may be either centralized or decentralized. Centralized virtual currencies have a single administrator that controls the system. An administrator issues the currency, establishes the rules for its use, maintains a central payment ledger, and has authority to redeem the currency. Currently, the vast majority of virtual currency payments transactions involve centralized virtual currencies. Examples: E-gold, Liberty Reserve dollars/euros, Second Life "Linden dollars", PerfectMoney, WebMoney "WM units", and World of Warcraft gold. Decentralized virtual Currencies (cryptocurrencies) are distributed, open-source, math-based peer-to-peer virtual currencies that have no central administrating authority, and no central monitoring or oversight. Examples: Bitcoin; LiteCoin; and Ripple. See more at FATT, *infra* note 3, p. 5; Niels Vandezande, *infra* note 8, pp. 340&341.

[10] Cryptography is the technique of protecting information by transforming it into an unreadable format that can only be deciphered (or decrypted) by someone who possesses a secret key. See more at Robby Houben, Alexander Snyers (2018), 'Cryptocurrencies and Blockchain: Legal Context and Implications for Financial Crime, Money Laundering and Tax Evasion', European Parliament, p. 15 ff; FATT, *infra* note 3 p. 5.

[11] *A. Can Inci and Rachel Lagasse (2019), '*Cryptocurrencies: Applications and Investment Opportunities,' *Journal of Capital Markets Studies,* Volume 3, Issue 2, p. 99; FATT, *infra* note 3 p. 5 ff.

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[13] Ibid

[14] Inci and Lagasse, *infra* note 11, p. 100

[15] Satya Prakash Yadav, Krishna Kant Agrawal, Bhoopesh Singh Bhati, Fadi Al-Turjman, and Leonardo Mostarda (2020), 'Blockchain-Based Cryptocurrency Regulation: An Overview', *Computational Economics*, p. 2 https://doi.org/10.1007/s10614-020-10050-0; Reddy and Minnaar, *infra* note 12, p. 72.

[16] Christopher P. Buttigieg, Christos Efthymiopoulos, Abigail Attard & Samantha Cuyle (2019), 'Anti-money laundering regulation of crypto assets in Europe's smallest member state,' *Law and Financial Markets Review,* p. 2. https://doi.org/10.1080/17521440.2019.1663996

[17] Reddy and Minnaar, *infra* note 12, p. 74.

The market of cryptocurrencies developed very swiftly during the previous decade. According to the Coinmarket Cap estimation, as of March 2021, there are more than four thousand types of cryptocurrencies.[18] However, among several thousand cryptocurrencies, in terms of market capitalization, Bitcoin is the most popular and largest cryptocurrency.[19] By the same token, Bitcoin is a unique cryptocurrency that is widely considered to be the first of its kind and it is increasingly drawing the attention of regulators in charge of banking and payment institutions.

Bitcoin is an internet-based cryptocurrency introduced globally with the article "Bitcoin: Peer-to-Peer Electronic Payment System" published by a person or group using the name of Satoshi-Nakamato in 2008 and released as open-source in 2009.[20] Bitcoin was created in 2009 following the international financial crisis of 2008.[21] Satoshi, who is believed to possess over one million Bitcoins, which value over a billion dollars, thought the crisis was more due to an unjust financial regulation system, especially printouts of phony money, than a failure of economic principles.[22] Therefore, Bitcoin was created with the intent to save the world from such kind of financial crisis.

Individuals can earn Bitcoin by trading, mining,[23] and payment for services.[24] There are total of 21 million bitcoins (and each unit can be divided into smaller parts).[25] Out of the 21 million Bitcoins, over 18.5 million are already mined.[26] The rest are expected to be mined until 2140.[27] In 2010 one bitcoin was exchanged for 0.0025 cents of the U.S. Dollar (almost 0 USD) whereas on 25 February 2021 it is exchanged for USD 46,301.56.[28] As of January 2020, over 160 international branded companies accept Bitcoin for their services and products. These companies include Microsoft, Overstock, Whole Foods, Starbucks, Newegg, Namecheap, Home Depot, Lolli, Amazon, eBay, BMW, and PayPal.[29] This indicates that cryptocurrencies are becoming the payment system of future generations.

## 3. Cryptocurrencies and Criminality

Cryptocurrencies have their benefits and downsides. With regard to benefits of cryptocurrencies, they are easier to transfer funds between two parties in a transaction. The transactions are facilitated through the use of public and private keys for security purposes, and these transfers are done with minimal processing fees, and allow users to avoid the steep fees charged by most banks for internet online-based transactions. [30]

The challenges of cryptocurrencies relate to their vulnerability to several nefarious activities. Though arguable, some scholars such as Kfir (2020) and Bulter (2019) argue that criminals are uninterested in cryptocurrencies due to (i) cash is still a king in the criminal

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[18] See more at 'Today's Cryptocurrency Prices by Market Cap', Accessed on February 10, 2021, https://coinmarketcap.com/

[19] See more at Rick Bagshaw (22 April 2020), 'Top 10 Cryptocurrencies by Market Capitalisation', https://finance.yahoo.com/news/top-10-cryptocurrencies-market-capitalisation-160046487.html; Hossein Nabilou (2019), 'The Dark Side of Licensing Cryptocurrency Exchanges as Payment Institutions,' *Law and Financial Markets Review*, p. 1. https://doi.org/10.1080/17521440.2019.1626545

[20] Satoshi Nakamoto (2009), '*Bitcoin: A Peer-to-Peer Electronic Cash System'*, https://bitcoin.org/bitcoin.pdf

[21] Chuen, D. L. K., Guo, L., & Wang, Y (2017), 'Cryptocurrency: A new investment opportunity?' *The Journal of Alternative Investments*, Volume 20, Issue 3, p. 18.

[22] Ibid

[23] Bitcoin mining is the validation of transactions on every Bitcoin block. The decentralized Bitcoin design ensures that transactions are transmitted on the peer-to-peer network and once they have been transmitted, it must be validated that the transaction is legitimate and then registered on the Bitcoin blockchain public transaction database. Miners are basically involved in the processing under verification of transactions before the transactions on the Bitcoin blockchain are registered. Miners would collect transaction fees as new Bitcoins. Satya Prakash Yadav, Krishna Kant Agrawal, Bhoopesh Singh Bhati, Fadi Al-Turjman, Leonardo Mostarda (2020), 'Blockchain-Based Cryptocurrency Regulation: An Overview,' *Computational Economics,* pp. 11&12, https://doi.org/10.1007/s10614-020-10050-0

[24] Asheer Jaywant Ram (2018), 'Bitcoin as a New Asset Class', *Meditari Accountancy Research*, P.8&9, https://doi.org/10.1108/MEDAR-11-2017-0241; Kroll, Joshua A., Ian C. Davey, and Edward W. Felten (2013), 'The economics of Bitcoin mining, or Bitcoin in the presence of adversaries,*' In Proceedings of WEIS*, P.3.

[25] See more at 'How Many Bitcoins Are There?', https://www.buybitcoinworldwide.com/how-many-bitcoins-are-there/

[26] Daniel Phillips (11 February 2021), 'What Will Happen to Bitcoin After All 21 Million are Mined?', https://decrypt.co/33124/what-will-happen-to-bitcoin-after-all-21-million-are-mined

[27] Ibid

[28] See more at 'Bitcoin Price Today & History Chart', https://www.buybitcoinworldwide.com/price/

[29] Jordan Tuwiner (5 February 2021), 'Who Accepts Bitcoin? 11 Major Companies', https://www.buybitcoinworldwide.com/who-accepts-bitcoin/

[30] Bunjaku, F., Gjorgieva-Trajkovska, O., & Miteva-Kacarski, E (2017), 'Cryptocurrencies–Advantages and Disadvantages. *Journal of Economics*, Volume 2, Issue 1, P. 36.

economy and it is working well enough for them,[31] (ii) lack of skills necessary to exploit cyber means for criminal purposes, and (iii) the use of cryptocurrencies in the conflict-affected area –a haven for criminals and terrorist is a colossal challenge.[32] The argument also centers on the fact that fiat money is more available for criminals than virtual money.

However, scholars including Wegberg, Oerlemans, and Deventer (2019), and multilateral bodies such as FATF argue that cryptocurrencies are susceptible to several types of nefarious activities such as money laundering, terrorist financing, fraud, and other cybercrimes.[33] The FATF, specifically noted that it is a colossal challenge to apply money laundering prevention measures such as customer due diligence (CDD) or know your customers (KYC) to transactions conducted using cryptocurrencies. So, this has increased the susceptibility of the cryptocurrency payment system to several nefarious activities. Moreover, the characteristics of cryptocurrencies including decentralization, anonymity, and being unregulated make them extremely vulnerable to criminality.[34] Specifically, cryptocurrencies are straightforward to use, relatively anonymous, and their use is unimpeded by borders or legislation[35] and therefore, are becoming the currency of choice for many criminals.[36]

Several high-profile investigations and prosecutions suggest that cryptocurrencies are used to commit several nefarious activities.[37] Criminals used cryptocurrencies to buy and sell illegal drugs and firearms on the Dark Web[38], and payment for ransomware.[39] Criminals also used cryptocurrencies to launder the proceeds of crime[40] in two ways; (i) they could buy cryptocurrencies using the proceeds of crime, and (ii) changing the cryptocurrencies into fiat money (cash-out strategy).[41] Several law enforcement agencies have investigated the misuse of Bitcoins and their facilitation of criminal activity. The FBI considers the anonymous Bitcoin payment

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[31] See more at Isaac Kfir (2020), 'Cryptocurrencies, National Security, Crime and Terrorism,' *Comparative Strategy*, Volume 39, Issue 2, p. 119 https://doi.org/10.1080/01495933.2020.1718983

[32] See more at Simon Butler (2019), 'Criminal use of cryptocurrencies: a great new threat or is cash still king?' *Journal of Cyber Policy*, Volume 4, Issue 3, 326-345, p. 338 ff, https://doi.org/10.1080/23738871.2019.1680720; Europol (2015), 'Why Cash Is Still King? A Strategic Report on the Use of Cash by Criminal Groups as a Facilitator for Money Laundering', *Trends Organ Crim*, Volume 18, Issue 35, p. 357 ff, https://doi.org/10.1007/s12117-015-9256-x.

[33] See more at FATF, *infra* note 3, p. 9; Rolf van Wegberg, Jan-Jaap Oerlemans, and Oskar van Deventer (2019), 'Bitcoin Money Laundering: Mixed Results? An Explorative Study on Money Laundering of Cybercrime Proceeds Using Bitcoin', *Journal of Financial Crime*, Vol. 25 No. 2, p. 420 https://doi.org/10.1108/JFC-11-2016-0067

[34] FATT, *infra* note 3, p. 9.

[35] Wegberg, Oerlemans, and Deventer, *infra* note 33, p. 420.

[36] Sesha Kethineni and Ying Cao (2019), 'The Rise in Popularity of Cryptocurrency and Associated Criminal Activity,' *International Criminal Justice Review*, Vol. 30, Issue 3, p. 329 ff https://doi.org/10.1177%2F1057567719827051

[37] See more at David G.W. Birch (10 January 2021), 'Why Do Criminals Use Cash and Not Bitcoin?' Retrieved 23 February 2021 from: https://www.forbes.com/sites/davidbirch/2021/01/10/why-do-criminals-use-cash-and-not-bitcoin/?sh=25224cf7a56f; Daniel Dupuis and Kimberly Gleason (2020), 'Money Laundering with Cryptocurrency: Open Doors and the Regulatory Dialectic', *Journal of Financial Crime*, p. 2. https://doi.org/10.1108/JFC-06-2020-0113;

[38] Dark Website is hidden part of the Internet, which can only be accessed through TOR–The Onion Router browser. The TOR browser encrypts the connection and ensures anonymity. Organized criminal networks navigate the Dark Web using fake identities, making it hard for law enforcement agencies to trace them. See more at Adam Turner and Angela S M Irwin (2018), 'Bitcoin Transactions: A Digital Discovery of Illicit Activity on The Blockchain,' *Journal of Financial Crime*, https://doi.org/10.1108/JFC-12-2016-0078

[39] Nathaniel Popper (28 January 2020), 'Bitcoin Has Lost Steam. But Criminals Still Love It', Retrieved 23 February 2021 from: https://www.nytimes.com/2020/01/28/technology/bitcoin-black-market.html

[40] Anna Irrera (9 December 2020), 'Criminals getting smarter in use of digital currencies to launder money', Retrieved 23 February 2021 from: https://www.reuters.com/article/crypto-currencies-criminals-idUSKBN28J1IX

[41] Wegberg, Oerlemans, and Deventer, *infra* note 33, p. 420.

network to be an "alarming haven for money laundering and other criminal activity"[42]. As far back as 2012, the FBI was expressing concerns about the difficulty of tracking the identity of anonymous Bitcoin users thereby demonstrating how law enforcement agencies were experiencing difficulty identifying suspicious users and obtaining records for Bitcoin transactions.[43] Unfortunately, these difficulties are still present with law enforcement agencies

FATF recommends countries to conduct risk assessment regarding virtual assets to mitigate risks associated with virtual assets through implementing anti-money laundering principles such as undertaking CDD/KYC, conducting risk-based supervision, and reporting suspicious transactions.[44] FATF also noted that countries are required to license or register virtual asset service providers and subject them to supervision or monitoring by competent national authorities.[45] The FATF defined virtual asset service provider as:

[A]ny natural or legal person … [who] conducts one or more of the following activities or operations for or on behalf of another natural or legal person:

i.   exchange between virtual assets and fiat currencies;
ii.  exchange between one or more forms of virtual assets;
iii. transfer of virtual assets;
iv.  safekeeping and/or administration of virtual assets or instruments enabling control over virtual assets; and
v.   participation in and provision of financial services related to an issuer's offer and/or sale of a virtual asset.[46]

The crypto service providers will need to "identify who they are sending funds on behalf of, and who is the recipient of those funds."[47] Further, they need to "know their customers and conduct proper due diligence to ensure they are not engaging in illicit activity," as well as "develop risk-based programs that account for the risks in their particular type of business." In sum, the threat of criminal misuse of virtual assets is serious and urgent, and the FATF expects all countries to take prompt action to implement the FATF Recommendations in the context of virtual asset activities and service providers.

## 4.  The Regulation of Cryptocurrencies: The Experience of Some Jurisdictions

The introduction of cryptocurrencies has become a challenge to the financial and regulatory sector.[48] The system of payment offered by cryptocurrencies could operate outside the current structure of the formal financial services and could evade the regulation and licensing regime that is currently in place.[49] At the same time, cryptocurrencies are filling an identified market gap in which this pattern is predicted to expand further in the future.[50] Ignoring cryptocurrencies is not an option for financial services. Thus, regulating cryptocurrencies would be inevitable.

Globally, the regulation of cryptocurrencies varies from jurisdiction to jurisdiction. Based on the regulation of cryptocurrencies, countries are categorized into three: countries that legalize its usage, countries that outlaw its usage, and countries that are in a state of a wait-and-see approach. Some states such as the United States (U.S.),

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[42] Kim Zetter (05 September 2012), 'FBI Fears Bitcoin's Popularity with Criminals', Retrieved 23 February 2021 from: https://www.wired.com/2012/05/fbi-fears-bitcoin/

[43] Ibid

[44] FATF, *infra* note 2, p. 15.

[45] Ibid

[46] FATF, *infra* note 2, p. 127.

[47] FATF (2015), 'Guidance for a Risk-Based Approach: Virtual Currencies' https://www.fatf-gafi.org/media/fatf/documents/reports/Guidance-RBA-Virtual-Currencies.pdf

[48] Mohammed Ahmad Naheem (2018), 'Regulating virtual currencies - the challenges of applying fiat currency laws to digital technology services', *Journal of Financial Crime,* p. 2 https://doi.org/10.1108/JFC-08-2016-0055

[49] Ibid

[50] Ibid

Canada, Australia, Finland, Belgium, Cyprus, the United Kingdom (UK), and Japan regulate the use of cryptocurrencies.

The U.S. Department of Treasury's Financial Crimes Enforcement Network has been issuing guidance on Bitcoin since 2013.[51] The Treasury has defined cryptocurrencies not as currency, but as a money services business. This places it under the Bank Secrecy Act, which requires exchanges and payment processors to adhere to certain responsibilities like reporting, registration, and record keeping.[52]

Canada maintains a generally cryptocurrencies-friendly stance while also ensuring the cryptocurrency is not used for money laundering. Cryptocurrencies are viewed as a commodity by the Canada Revenue Agency.[53] This means that cryptocurrency transactions are viewed as barter transactions, and the income generated is considered business income.[54] The taxation also depends on whether the individual has a buying-selling business or is only concerned with investing[55]. Even though Canada considers cryptocurrency transactions as barter transactions, it considers the Bitcoin exchanges as a money service business.[56] This brings it under the purview of the anti-money laundering laws. Bitcoin exchanges need to register with the Financial Transactions and Reports Analysis Centre of Canada, report any suspicious transactions, abide by the compliance plans, and even keep certain records.

Australia considers Bitcoin a currency like any other and allows entities to trade, mine, or buy it. Since April 2017, Japan has legalized Bitcoin and recognized it as legal tender.[57]Though the European Union (EU) has shown some developments in the regulation of cryptocurrency, it has not issued any official decision on legality, acceptance, or regulation. However, the EU in June 2018 decided to apply money-laundering prevention mechanisms such as CDD/KYC and report suspicious transactions to virtual-currency exchange platforms and digital wallet holders.[58]

Individual EU countries have developed their positions on cryptocurrency. In Finland, the Central Board of Taxes has given Bitcoin a value-added tax-exempt status by classifying it as a financial service.[59] Bitcoin is treated as a commodity in Finland and not as a currency. The Financial Conduct Authority in the UK has a pro-Bitcoin stance and wants the regulatory environment to be supportive of the digital currency.[60] Bitcoin is under certain tax regulations in the UK. The National Revenue Agency of Bulgaria has also brought Bitcoin under its

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[51] Department of the Treasury Financial Crimes Enforcement Network (2013), 'Application of FinCEN's Regulations to Persons Administering, Exchanging, or Using Virtual Currencies' p. 3 ff https://www.fincen.gov/sites/default/files/shared/FIN-2013-G001.pdf

[52] Ibid

[53] Government of Canada (updated 27 June 2019), 'Guide for cryptocurrency users and tax professionals', https://www.canada.ca/en/revenue-agency/programs/about-canada-revenue-agency-cra/compliance/digital-currency/cryptocurrency-guide.html

[54] Ibid

[55] Ibid

[56] Ibid

[57] Irina Cvetkova (2018), 'Cryptocurrencies Legal Regulation,' *BRICS Law Journal*, Volume 5, Issue 2, p. 132, Doi: 10.21684/2412-2343-2018-5-2-128-153

[58] European Union (2018), 'Fifth EU anti-Money laundering directive', Published on 19 June 2018 in the Official Journal of the European Union (OJ L156, 19.06.2018), https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018L0843

[59] OECD (2020), 'Taxing Virtual Currencies: An Overview of Tax Treatments and Emerging Tax Policy Issues,' OECD, Paris. https://www.oecd.org/tax/tax-policy/taxing-virtual-currencies-an-overview-of-tax-treatments-and-emerging-tax-policy-issues.pdf

[60] Global Legal Insights (2021), 'Blockchain and Cryptocurrency Regulation 2021/United Kingdom,' https://www.globallegalinsights.com/practice-areas/blockchain-laws-and-regulations/united-kingdom

existing tax laws.[61] Germany is open to Bitcoin; it is considered legal but taxed differently depending upon whether the authorities are dealing with exchanges, miners, enterprises, or users.[62]

Even the pro-cryptocurrency countries vary in its regulation. Countries such as Argentina, Austria, Bulgaria, Finland, Iceland, Israel, Italy, Norway, Poland, Romania, Spain, Sweden, and the UK govern cryptocurrencies under their taxation laws.[63] Costa Rica, Czech Republic, Estonia, Hong Kong, Latvia, Luxembourg, and Singapore govern the cryptocurrency business through anti-money laundering and countering the financing of terrorism legal norms.[64] Australia, Canada, Denmark, Japan, and Switzerland regulate the cryptocurrency business through both anti-money laundering and taxation laws.[65]

Various countries including Algeria, Bolivia, Morocco, Nepal, Pakistan, and Vietnam have banned cryptocurrency transactions.[66] Moreover, countries such as Bangladesh, China, Colombia, Iran, Lithuania, Lesotho, and Thailand restrict financial institutions from participating in digital coin transactions within their borders.[67] China heavily restricted Bitcoin without actually criminalizing the holding of bitcoins. All banks and other financial institutions like payment processors are prohibited from transacting or dealing in Bitcoin.[68] The Chinese government has cracked down on miners. India banned banks from dealing in bitcoins and left the overall legal status of cryptocurrencies unclear.[69] Columbia does not allow Bitcoin use or investment. Bitcoin and other cryptocurrencies were banned in Ecuador by a majority vote in the national assembly.[70]

In emerging markets, the legal status of crypto currency still varies dramatically. Most developing countries have not determined the legality of crypto currency, preferring instead to take a wait-and-see approach. Almost all African countries,[71] the Middle East, East Asia, and Latin American countries have neither allowed nor banned

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[61] Ilieva Voutcheva & Co. Law Firm (n.d), 'The European Commission's project to regulate the cryptocurrency market. Tax treatment in Bulgaria,' accessed on March 25, 2021, https://ivlawfirm.com/en/the-european-commission-s-project-to-regulate-the-cryptocurrency-market-tax-treatment-in-bulgaria/

[62] The Law Library of Congress (2021), '*Taxation of Cryptocurrency Block Rewards in Selected Jurisdictions*', https://www.loc.gov/law/help/cryptocurrency/block-rewards/taxation-block-rewards.pdf pp. 39-43.

[63] The Law Library of Congress (2018), '*Regulation of Cryptocurrency Around the World*', p. 5. https://www.loc.gov/law/help/cryptocurrency/cryptocurrency-world-survey.pdf

[64] Ibid

[65] Ibid

[66] Ib. p. 2

[67] Daniel Dupuis and Kimberly Gleason (2020), 'Money laundering with cryptocurrency: open doors and the regulatory dialectic', *Journal of Financial Crime*, DOI 10.1108/JFC-06-2020-0113, p. 3.

[68] United Nations (16 November 2017), 'Regulating the no man's coin – the rapid rise of cryptocurrencies has regulators scratching their heads,' https://www.un.org/development/desa/en/news/policy/cryptocurrencies.html

[69] The Law Library of Congress, *infra* note 63, p. 99-101.

[70] The Law Library of Congress, *infra* note 63, p. 14.

the use of cryptocurrency. The decentralized and anonymous nature of cryptocurrencies has challenged many governments on how to allow its legal use while preventing criminal transactions. Countries are wary because of its volatility, decentralized nature, perceived threat to current monetary systems, and links to illicit activities like drug trafficking and money laundering. Many countries are still analyzing ways to regulate crypto currency. Overall, cryptocurrency remains a legal gray area for much of the world.

## 5. Cryptocurrencies in Ethiopia

The use of cryptocurrencies has spread to all corners of the world and has now reached Ethiopia. In May 2018, Getahun Mekuria, the then Minister of Science and Technology, signed an agreement with Charles Hoskinson, Chief of Executive of Hong Kong-based IOHK.[72] The company provides Cardano, a type of blockchain record management application. The MoU was signed to provide training on how to develop cryptocurrency in Ethiopia and to create a new digital payments system that will allow six million users to pay their power and electric bills with cryptocurrency.[73]

Besides the initiatives of the government, several Bitcoin networks (Bitcoin service providers) exist in Ethiopia. The Bitcoin networks such as AchiversKlub school of Cryptocurrency,[74] Bit Club, and AWS Mining are doing extensive works to introduce and expand the business of Bitcoin to Ethiopia. The founders of the clubs are Ethiopians living abroad.[75] Since 2016, the clubs host meetings in Addis Ababa to teach people: how Bitcoin works, and how they can invest in it.[76] They encourage individuals either to buy Bitcoin or invest in Bitcoin mining. The meeting was so crowded that some people even had to return home. Besides, they use social media outlets such as YouTube, Facebook, Instagram, Telegram, WhatsApp, and Twitter to advertise the business.

Although the expansion of Bitcoin in Ethiopia is at its infant stage, a growing number of Ethiopians investing heavily and profiting by unheard-of margins.[77] Many Ethiopians are joining the business of Bitcoin by purchasing it. However, some Ethiopians are also engaged in mining Bitcoin.[78]

## 6. The Regulation of Cryptocurrencies in the Ethiopian Legal Norms

In Ethiopia, there are two arguments on the business of cryptocurrencies in general and Bitcoin in particular. Its ardent supporters, specifically, Bitcoiners argue that Bitcoin provides financial freedom so that the user's money is safe and secure, can be deposited and withdrawn quickly and easily, and it eliminates exposure to wrong

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[71] Pavithra Rao (April 2018 - July 2018), 'Africa could be the next frontier for cryptocurrency Experts say conditions on the continent are great for virtual currency', https://www.un.org/africarenewal/magazine/april-2018-july-2018/africa-could-be-next-frontier-cryptocurrency; Yomi Kazeem (7 August 2018), 'African governments are playing a waiting game on regulating cryptocurrencies,' https://qz.com/africa/1350294/bitcoin-cryptocurrency-regulation-in-africa-is-uncertain/

[72] Rachel Wolfson (30 April, 2019), 'Cardano Founder Launches Enterprise Blockchain Framework In Collaboration With Ethiopian Government', https://www.forbes.com/sites/rachelwolfson/2019/04/30/cardano-founder-launches-enterprise-blockchain-framework-in-collaboration-with-ethiopian-government/?sh=3415676e4e10

[73] Ibid

[74] AchiversKlub school of Cryptocurrency was started in 2017. The Klub gives classroom based or online courses of cryptocurrency, to introduce the technology widely in Ethiopia to be used as an alternative to fiat currency.

[75] Capital Ethiopia (18 May 2020), 'The Bitcoin Revolution in Ethiopia', https://www.capitalethiopia.com/capital/the-bitcoin-revolution-in-ethiopia/

[76] Kaleab Girma (n.d), 'Despite Murky Picture, Bitcoin Hatches', https://addisfortune.net/addisfortunefeature/despite-murky-picture-bitcoin-hatches/

[77] Ibid

[78] Ibid

banking regulations.[79] Further, they state that Bitcoin can even solve the foreign currency shortage of Ethiopian importers. They encourage importers to invest in Bitcoin stating that they can order items they want to import from their Bitcoin wallet[80] without waiting for government regulation and foreign currency. These promoters consider Bitcoin as a good opportunity –decentralized governance of networks is regarded as innovative and ultimately more effective than traditional centralized financial governance system in an era of rapid and unpredictable technological change. Moreover, they argue that criminal groups are not interested in cryptocurrencies as it is difficult to use cryptocurrencies where fiat money is more available and it is challenging to get access to the cryptocurrencies form of payment in the country.

However, its opponents argue that this business is against the financial regulation of the country.[81] They state that the main source of income comes in the form of commissions and some experts in the field call it a pyramid scheme[82] which is prohibited by Ethiopian law.[83] Moreover, they consider it as one mechanism of capital flight and its doors are open for criminals to exploit and to launder the proceeds of their illicit activities.[84] The transaction conducted by Bitcoin is not verified by a centralized government organ but is conducted through decentralized peer-to-peer networks. Because of the anonymity it provides, the virtual currency industry is attractive to nefarious actors. Experts from the Ethiopian Financial Intelligence Center[85] noted that money

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[79] Capital Ethiopia (18 May 2020), 'The Bitcoin Revolution in Ethiopia', https://www.capitalethiopia.com/capital/the-bitcoin-revolution-in-ethiopia/; 'Can I Trade Cryptos in Ethiopia Legally?', https://www.cryptoexchangelistings.com/go/ethiopia-en/article/legal-info/

[80] Literally, the Bitcoin Wallet is the account number of the Bitcoiner. The wallet contains private/public key pairs, accounts which have Bitcoin addresses and funds from different transactions associated to it, outgoing and incoming transactions to/from the wallet, user settings, key pool and change addresses and information regarding the best blockchain. See more at Adam Turner and Angela Samantha Maitland Irwin (2017). 'Bitcoin Transactions: A Digital Discovery of Illicit Activity on the Blockchain', *Journal of Financial Crime*, https://doi.org/10.1108/JFC-12-2016-0078

[81] An interview with a Financial Intelligence Analysis Team Leader of the Ethiopian Financial Intelligence Center (FIC), on the 24th December 2020 in Addis Ababa.

[82] Ibid

[83] 'Blockchain, Bitcoin and Cryptocurrency in Ethiopia: The Million Dollar Return,' https://allaboutethio.com/blockchain-cryptocurrency-bitcoin-in-ethiopia.html

[84] An interview with a Senior Leader of the FIC, on the 19th December 2019 in Addis Ababa.

[85] The Center is an independent authority established by the government of Ethiopia to collect, store, receive a survey, analyze, and disseminate information about suspected money laundering and financing of terrorism cases and conduct public awareness program about money laundering. See more at *Art 13-16 of the Prevention and Suppression of Money Laundering and Financing of Terrorism Proclamation No. 780/2013* (hereafter the Ethiopian Anti-Money Laundering Law) *and Financial Intelligence Center Establishment Council of Ministers Regulation No. 171/2009.*

prosecutor have limited awareness about what crypto currency is and the challenges of cryptocurrency to law enforcement work.

The next two sub-sections discuss the regulation of cryptocurrencies in Ethiopia's legal system. First, the adequacy of the national payment system legal norms to govern cryptocurrencies is examined, and it proceeds to examine the comprehensiveness of the country's anti-money laundering legal norms in governing the threat of money laundering, terrorist financing, and associated predicate offenses that can emanate from cryptocurrencies.

## 5.1. Cryptocurrencies under Ethiopia's National Payment System Legal Norms

National payment systems, specifically the traditional fiat money is highly exposed to credit risk, liquidity risk, operational risk, legal risk, and systemic risk.[85] To mitigate those risks, countries have established a robust institutional and legal infrastructure. Similarly, the government of Ethiopia has enacted several laws to regulate the country's national payment system. The prime legislation in this regard is the *National Payment System Proclamation No. 718/2011.*

laundering through cryptocurrencies, specifically Bitcoin would be one of the typologies[86] of money laundering in the country.[87] However, except the Center, the law enforcement institutions, specifically the police and

The law was enacted to "provide rules on establishment, governance, operation, regulation, and oversight of the national payment system to ensure its safety, security, and efficiency".[85]

The law provides the type of national payment system that operates in Ethiopia. Accordingly, the national payment system consists of:

According to Ethiopia's national payment legal norms, the use of currency not issued and authorized by the National Bank of Ethiopia is not allowed in the country. However, the nature of cryptocurrencies is decentralized –antithetical to the existing centralized structure of monetary and financial regulation of the country. And cryptocurrencies are not issued and governed by any central authority. Thus, it could be argued that cryptocurrencies are outlawed in Ethiopia. However, the recent developments in the country do not seem to support this conclusion because MoU signed between the Minister of Science and Technology and IOHK implies the interest of the government of Ethiopia to introduce the payment system of cryptocurrencies.

Moreover, the Bitclub networks are operating in the country without any restriction. In view of these recent developments, it could be concluded that even though the cryptocurrency payment system is growing in Ethiopia, the country's national payment system legal norms have strategic deficiencies to govern it. The prevailing experience of the country reveals that individuals and groups are engaged in the business/payment system of cryptocurrencies without registration and securing a necessary license from the National Bank of Ethiopia.

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[86] An interview with a Financial Intelligence Analyst of the Ethiopian Financial Intelligence Center, on the 18th September 2019 in Addis Ababa.

[87] Ibid

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(a) sending, receiving and processing of orders of payment or transfers of money in domestic or foreign currencies; (b) issuance and management of payment instruments; (c) payment, clearing and settlement systems; (d) arrangements and procedures associated to those systems specified under paragraph 'c' of this sub-article; and (e) payment service providers, including operators, participants, issuers of payment instruments and any third party acting on behalf of them, either as an agent or by way of outsourcing agreements, whether entirely or partially operating in the country.[87]

The law authorizes the National Bank of Ethiopia to "establish, own, operate, participate in, regulate and supervise: (a) an integrated payment system consisting of a large value funds transfer system and retail funds transfer system, and (b) central securities depository."[87] The law prohibits the introduction of a new payment system without the prior written approval of the National Bank of Ethiopia.

In 2020, to maintain the safety and efficiency of the national payment system, the National Bank of Ethiopia has issued two directives. These are *Licensing and Authorization of Payment System Operators Directive No. ONPS/02/2020* and *Licensing and Authorization of Payment Instrument Issuers Directive No. ONPS/01/2020.* The first directive provides the procedures used to license and authorize payment system operators. The operators are the National Bank, banks, micro-finance institutions, and any other person authorized by the National Bank.[87] The second directive provides procedural requirements to issue a payment instrument and types of payment instruments used in the country. According to this Directive, a payment system refers to "any instrument whether tangible or intangible that enables a person to make payments or transfer money and it includes electronic money."[87] These laws focused on the payment systems that are centralized and issued upon the authorization of the National Bank of Ethiopia. These types of payment systems are usually known as fiat currencies, and they could be money, e-money, and negotiable instruments.

As highlighted above, there are countries that regulate cryptocurrencies through anti-money laundering and countering the financing of terrorism regulations. Ethiopia has enacted a law to prevent and suppress money laundering and terrorism financing –*Proclamation No. 780/2013* (henceforth the Ethiopian anti-money laundering law). Article 29(1) of the law illustrates the *actus reas* of money laundering incorporated in the Ethiopian legal system. According to this provision, money laundering is said to be committed by:

Any person who knows or should have known that a property is the proceeds of a crime and who:

a) converts or transfers the property for the purpose of concealing or disguising the illicit origin of the property or of assisting any person who is involved in the commission of the predicate offence to evade the legal consequences of his actions;

b) conceals or disguises the true nature, source, location, disposition, movement or ownership of or rights with respect to the property;

c) acquires, possesses or uses the property; or

d) participates in the commission, conspires to commit, attempts to commit or aids, abets, facilitates or counsels the commission of any of the elements of the offence mentioned in paragraphs (a) to (c) of this sub-article …

This provision states five wider substantive offenses of money laundering including conversion of criminal proceeds[88], concealment of the illicit origin of property, acquisition of proceeds of crime, participation in the commission of money laundering either in a principal or secondary capacity, or assisting any person who is involved in the commission of the predicate offense[89] to evade the legal consequences of his actions. Art 2(5) of the law defines property as "any asset, whether movable or immovable, or tangible or intangible, including legal instruments in any form evidencing title to or interest in such assets such as bank credits, traveler's cheques, bank cheques, money orders, shares, bonds, and any interest, dividend or other income or value generated by such asset."

This sub-article defines property to include both movable/immovable or tangible/intangible assets. By taking this into account, one may argue that the Ethiopian anti-money laundering law governs virtual assets. However, the definition of currency provided in the anti-money laundering law and the list of institutions responsible for the implementation of the country's anti-money laundering legal norms do not warrant such conclusion. The Ethiopian anti-money laundering law defines currency as "banknotes and coins of Ethiopia or any other country that are in circulation as a medium of exchange".[90] According to this article, currency refers to a medium of exchange that has legal tender status in any jurisdiction. However, cryptocurrencies are not issued nor guaranteed by any jurisdiction. Thus, it could be argued that cryptocurrencies are out of the realm of the country's anti-money laundering law.

The Ethiopian anti-money laundering law intends to protect financial institutions and certain non-financial businesses and professions (commonly known as reporting entities) from abuse and deceit by money launderers and terrorist financiers. Financial institution comprises "a bank, an insurance company, a microfinance institution, postal savings, money transfer institution or any other institution designated as such by the National Bank pursuant to the relevant law" of the country.[91]

Designated non-financial businesses and professions include: (a) real estate agents and brokers; (b) dealers in precious metals or precious stones; (c) lawyers, notaries and other independent legal professionals when they prepare for, carry out or engage in transactions for their clients; (d) independent accountants; and (e) such other businesses and professions as may be designated by the Center [the Ethiopian Financial Intelligence Center].[92] These institutions are indebted to comply with the country's anti-money laundering law. Specifically, they are obliged to pursue a risk-based approach, undertake adequate CDD/KYC measures, keep copies of all records obtained through the CDD measures, and report suspicious transactions, cash transactions, wire transfers, or cross-border transactions of cash and bearer negotiable instruments.[93]

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[88] Proceeds of crime means any fund or property derived or obtained, directly or indirectly, from a predicate offence. *Art 2(3) of the Ethiopian Anti-Money Laundering Law*.

[89] It refers to any offence capable of generating proceeds of crime and punishable at least with simple imprisonment for one year. *Art 2(4) of the Ethiopian Anti-money Laundering Law*.

[90] *Art. 2(25) of the Ethiopian Anti-money Laundering Law*.

[91] *Id., Art. 2(9)*.

[92] *Id., Art. 2(10)*.

[93] *Id., Art. 6-12*.

So far, virtual asset service providers are not designated either as financial institutions or non-financial businesses and professions. That is to say, neither the National Bank of Ethiopia nor the Ethiopian Financial Intelligence Center has designated virtual asset service providers either as financial institutions or non-financial businesses and professions. Thus, the virtual asset service providers are beyond the country's anti-money laundering regime. That is to say, the concern of the country's anti-money laundering law is on institutions that deal with the actual money which is governed and regulated by the government. This shows the inadequacies in the law to govern current developments and trends such as cryptocurrencies.

Generally, the laws enacted to govern the national payment system and to suppress and prevent money laundering and terrorist financing are aimed at regulating fiat money. There are strategic deficiencies in the country's legal norms to govern the crypto-coins payment system. The government of Ethiopia has not yet disclosed its position on the issue of cryptocurrency in general and Bitcoin in particular. Ethiopia has not enacted a law that allows the use of cryptocurrencies. Nor has it conducted a risk assessment with regard to the problems that can emanate from cryptocurrencies. Like many other developing countries, the country is in a dilemma thereby placing itself in a state of a wait-and-see.

Meanwhile, however, Bitcoiners are engaged in expanding the business in the country. They inspire Ethiopians to partake in the Bitcoin business either by buying Bitcoin or be engaged in mining. There is thus the need for caveats because Bitcoiners are engaged in the business without a license or in the absence of an established mechanism for the licensing and registration of virtual asset service providers.

## 7. How Can Ethiopia Regulate Cryptocurrencies?

Cryptocurrencies have many potential benefits. They could make payments easier, faster, and cheaper; and provide alternative methods for those without access to regular financial products.[94] However, without proper regulation, they are becoming a virtual safe haven for criminals and terrorists. As discussed in section 4 above, some countries have started to regulate the virtual asset sector, while others have prohibited virtual assets altogether. Yet, most countries have not taken any action.

FATF encourages less prohibition and more regulation of private actors in the cryptocurrencies ecosystem.[95] The regulation of cryptocurrencies has to originate from the unique characteristics of the payment system. The first footstep in regulating such type of payment system is creating a legal base. The Ethiopian government has to enact a law that governs how the business of cryptocurrencies is conducted and the law should indicate the regulatory and law enforcement agencies (commonly known as competent authorities) that deal with it. The law that would be enacted to regulate cryptocurrencies has to focus on how to (i) use the payments system, and (ii) control the nefarious activities that can emanate from this payment system.

Ethiopia should identify, assess, and understand the money laundering and terrorist financing risks emerging from virtual assets and the activities or operations of virtual assets service providers. Based on this assessment, the country should apply a risk-based approach to ensure that measures (both normative and operational) are put in place in order to prevent or mitigate money laundering and terrorist financing that are commensurate with the risks identified.

The National Bank of Ethiopia has to establish a system of registration and licensing of crypto-asset service providers. The virtual assets service providers should conduct a sector-specific risk assessment and take effective action to mitigate their money laundering and terrorist financing risks including conducting CDD/KYC, record keeping, and reporting suspicious transactions. The Ethiopian Financial Intelligence Center, a vanguard organ for the prevention and suppression of money laundering and terrorist financing in Ethiopia, has to expand the system of reporting, supervision, and regulation to crypto-asset service providers. This will ensure transparency of virtual asset transactions and keep funds with links to crime and terrorism out of the cryptosphere.

Regulatory and law enforcement agencies such as the Ethiopian Information Network Security Agency, Financial Intelligence Center, Office of Federal Attorney General, National Intelligence and Security Service, and Federal Police Commission have to augment the skills of their human power and technological capabilities to implement the laws that would be enacted to regulate cryptocurrencies, specifically to prevent and suppress the threat of criminality that can emanate from virtual currencies or crypto-asset service providers. Tracing or investigating criminal activities that are committed by using crypto-assets requires highly skilled humanpower that is equipped with advanced technology. With this in mind, the law enforcement agencies have to train their human power on what cryptocurrency is, the investigation

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[94] FATF, Virtual Assets: How do the FATF Standards apply? https://www.fatf-gafi.org/publications/virtualassets/documents/virtual-assets-fatf-standards.html?hf=10&b=0&s=desc(fatf_releasedate)

[95] FATF, *infra* note 2, p. 15.

and prosecution of criminal activities committed using cryptocurrencies, or when cryptocurrencies become targets of investigation.

## 8. Conclusion

The objective of cryptocurrencies is to become a payment system by substituting, complementing, or competing with conventional payment systems.[96] There is nothing inherently criminal in the development of cryptocurrency. However, recent trends have revealed that the nature of cryptocurrencies, i.e., decentralization, their unregulated nature, and anonymity, are providing attractive opportunities for criminal exploitation. In spite of these challenges, the government of Ethiopia has neither enacted a law that governs cryptocurrencies nor has it conducted the risk of criminality that can emanate from this business.

Many developing countries, including Ethiopia, are in a state of a wait-and-see approach. This has two contradictory manifestations. On the one hand, the business is expanding at a rapid pace and on the other hand, it is not governed. Thus, the Ethiopian government should consider enacting a law that comprehensively governs the payment system of cryptocurrencies. Along with this, improving the capabilities of financial institutions, law enforcement agencies, and regulatory authorities is crucial to deal with the cryptocurrency payment system.

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[96] Nabilou, *infra* note 19, p. 1.

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# 4. THE EFFECTS OF ENTREPRENEURSHIP TRAINING ON SELF-EMPLOYMENT:THECASEOFKOLFEINDUSTRIALCOLLEGE

by:HabtamuAyansaTuli[1]

**ABSTRACT**

The main objective of the study was to assess the effects of entrepreneurship training on self-employment in the case of Kolfe Industrial College, Addis Ababa. Explanatory research design was employed to conduct the research. Questionnaires were distributed to 133 participants and 28 process owners were interviewed. Questionnaires and structured interview were used for data collection. Frequency distribution, percentage, mean and standard deviation, correlation, regression and ANOVA test among others, were used to present, analyze and interpret data in line with each research questions. Major findings revealed that entrepreneurship training has significantly contributed for self-employability skills of graduates in Kolfe Industrial College, Addis Ababa. Specifically, the results of training on motivation, creativity, attitude and business plan development skills were statistically significant and affect self-employment skills in the study area. In addition, descriptive results show us graduates were seen to have skill gaps in business planning, lack of understanding about the importance of business planning for getting funds, its role in creating new products and being competitive in world of work. Lastly, the graduates were in fear of challenges and fear of being unemployed after graduation. This revealed the low effects of the training in setting minds of graduates towards self-employments. As per the findings, entrepreneurship training programs in the TVET College should enhance graduates' motivations towards self-employment, creativity skills, business development skills and entrepreneurial skills. Therefore, encouraging graduates to create new businesses rather training completion criteria, the training instruction and methodology needs to ensure deep understanding to make the graduates open to opportunities, and to be motivated to start their own business, the training methodology need to include practical training linked with reality business world were recommended.

*Key Words:* graduates, training, entrepreneurship, education, self-employment etc.

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# CHAPTER ONE

## Introduction

### 1.1 Background of the Study

The Ethiopian education and Training Policy (1994) stated the following: "Parallel to general education diversified technical and vocational education will be provided for those who leave school from any level of education". This policy further states that Technical training will be provided for those who complete grade ten for development of middle-level manpower. The technical and vocational training program will help to develop middle level manpower.

However, technical and vocational training alone wouldn't help students to obtain independent life. Therefore, complimenting the technical and vocational skills with entrepreneurship training followed by management of small businesses and business growth strategies becomes mandatory

In order to make Ethiopian graduates more resourceful and self-reliant, the Federal Ministry of education introduced entrepreneurship education into the curricula of the universities, polytechnics and colleges of education through their regulatory and supervisory agencies, National Universities commission, National Board for Technical Education and National Commission for Colleges of Education (MOE,2018).

Nwangwu (2007), supported entrepreneurial education and also argued that graduates with adequate skills and training will be creative and innovative in identifying noble business opportunities.

Fayolle (2004) and Bhandari (2006) observed that more institutions have adopted a wide range of entrepreneurship programmes and training activities which appears to be influencing students in terms of generating entrepreneurial interest and going into the business of their choices.

Soutaris, Zerbinati and Al-Lahan (2006), revealed that entrepreneurial programs raise attitudes and behavior capable of provoking entrepreneurial intentions among youths who have interest in the economic development of their nation.

As Batra (2003), described in his book entrepreneurship training programs should develop a series of abilities, attitudes, values and traits that are essential for entrepreneurial development among trainees. According to this author to be effective, entrepreneurship education needs to involve the individual, be workable, relevant and usable. Moreover, according to Desai (2001) edition, the educational process needs to ensure deep understanding which enables the individual to be open to opportunities, be able to assess risks, be willing to learn from errors, and be motivated to start their own business.

Supporting the above views, Gubta and Srinivasan (2003), confirmed that it should be the aim of every institution or training center to develop the full potential of learners by providing learning opportunities and tasks which are vital for better understanding of the subject. It is strongly advised that the teacher need to use a variety of instructional strategies and should not focus on one type of teaching methodology in order to meet the objectives of each topic or unit in the training of entrepreneurship.

According to Gibb (2007), and Blaug (1987), the challenge in bringing entrepreneurship into the classroom is to organize the classroom around the structural characteristics identified above. The challenge is to allow young trainees to experience and feel the concept rather than just learn about it in the conventional sense. This leads to emphasis upon a pedagogy that encourages learning: by doing; by exchange; by copying (learning from the experience of others ); by experimentation; by risk taking ; by creative problem solving; by feedback through social interaction; by dramatization and role playing; by close exposure to role models; and in particular, interaction with the outside real world.

From the above view what can be drawn are the teachings of entrepreneurship need to focus on inspiring learners through entrepreneurial real life interactions and simulations. In simple words, it should put trainees" in situations similar to those that they will meet in practice. According to the international level based training manual (1998), there are five important factors in the operation of the training: the linking of learning with activity, providing adequate space and time for processing; creating a supporting environment for change; being sensitive to the culture of the target group; and developing technical competence in the field of business management.

Self-employment refers to a situation where an individual creates, begins and takes control of the business decision rather than working for an employer

Entrepreneurship is a competence for everyone, helping young people to be more creative and self-confident in business world. Training for entrepreneurship can be particularly effective in initial TVET training, as students are close to entering working life and self-employment may be a valuable option for them. Thus, study focus on the effects of entrepreneurship training on self- employment in case of Kolfe Industrial College

## 1.2     Statement of the Problem

Youth employment is at the center of the policy agenda in Ethiopia. The Ethiopian government has introduced Technical and Vocational Education and Training (TVET) programs to produce young people equipped with skills that enable them to engage in productive lives.

In environments characterized by constrained labor demand from the private sector and high rates of youth unemployment, entrepreneurship-support interventions targeting students are promising policy options.

Entrepreneurship training has the potential to enable graduates to create their own jobs, as well as possibly to better align their skills with private employers" needs. Some TVET Colleges in Ethiopia are providing entrepreneurship education to graduate students. Yet despite the potential of entrepreneurship training, its effects on increasing students" skills and facilitate entry into self- employment remains thin.

Many of young women and men''s in the Addis Ababa City Administration are faced to job seekers rather than job creators which leads to serious conflict between government and young unemployment peoples. This leads to political instability, wastage of manpower and economic crises in the city.

In spite of the increasing recognition of entrepreneurship education as a source of self- employment initiatives, regional development and economic dynamism in a rapidly globalizing world, there has been no systematic attempt to look at it from the science and technology students'' perspective.

of entrepreneurship training in terms of creating job opportunities specifically among graduate trainees is not practiced and critical challenges were not clearly addressed.

| Wage Employed | 69(69.69%) |
|---|---|
| SELF EMPLOYED | 9(9.09%) |
| UNEMPLOYED | 22(22.22) |
| WAGE EMPLOYED | 69 (68%) |
| TOTAL | 100 GRADUATES |

SOURCE: KIC WCII OFFICE(2014)

However, no published works and solid researches are available in relation to the effects of entrepreneurship training on self-employment up to the knowledge of the researcher. Thus, the existence of the above mentioned problems and limited researches throughout the selected city was what triggered and initiated the researcher to raise the issue under the study to fill research gaps.

Therefore, study aim to assess the effects of entrepreneurship training on2022 E.C and 2022 TVET graduates Kolfe Industrial College to fill the research gaps by forwarding the following basic research objectives with their respective questions

## 1.3 Objectives of the Study
### 1.3.1 General Objectives of the Study

The general objective of the study was to examine the influence of entrepreneurship training on self-employment in case of Kolfe Industrial College.

### 1.3.2 Specific Objectives of the Study

- To assess the influence of attitude training of TVET graduates on Self-Employment in Kolfe Industrial College
- To examine the influence of entrepreneurship training on creativity skills on Self- employment in Kolfe Industrial College
- To assess the influence of business plan development skills training on self-employment of TVET graduates in Kolfe Industrial College
- To know the influence of motivation training on self- employment of TVET graduates in to
  - become self-employed in Kolfe Industrial College

**Basic Research Questions**

The following questions were designed to address the above objectives.

- Does entrepreneurship training on attitude of trainees" significantly affect TVET graduates to be self-employed in Kolfe Industrial College?
- Does entrepreneurship training on creativity skills significantly affect TVET graduates to be self- employed in Kolfe Industrial College?
- Does entrepreneurship training on business plan development skills significantly affect TVET graduates to be self-employed in Kolfe Industrial College?
- Does entrepreneurship training on motivation significantly affect TVET graduates to be self- employed in, Kolfe Industrial College?

## 1.4     Significance of the Study

Effective Entrepreneurship training plays a significant role in cushioning graduate unemployment; this has been established by both theoretical and empirical studies. Self- employment is a major determinant and contributor to economic development. It is perceived as  a change agent in job creation as well as increasing nation"s wealth through economic development. The findings of this study will be significant to Kolfe Industrial College  graduates help them in view of identify business opportunities and self-employments.

However, The findings of this study will be significant to improve the delivery of entrepreneurship trainings, And drawn from the study will contribute in creating awareness among the administrators of the colleges under investigation and other concerned bodies to improve the delivery of the training, And it has also depicted the range of factors that challenge graduates in the process of self-employment and forwarded ways to minimize them.

## 1.5     Scope of the Study

The main objective of the study was to examine the effect of entrepreneurship training on current year  TVET graduates be self- employed in case of Kolfe Industrial College. The study only investigating the effect of entrepreneurship training on self-employment TVET graduates of2022 &2022 in Kolfe Industrial College.

The researcher was triggered to conduct this study to fill the research gaps in selected college. Hence, attitudes, creativity skills, business development skills, and motivation of graduates towards self-employment were employed as independent variables, and self-employment as independent. Due to shortage of reference materials in the area of entrepreneurship training in Ethiopian case, most of the sources used in the study were more of research findings in other countries. The data were collected from graduates of2022 &2022 who had completed the respective level entrepreneurship training.

**Limitations of the Study**

As far as the limitations of the study were concerned, up to the knowledge of the researcher, there were limited literatures on the issue under study because of it is new concept in Ethiopia. In addition, during data collection, some respondents failed to return the questionnaires on right time. There was also tendency of refusing to give full answers for the questions, especially for close ended interviews. Moreover, COVID-19 was a very much challenge to discharge and articulate the thesis in the status of expected level. This was due to the fact that it affected all participants of the study and created great obstacles for distribution and collection of data.

# CHAPTER TWO

## 2. Review of Related Literature

### 2.1 Entrepreneurship Training on Attitudes

The social learning theory pays particular attention on the development of cognitions interconnected to the expected outcome of behavior. According to McDonald and Kielsmeier, (1970), this theory suggests that a person obtains attitudes by observing other people's behavior and imitating them. The author adds that the person being observed must be convincing to the observer (Bednar &Levie, 1993).

Credibility is largely achieved by creating trust and deep conviction. Observational learning is greater when the objects being observed are seen to be trustworthy and convincing (Zimbardo &Leippe, 1991). According to this theory the opinions that young people hold towards entrepreneurship could have been acquired by observing the society around them in early stages of life.

The young people observed that a person who studied and became a doctor, engineer, and pilot, among other professions was hailed and a person who started a business was not recognized as much or was not taken to be as successful or took long to succeed in life. Thus the young people could have been conditioned to this thought and therefore need to be communicated to and informed in order to have some new learning experience which will make them have a change of attitude towards entrepreneurship.

The other theory used in this study was the affective-cognitive consistency theory. This theory examined the relationship between attitudes and beliefs. The theory suggests that the affective component of the attitude system may be changed by providing new information through a persuasive message. Once the individual has listened to the new information, his or her opinion about something or someone will change according to their understanding. Thus processing of the message requires that the audience pay attention to and understand it, then accept and retain it (Zimbardo &Leippe, 1991). According to this theory, an individual must listen to and

understand the communication before acceptance can occur. It is during this time of listening and understanding that the individual can be able to change and act in accordance to the new opinion.

The information could include the benefits of entrepreneurship like it provides employment to the entrepreneur and also to others through creation of job opportunities. The information could also include benefits brought to the nation as a whole like bringing about economic growth. Such information could influence the attitude of the young people towards entrepreneurship.

The study also adopted the Bandura‟s social theory which proposes that people are driven not by inner forces, but by external factors (Bandura, 1991).

The theory suggests that human functioning can be explained through the interaction of three factors. These are behavior, personal and environmental factors. According to Bandura (2005), environmental factors represent influences that come from the surroundings which lead to formation of behavior while personal factors represents those influences that come from within a person like instincts, drives, traits, and other individual motivational forces.

People who have ventured into entrepreneurship and have started businesses are said to be facing many challenges such as poor infrastructure, lack of finances, unsupportive government policies, among other challenges. These could be referred to as the environmental factors. Young people growing up and observing people struggle with these kinds of challenges may develop a certain attitude towards entrepreneurship.

If the people struggling later become successful the young people may desire to go through the same and become successful while other young people may feel that the struggle is too much and the results are far from reach and this may make them have a different attitude (Bandura, 1991).

## 2.2 Entrepreneurship Training On Creativity

Increasingly, there is pressure on creative and performing arts schools in higher education institutions to develop curriculum that addresses the employability of graduates. Such curriculum must be reflective of the particular types of employment commonly experienced by creative and performing arts graduates. Typical employment in the arts is by way of short-term projects and contracts with high levels of self-employment (Throsby and Zednik, 2010). Arts

entrepreneurship is a relatively new discipline in creative and performing arts higher education and is currently attracting attention due to the possibilities it affords to address graduate employability issues. However, as an emerging area there is a need for further research that attempts to clarify the meaning of arts entrepreneurship and explore how it is currently practiced.

Beckman (2011) argues the need for a paradigm shift to ensure that arts entrepreneurship is considered an academically robust and integral aspect of creative and performing arts education. The aim of this article is to contribute to this paradigm shift through an examination of an emerging and integral element in arts entrepreneurship education, an "arts entrepreneurial mindset (Carey and Naudin, 2006; Gustafson, 2011).

An arts entrepreneurial mindset as it relates to training in TVET colleges through analyzing themes with creative and performing arts entrepreneurial mindset has five important elements, each with an indelible link to creative practice via a firm focus on the dissemination of creative work. These are 1) the capacity to think creatively, strategically, analytically and reflectively, 2) confidence in one‟s abilities, 3) the ability to collaborate, 4) well developed communication skills and 5) an understanding of the current artistic context (Linan, F., Rodriguez-Cohard, J. C. and Rued-Cantuche, J. 2005).

Pollard and Wilson( 2010) argued that entrepreneurial mindset in Creative and Performing Arts Education Activate that these skills are important in higher education and our explication of these skills in arts entrepreneurship education show how such education can make an important contribution to creative and performing arts education more generally.

## 2.3 Entrepreneurship Training on Business Plan

While most educators use business plans to teach entrepreneurship, not all researchers agree that they are significant for the success of new ventures. One argument involves the fact that since business plans are best written by the founders themselves, at the most critical point it the venture‟s history, its creation, the time required is not worth the benefit (Bhide, 2000).

Other studies conducted to measure the relationship between the preparation of a business plan and the firm‟s success show little connection between the two (Pearlmutter, & Singh, 2007). We believe that challenging prospective entrepreneurs to accomplish a formal business plan early in the venture creation process will likely enable them to engage in additional start-up behaviors that could further the process of business creation.

By engaging in venture creation activities earlier rather than later, prospective investors and other venture supporters might ascertain earlier whether a fledgling idea has potential as an ongoing business. The importance of a written plan document is very important for potential investors, particularly for venture capitalists. The initial screening and due diligence by investors has been shown to be based upon the business plan document (Zacharakis& Meyer, 2000).

Additionally, the three primary criteria used by investors to make investment decisions: 1) entrepreneurial/team capabilities; 2) product/service and market characteristics, and 3) financial needs of the firm, all of which can be best communicated using a business plan (Fried &Hisrich, 1994).Using a business plan exercise seems critical for entrepreneurial success and therefore for entrepreneurial education.

Business plan preparation is also important for entrepreneurship education. Research shows that entrepreneurship education is enhanced through the use of application-based methodology as opposed to theory based approaches (Harrison & Leitch, 2005). This is due to the experiential nature of entrepreneurship. Many scholars believe the best way to teach the entrepreneurial context is through providing students with learning experiences (White, Hertz, & D'Souza, 2011).

Teaching entrepreneurship is seen as similar to teaching a craft such as medicine or architecture, where the student must acquire procedural as well as declarative knowledge (Anderson, 1983). Declarative knowledge is information of which students are consciously aware, that can be acquired from textbooks, and that students can clearly report, such as on examinations. Procedural knowledge is expertise and know-how acquired through practice, and is more difficult for students to articulate (Ambrosini & Bowman, 2001).

Procedural knowledge is best acquired through experiential learning such as internships, residencies, etc. In the case of teaching entrepreneurship it is often difficult to provide these types of opportunities, so alternative methods must be devised. Involving students in a analyzing
business plan, is a valuable method for experiential learning because it requires the integration of previously acquired procedural knowledge (finance, marketing, strategy, etc.). This technique can provide students with the opportunity to connect theory from other subject matter with its practical application (Onah, M., 2006).

## 2.4 Entrepreneurial Motivation

Entrepreneurial motivation is the process of transforming an ordinary individual to a powerful businessman, who can create opportunities and helps in maximizing wealth and economic development. Motivation makes entrepreneur by fulfilling higher level needs such as recognition, esteem, and self-actualization (Gubta and Srinivasani, 2003).

Motivation may be defined as a process of stimulating someone to adopt the desired course of action (Kumar, 2004). According to the author positive motivation for entrepreneurship occurs when a person is inspired to act for earning some rewards and benefits. According to Gubta and Srinivasani (2003), a person‟s behavior is shaped by several socio- psychological factors such as his/her goals, education level, cultural back ground, work experience, etc.

As the above authors explained several factors motivate people to start business enterprises. To mention some: education, occupational experience, desire to innovate, and assistance from financial institutions, desire to be free and independent and family background.

Diana (2005) in her paper identified that human motivation could greatly influence the entrepreneurial process. In her arguments, she explicitly assumed that all human action is the result of motivational factors. She also assumes that entrepreneurship is not solely the result of human action; external factors also play a role (e.g., the status of the economy, the availability of venture capital, the actions of competitors, and government actions on the economy).

## 2.5     Entrepreneurial Skills Required For Business Start-Ups

The Earnest &Young Entrepreneurship Survey as explained in Diana (2005) summed-up the necessary characteristics of an entrepreneur. These include the entrepreneur‟s ability to recognize and take advantages of opportunities, his/her resourcefulness, creativity, independent thinking, risk taking and hardworking abilities, optimistic nature, innovativeness, visionary capabilities  and leadership qualities.

Moreover, Gibb (2007) explained that entrepreneurial attributes such as creativity, opportunity seeking, initiative taking, motivation, achievement orientation, autonomous behavior, need for challenge and willingness to learn from failures are required for successful business start-ups.

Therefore, in order to equip graduates with these entrepreneurial skills, the trainees should be encouraged to make an in-depth study of the reality of the business atmosphere, looking for symptoms (changes, improper situations, chaos, etc.), which could mean opportunities.

They need to discuss the main sources of opportunity in the area of the future entrepreneurs.  With the help of films and texts, they do exercises where the students are encouraged to identify 21 breaks in paradigms of the past, and to project breaks in paradigms in the future, in their own field. The testimonies and interviews are also sources of training in the process of the analysis of opportunity (Zimmer, 2005).

## 2.6     Preparing Business Plan

A business plan is a very important strategic tool for entrepreneurs. A good business plan not only helps entrepreneurs to focus on the specific steps necessary for there to make business ideas succeed, but it also helps them to achieve both their short-term and long-term objectives. The business plan is defined as a formal, written document which describes the nature of the  business, operations and strategies for the firm (Dollinger, 2003).

According to Burns (1990) the business plan underlies the opportunities of the venture and helps to recognize the strengths and weaknesses while adding structure to the proposal of the entrepreneur. Business plans are considered a highly valued tool to be used in obtaining finance, forming alliances, setting the direction of a company or as a tool to measure the performance of

the firm (Burns & Dewhurst, 1990).

Since planning provides a clear goal and a strategy to obtain it, the success of the business plan as a document, must stress the company´s capabilities, objectives underline the path of action for accomplishing the goals (Burns & Dewhurst, 1990).

A good business plan must recognize strengths and weakness of the venture. Developing a business plan sets one of the most important transitions for the firm. It defines the stage when an idea becomes into a tool for generating value and growth. It is argued by Burns & Dewhurst (1990) that the process of planning the venture needs an extensive understanding of the business and its environment. It also prepares the owner to foresee challenges and serves to steer the business into the desired direction.

Burns & Dewhurst (1990) establishes that every business opportunity contains different characteristics and can be viewed from several different perspectives. Adapting the business plan to the target specific stakeholders and according to the outcome pursued makes it an excellent tool that gives a better understanding of the business. From the investor‟s point of view, a business opportunity must be backed up by a business plan that gives a potential of a high return and an efficient way of exploiting the opportunity presented (Burns & Dewhurst, 1990).

Furthermore Rich &Gumpert (1985) ensures that in order to attract investment an idea must be supported by a complete business plan that reveals the customer‟s interest and the way that the financial projections will be. The quality of the team that is developing the idea is said to be crucial for investors.

Timmons (1999) describes the benefit of having a great team with a good idea rather than a good team with a great idea. Burns & Dewhurst (1990) highlight the principle of keeping the business plan concise; it must contain enough substance in the chapters to be able to cover the subjects effectively while maintaining the reader‟s interest.

Even when Rich &Gumpert (1985) state that a business plan must contain projections with a five year profitability, that will show the investors when they receive the return of their money,
Sahlman (1997) recommends to include no more than a year in financial projections, since a new company faces too much unpredictability to produce a real forecast. What is true is that the financial projections and forecast need to be included; the financial information must present the business model that the venture will hold and how it will become profitable.

Sahlman (1997) provides a framework where the business plan must follow, it includes the critical factors where a venture relies on becoming a success or a failure; these are, The people that are starting the venture as well as the outside parties that provide services or important resources, The opportunity and profile of the business itself and the way it can grow or expand; it is also important to include the economics and the barriers that prevent its success.

Business plan writers must strive to project credibility (Hindle & Mainprize, 2006), so there must be a match between what the entrepreneurship team (resource seekers) needs and what the investors (resource providers) expect based on their criteria. A take it or leave it approach (i.e. financial forecasts set in concrete) by the entrepreneurship team has a high likelihood of failure in terms of securing resources.

## 2.7  Conceptual Framework of the Study

*Independent variables*                                    **Dependent variable**

| Training on |
| Training on creativity |
| Training on business Plan |
| Training on |

Self-
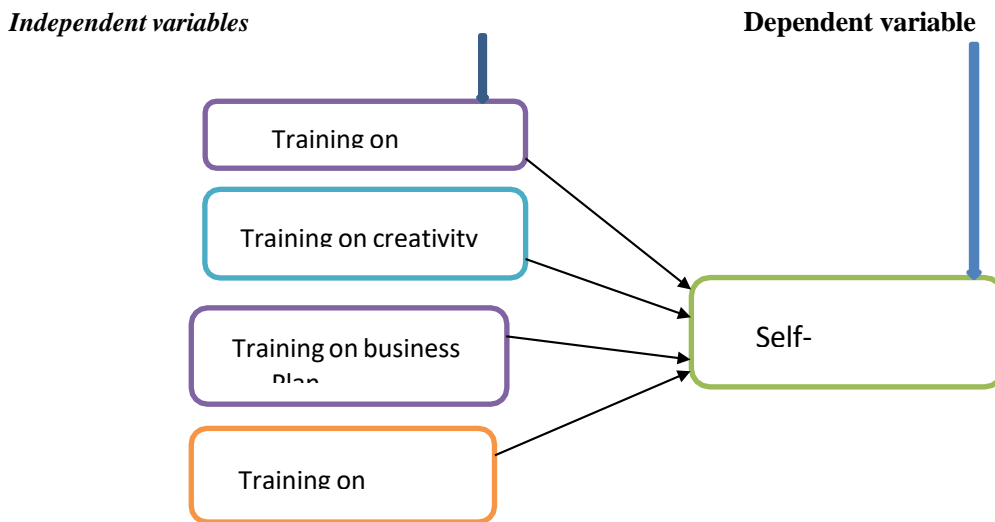
Figure 1: Conceptual Framework of the Study

**Source**: Own designed by the researcher (2021)

**Mathematical model specification of the study**

**Y=α+β1TC+β2TA+β3TBP+β4TM+ε**

Whereas,  *α=constant*

*β1, β2, β3 and β4 were stand coefficient*

*TC,TA,TBP,TM  shows  training on creativity, training on attitude, training on business plan development skill and training on motivation  respectively*

*Y =self –employment*

ε standard error

# CHAPTER THREE

## 3 RESEARCH DESIGN AND METHODOLOGY

### 3.1 Research Design

In this study the explanatory research design was employed with mixed research approach (i.e. quantitative and qualitative). In addition to address the study objectives mixed approaches was used with questionnaires and interview methods.

### 3.2 Sampling Technique and Sample Size Determination Formula

In this study probability sampling technique was employed because it allows the researcher to sets a selection of a few criteria and chooses members of a population randomly. Hence, in this study all TVET graduates of2022 &2022 have an equal opportunity to be a part of the sample with this selection parameter.

To get representative data, solving formula cited by Yemane (1967), considering the level of acceptable margins of error 5% is employed in the study. Regarding this Kothari (2004) suggests that an optimum sample is one which fulfills the requirements of representatives and reliability.

**Table 1: Determination of Sample Graduates and Field of the Study**

| Field Of The Study | Kolfe Industrial College 2022 &2022 gradautes | | |
|---|---|---|---|
| | M | F | T |
| Apparel Fashion Design | 15 | 25 | 40 |
| Business services | 30 | 15 | 45 |
| Furniture Making | 28 | 2 | 30 |
| Mechanics | 32 | 3 | 35 |
| Hardware And Networking Service | 40 | 10 | 50 |
| Total | 145 | 55 | 200 |

**Source**: Field Survey, 2022

Total trainers are (N=200) a total number of samples are required drawn assuming 95% of confidence level and 5% margin of error. Based on this the researcher decided to take the upper
population size limit to get more valid sample size. Then, the total sample size (n) is calculated by using the following formula.

n = the sample size N= the size of the population

e = the margin of error or the maximum error and for this study is 5% with confidence level (95%). By using this formula the sample of the study are.

$$n = \underline{N} = \underline{200} = 133$$
$$1+N\,(e)^2 \qquad 1+\,200(0.05)^2$$

*Whereas N= Total Population, n= sample size and e= level of confidence*

Therefore, the sample size of this study will be 133 considered fairly representative of the target population in the study area, the rest concerned bodies participants will be selected purposely for interview. To compute the sample proportion of each College, the obtained sample will be divided by population and proportionate sample size will be drawn.

### 3.3    Methods of Data Analysis
The data collected from primary sources was documented, organized, summarized and presented using SPSS software, then, analyzed as per research questions. The qualitative data obtained from the study was organized, analyzed and interpreted and supplemented to quantitative data. To avoid redundancy while narrating respondents" answers, common responses were summarized in tables, and then, taken as support to or against quantitative data.

The quantitative data obtained from questionnaires were edited, categorized and tabulated made ready for analysis. After this, the data was analyzed and interpreted using statistical tools like percentage, mean and inferential analyses methods, Anova Test, correlation and regression. The qualitative data was organized into meaningful theme and transcribed to triangulate and crosscheck data gathered using other tools. Finally, the major findings of the study were reported and feasible recommendations were forwarded.

As this study required the participation of human respondents, specifically human resource
professionals, and certain ethical issues were addressed. The consideration of these ethical issues is necessary for the purpose of ensuring the privacy as well as the safety of the participants. Among the significant ethical issues that were considered in the research process include consent and confidentiality.

In order to secure the consent of the selected participants, the researcher communicated all important details of the study, including its aim and purpose. By explaining these important details, the respondents" were able to understand the importance of their role in the completion of the research. The respondents were also advised that they could withdraw from the study even during the process. With this, the participants were not being forced to participate in the research. The confidentiality of the participants is also ensured by not disclosing

their names or personal information in the research. Only relevant details that helped in answering the research questions were included.

# CHAPTER FOUR

## 4 DATA PRESENTATION AND ANALYSIS

### 4.1 Introduction

In this section, the overall effects of entrepreneurship training on self-employment in the case Kolfe Industrial College was presented. This data analysis and interpretation part is composed of different information that was gathered through primary and secondary data collection methods. The primary data was collected using self-administered questionnaire, and in depth interview. About 133 graduate trainees responded to self-administered questionnaire. In addition, face to face interviews with 5 training coordinators, 5 department heads and other 18 workers, totally 28 employees having ample experiences and knowledge of the issue under study was conducted. Out of them, fifteen pre-thought interviews with the top management, the researcher was lucky enough to undertake all. Out of the 133 questionnaires distributed, 133 were collected back resulting in 100% response rate.

### 4.2 Demographic background information of respondents

The first analysis of data involves profiling the background characteristics of the respondents drawn from the sampled TVET Colleges. In this section, based on the response obtained from the respondents, demographic characteristics of the study group were examined in terms of sex, age, and educational background, level of education and length of training.

**Table 2:- Frequency and Percentage distributions of demographic characteristics of respondents**

| ITEMS | | Frequency | Percent |
|---|---|---|---|
| GENDER | | | |
| Male | | 89 | 66.9 |
| Female | | 44 | 33.1 |
| Age | 18-25 | 96 | 72.2 |
| | 26-30 | 32 | 24.1 |
| | 31 -35 Years | 4 | 3.0 |
| | 36 and above years | 1 | .8 |
| | Marital Status | | |
| Mar | Single | 105 | 75.9 |
| | Married | 26 | 19.5 |
| | Divorced | 2 | 4.5 |
| | Field Of Study | | |
| | Mechanics | 28 | 21.05 |

| | | | |
|---|---|---|---|
| | Garment | 25 | 18.79 |
| | Furniture | 34 | 25 |
| | Hardware And Networking | 24 | 25.56 |
| | Business services | 22 | 16.54 |

In this study, about 89(66.9%) males and 44(33.1%) female candidate graduates were participated during collection of quantitative data.  This indicates the clear majority of respondents and candidate graduates were male in gender.

Regarding age of respondents 96(72.2%) was in between 18-25 years old. While the rest 32(24.1%) were in between 26-30 years old. About 4(27.9 %) were in between 31-35 years old. Only 1(0.8 %) of the employees were in between 36 and above years old. As clearly, indicated that majority of  graduates in selected TVET College were young, energetic and matured enough for proper filling of questionnaires distributed.

As can be seen from the above table 3, among 133 filling the questionnaires, 105(75.9%) were single, 26(19.5%) were married and the remaining 2(4.5%) were divorced as far as marital status graduate trainees was concerned.

As indicated in the above table 2, 34(25%) trainees were from furniture department"s, 28(21.5%) of them were from mechanics, 25(18.70%) were from hard and network, and the rest 22(16.54%) were from business service department.

In the above table 6, the training duration of graduate trainees was elaborated as that majority 41(30.30%) of them were stayed for two years, 36(27.06%) of them stayed for 4 years, the remaining 29(21.80%) and 27(20.3%) were stayed in between 3 years and 1 years respectively. This indicated that the respondents were enough experienced and have ample knowledge regarding the training intervention on self-employment

## 4.3 Descriptive Results of Main Variables

### 4.3.1 Entrepreneurship training on attitude
**Table 3:- training on attitude**

| S.No | Variables | Scale | Frequency |
|------|-----------|-------|-----------|
| 1 | I have a sound technical knowledge to start a business | Strongly disagree | 20 |
| | | Disagree | 42 |
| | | Indifferent | 16 |
| | | agree | 45 |
| | | strongly agree | 10 |
| 2 | Having entrepreneurship training makes me job creator | Strongly disagree | 45 |
| | | Disagree | 62 |
| | | Indifferent | 11 |
| | | agree | 8 |
| | | strongly agree | 7 |
| 3 | The training help me to develop my confidence on self-employment | Strongly disagree | 45 |
| | | Disagree | 62 |
| | | Indifferent | 11 |
| | | agree | 8 |
| | | strongly agree | 7 |
| 4 | Entrepreneurship training connect my life with the world of work | Strongly disagree | 43 |
| | | Disagree | 43 |
| | | Indifferent | 13 |
| | | agree | 25 |
| | | strongly agree | 9 |
| 5 | Entrepreneurship can be considered as career option in todays globalized world | Strongly disagree | 31 |
| | | Disagree | 46 |
| | | Indifferent | 13 |
| | | agree | 40 |
| | | strongly agree | 3 |
| 6 | The training developed my business mind set | Strongly disagree | 42 |
| | | disagree | 29 |
| | | Indifferent | 12 |
| | | agree | 40 |

*SD=Standard Deviation), Intervals***: (1.00-1.49) = strongly disagree; (1.50-2.49) = disagree; (2.50-3.49) = indifferent (3.50 - 4.49) = agree; (4.50-5.00) = strongly agree**

Source: Own SPSS Result 2022

| | | strongly agree | 10 | 7.5 | | |
|---|---|---|---|---|---|---|
| | Entrepreneursh ip training assisted me in opportunity identification | Strongly disagree | 20 | 15.0 | 2.87 | 1.2 4 |
| | | disagree | 42 | 31.6 | | |
| | | Indiffere nt | 16 | 12.0 | | |
| | | agree | 45 | 33.8 | | |
| | | strongly agree | 10 | 7.5 | | |
| | Lack of finance is one of the main reason why many graduates don''t start business firm | disagree | 19 | 14.3 | 3.72 | .78 |
| | | Indiffere nt | 7 | 5.3 | | |
| | | agree | 99 | 74.4 | | |
| | | strongly agree | 8 | 6.0 | | |
| | | disagree | 19 | 14.3 | | |
| | Venturing into | disagree | 19 | 14.3 | 3.75 | .83 6 |
| | | Indifferent | 9 | 6.8 | | |
| | | agree | 90 | 67.7 | | |
| | | strongly agree | 15 | 11.3 | | |
| **Training on attitude** | | | | | 2.65 | 1.12 |

The above table 3 above contains a range of behavioral skills, sometimes referred to as soft skills, entrepreneurial skills, or personality traits to the effects of entrepreneurship training on self-employment of candidate graduates.

The literature argued that the entrepreneurship training for the person aim at developing entrepreneurial traits and behavioral skills. These behavioral skills are likely most malleable among youth (Almlund, 2011).

However, as indicated in the above table 6, the mean values of each of the items with respect the effects of entrepreneurship training on attitudinal changes of graduate trainees were calculated between 1.93 and 3.75 of standard deviations that range between 1.07 and 0.83. Among the listed variables, the lowest mean value and disagreement is registered that graduates were not equipped with sound technical knowledge to start their own business (M=1.93, SD=1.07). In the same table, the graduates believes that the entrepreneurship training provided did not make them job creator (M=2.02, SD=1.06).The usefulness of entrepreneurship training in developing the confidence of graduate trainees to become self-employed and connecting their future with ever- changing market of world were rated low with mean of 2.12 (SD=1.22) and 2.35 (SD=1.29) in ascending order respectively. This revealed that the graduate trainees have relatively less faith in their future life to be job creators as per training provided.

Furthermore, during qualitative interviews, the key informants confirmed that;

*One of the main modules of entrepreneurship was to change trainees' behavioral skills to contribute to "turn them into entrepreneurs." However, the program has no visible positive effects a range of behavioral skills often associated with entrepreneurship.*

**Moreover, the focal group discussion with core and experienced graduate trainees stressed that;**

*Entrepreneur training is parts of training and criteria for completion of major training rather than having importance in their future work life. Thus, they sated that it is just normal training. Rather than training working place and initial capital as the main things for creating job rather than training. More they depicted that the absence of training in their past life was makes them failed in so many activities and also they are losing their time in seeking government job for long period of time. So having training entrepreneur skills in early stage of graduates brings to the ability to create business activities. This become open the chance to employ for another person's. In top of this having training entrepreneur skills reduce government job seekers and become a person job creators rather than job seekers.*

On the contrary, the remaining graduates remained indifferent with their understanding of the entrepreneurship training as career options in todays globalized world, mind setter, and its importance as job opportunity identification, with relatively higher mean values of 2.53(SD=1.20) and 2.60 (SD=1.39),2.87(SD=1.24) which lied in interval of 2.50 to 3.49 in ascending order respectively. Overall, the results confirm that the effects of entrepreneurship on behavioral skills graduates towards self-employability was less sensed and rated. Therefore, the preference parameters appear stable and unaffected by the training intervention.

**4.3.2    Entrepreneurship Training on creativity skills**

**Table 4: training on creativity skills**

| S.No | Variables | Scale | Frequency | Percentage |
|------|-----------|-------|-----------|------------|
| 1 | The ability to manage money in business can affect negatively your capital | Strongly disagree | 34 | 25.6 |
| | | Disagree | 73 | 54.9 |
| | | Indifferent | 12 | 9.0 |
| | | Agree | 10 | 7.5 |
| | | strongly agree | 4 | 3.0 |
| 2 | Knowing business strategy can help you in taking calculated risk | Disagree | 27 | 20.3 |
| | | Indifferent | 9 | 6.8 |
| | | Agree | 90 | 67.7 |
| | | strongly agree | 7 | 5.3 |
| 3 | Strategic thinking can help you attentively lookingfor opportunities for personal and business growth | Strongly disagree | 29 | 21.8 |
| | | Disagree | 63 | 47.4 |
| | | Indifferent | 11 | 8.3 |
| | | Agree | 28 | 21.1 |
| | | strongly agree | 2 | 1.5 |
| 4 | Effective communication can affect negatively your business | Strongly disagree | 4 | 3.0 |
| | | Disagree | 26 | 19.5 |
| | | Indifferent | 9 | 6.8 |
| | | Agree | 87 | 65.4 |
| | | strongly agree | 7 | 5.3 |
| 5 | The creativity makes your product more competitor on the market | Disagree | 13 | 9.8 |
| | | Indifferent | 10 | 7.5 |
| | | Agree | 101 | 75.9 |
| | | strongly agree | 9 | 6.8 |
| | | Indifferent | 10 | 7.5 |
| training on creativity skills | | | | |

**Notice: (M= Mean, SD=Standard Deviation), Intervals: (1.00-1.49) = strongly disagree; (1.50-2.49) = disagree; (2.50-3.49) = indifferent (3.50 - 4.49) = agree; (4.50-5.00) = strongly agree**

*Source: Own SPSS Result2022*

In the above table 4, above contains a range creativity (to be entrepreneur) skills, sometimes referred to as technical and soft skills. The mean values of range of creativity roles of entrepreneurship training on graduate trainees were calculated between 2.00 and 3.79 with standard deviations that range between 0.82 and 0.70.

Custer (2005), argued that entrepreneurship programs enhance graduates" entrepreneurial skills, and encourage them to create new businesses. However, among the listed variables, the lowest mean value and disagreement is registered that graduates were not equipped well with creativity skills. This is because, they believe that managing money and knowing business strategy in business can affect negatively their capital and does not help them to calculate possible risks with (M=1.93, SD=1.07) and (M=2.02, SD=1.06) respectively in ascending order. However, effective management of money in a business is one of the factors lead to success in business world.

The graduates were also asked their level of understanding on that strategic thinking can help them attentively looking for opportunities for personal and business growth. With this respect, the graduate trainees understanding level of strategic thinking calculated with the mean value of (M= 2.33, SD=1.08) which lies in interval of disagreement. This revealed that the graduate trainees have relatively less understanding of entrepreneurship training provided.

On the contrary the graduates were confused and remain indifferent to determine whether effective communication affects their business negatively or not and the effects of creativity on their product to become competitors on the market with (M=2.57, SD=1.03) and (M=2.79, SD=1.01) in order of ascending respectively.

The results revealed that the entrepreneurship training intervention on creativity skills of candidate graduates towards self-employability was ended without any positive effects. Therefore, the range of creativity skills and parameters appear stable and unaffected by the entrepreneurship training intervention. The result was against the idea of Desai (2001) stated that educational process needs to ensure deep understanding, which enables the individual to be open to opportunities, be able to assess risks, be willing to learn from errors, and be motivated to start business.

**One of the training coordinator confirms that;**

*Trainers need to use a variety of instructional strategies and should not focus on one type of training and learning methodology in order to meet the objectives of each topic or unit in the training of entrepreneurship. It is also important that the method chosen works toward the achievement of the learning objective. Like normal training, entrepreneurship training needs to be supported with technical and practical works rather than theoretical ones.*

| S.No | Variables | Scale | Frequency | Percentage | M | SD |
|---|---|---|---|---|---|---|
| 1 | Exercising to preparing business plan after graduating help you in self-employed | Strongly disagree | 60 | 45.1 | 1.72 | .82 |
| | | Disagree | 59 | 44.4 | | |
| | | Indifferent | 5 | 3.8 | | |
| | | agree | 9 | 6.8 | | |
| | | Strongly agree | 0 | 0 | | |
| 2 | Preparing business plan can assist me in to get fund from lenders or investors | Strongly disagree | 60 | 45.1 | 2.01 | 1.16 |
| | | Disagree | 39 | 29.3 | | |
| | | Indifferent | 7 | 5.3 | | |
| | | agree | 26 | 19.5 | | |
| | | strongly agree | 1 | .8 | | |
| 3 | Business plan can"t help you in forecasting future problems and make any necessary changes up front to avoid them | Strongly disagree | 23 | 17.3 | 2.87 | 1.26 |
| | | Disagree | 39 | 29.3 | | |
| | | Indifferent | 11 | 8.3 | | |
| | | agree | 52 | 39.1 | | |
| | | strongly agree | 8 | 6.0 | | |
| 4 | Knowing about business plan can help me in judging the success of my business | Strongly disagree | 28 | 21.1 | 2.95 | 1.31 |
| | | Disagree | 26 | 19.5 | | |
| | | Indifferent | 10 | 7.5 | | |
| | | agree | 62 | 46.6 | | |
| | | strongly agree | 7 | 5.3 | | |
| training  business plan development skills | | | | | *2.38* | *1.13* |

**Notice***: (M= Mean, SD=Standard Deviation), Intervals***: (1.00-1.49) = strongly disagree; (1.50-2.49) = disagree; (2.50-3.49) = indifferent (3.50 - 4.49) = agree; (4.50-5.00) = strongly agree**
*Source: Own SPSS Result2022*

Entrepreneurship training intervention produced strong effects on participants" self-reported business skills. A major objective of the entrepreneurship track was to equip students with technical knowledge on how to produce a business plan and practical experience in developing a project.  Considering this, in the above table 5, the candidate graduate trainees were asked their business plan development skills after attending entrepreneurship training. Accordingly, the mean values of each four items were calculated between 1.72 and 3.14 with standard deviations of 0.82 and 1.20 respectively. The lowest mean value and disagreement is recorded in that the graduates were not perceived the use of business plan in self-employed and assist them to get fund from lenders or investors with (M=1.72, SD=0.82) and (M=2.01, SD=1.16) in ascending order respectively.

With respect to the use of business plan in forecasting  future problems and make any necessary changes up front to avoid them, its importance in judging  the success of my business, the graduates remain indifferent with (M=2.87 SD=1.26) and (M=2.95, SD=1.31) in ascending order

Adapting the business plan to the target specific stakeholders and according to the outcome pursued makes it an excellent tool that gives a better understanding of the business. However, the study revealed that the candidate graduates trainees assigned to the entrepreneurship training were not fully acquired the technical knowledge that was taught and then, their business development skill was unaffected.

| S.No | Items | Scale | Frequency | Percentage | M | SD |
|------|-------|-------|-----------|------------|---|-----|
| 1 | Doing something great/new can create employment | Strongly disagree | 91 | 68.4 | 1.4 | .80 |
| | | Disagree | 32 | 24.1 | | |
| | | Indifferent | 2 | 1.5 | | |
| | | agree | 8 | 6.0 | | |
| | | Strongly agree | 0 | 0 | | |
| 2 | Training on entrepreneurship motivates me in self-employment | Strongly disagree | 70 | 52.6 | 1.74 | .98 |
| | | Disagree | 42 | 31.6 | | |
| | | Indifferent | 6 | 4.5 | | |
| | | agree | 15 | 11.3 | | |
| | | Strongly agree | 0 | 0 | | |
| 3 | Having Creative mind can help me in Making quality/ unique product on the market | Strongly disagree | 48 | 36.1 | 2.17 | 1.2 |
| | | Disagree | 51 | 38.3 | | |
| | | Indifferent | 7 | 5.3 | | |
| | | agree | 17 | 12.8 | | |
| | | strongly agree | 10 | 7.5 | | |
| | | Strongly agree | 0 | 0 | | |
| 4 | Entrepreneurial motivation graduate unemployment | Strongly disagree | 52 | 39.1 | 2.25 | 1.36 |
| | | Disagree | 40 | 30.1 | | |
| | | Indifferent | 9 | 6.8 | | |
| | | agree | 19 | 14.3 | | |
| | | Strongly agree | 0 | 0 | | |
| 5 | Having Starting capital get me the chance to starting business | Strongly disagree | 10 | 7.5 | 3.7 | 1.24 |
| | | Disagree | 17 | 12.8 | | |
| | | Indifferent | 9 | 6.8 | | |
| | | agree | 54 | 40.6 | | |
| | | strongly agree | 43 | 32.3 | | |
| ***Training on motivation*** | | | | | ***1.90*** | ***1.08*** |

**4.3.4    Entrepreneurship Training on motivation**

**Table 6: training on motivation**

*Notice: (M= Mean, SD=Standard Deviation), Intervals: (1.00-1.49) = strongly disagree; (1.50-2.49) = disagree; (2.50-3.49) = indifferent (3.50 - 4.49) = agree; (4.50-5.00) = strongly agree*

**Source:  Field Survey, 2022**

In the above table 6, the graduate trainees were asked the effects of entrepreneurship training in motivating the graduates to be self-employed. Thus, the mean values of each item were calculated between 1.45 and 3.70 with standard deviations of 0.80 and 1.24 respectively.

Accordingly, the importance of creating new things in creating employment, the role of entrepreneurship training in motivating them to be in self-employed (M=1.74, SD=0.98), the  uses of equipped with creative mind in making quality/unique product on the market rated low  by the graduates assigned for training with (M=1.45, SD=0.80), (M=1.45, SD=0.80), and (M=2.17, SD=1.20) in ascending order respectively. They graduates also agreed with the role of entrepreneurial motivation in reducing graduate unemployment problem with (M=2.25, SD=1.36).

On the contrary, the candidate graduates perceive that having Starting capital help them and give the chance to starting business with (M=3.70, SD=1.24). The results indicated that the willingness and ability of an individual to seek out investment opportunities in an environment and be able to establish and run business enterprise successfully based on the knowledge and skills acquired was unaffected by training intervention.

**Supporting this idea, the focal group discussion stated briefly that;**

*Entrepreneurial motivation training transforming them from ordinary individual to power full persons and also motivates them in their business in order to achieve well and satisfy their customer. However, having capital is everything. Training without money is nothing. Because they believe the only way to self-employment is not having creativity mind but getting enough money.*

## 4.4 Grand mean all independent variables

**Table 7: grand mean**

| Descriptive Statistics | | | |
|---|---|---|---|
| VARIABLES | Mean | SD | N |
| Attitudes | 2.68 | .92 | 133 |
| Motivation | 2.29 | .64 | 133 |
| Business development skills | 2.22 | .63 | 133 |
| Creativity skills | 2.50 | .61 | 133 |

**From the grand mean of all independent variables;**
Business development skills of graduates towards self-employment were rated with weighted mean 2.22 and standard deviation 0.63 verifies low result.
Similarly, motivation as independent variable with weighted mean 2.29 and standard deviation
0.64 confirms medium scores but higher than the computed value of attitudes of graduates in self-employment opportunity.

Despite of this, creativity skills of graduates is the independent variable whose weighted mean
2.50 and standard deviation 0.61 revealed that low effects of on self-employment of graduates, but relatively high than the former two independent variables. Lastly, attitudes of TVET graduates towards self-employment weighted with mean of 2.68 and standard deviation 0.62 respectively in order of ascending

Generally, one can infer that the influence of BDS training and Motivation training on creating sense self-employment in TVET graduates was low as compared to creativity and attitudes of trainees in ascending order.

This indicated that BDS training and Motivation training has low effects on motivating graduates towards self-employment and whereas, the effects the rest variables is relatively better in selected TVET college.

## 4.5 Inferential statistics

### 4.5.1 Correlation Result of Study

Correlation coefficient of Pearson was applied to study the relation between constructs. The results are listed in the following table 9. According to Ratner (2014) correlation Values between 0 and 0.3 (0 and -0.3) indicate a weak positive (negative) linear relationship via a shaky linear rule, Values between 0.3 and 0.7 (-0.3 and -0.7) indicate a moderate positive (negative) linear relationship and values between 0.7 and 1.0 (-0.7 and -1.0) indicate a strong positive (negative) linear relationship via a firm linear rule. Therefore, in this study all correlation results are interpreted in light of this rule. The following table 9, shows the relationship among variable

**Table 8: correlation**

| CORRELATIONS | | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| ATTITUDES | Pearson Correlation | 1 | | | | |
| | Sig. (2-tailed) | | | | | |
| MOTIVATION | Pearson Correlation | -.013 | 1 | | | |
| | Sig. (2-tailed) | .816 | | | | |
| BDS | Pearson Correlation | -.101 | -.017 | 1 | | |
| | Sig. (2-tailed) | .072 | .761 | | | |
| CREATIVITY SKILLS | Pearson Correlation | .064 | .001 | .049 | 1 | |
| | Sig. (2-tailed) | .254 | .986 | .380 | | |
| a. List wise N=133 | | | | | | |

**From the analysis**;

It is noted that training on attitudes of the respondents of graduates had moderate but negative correlation with self-employment(r = -0.13, p=0.824>0.05) and so it is likely that this variable would not best predict self-employment opportunity. The result also indicated motivation had insignificant, positive linear correlation with self-employment (r=0.04, p=0.008<0.05). The correlation between business development skills training and self-employment was weak, linear correlation and insignificant(r=0.024, p=0.66), the correlation between creativity skills and self- employment was strong, negative linear and in significant(r=-0.039, p=0.485).
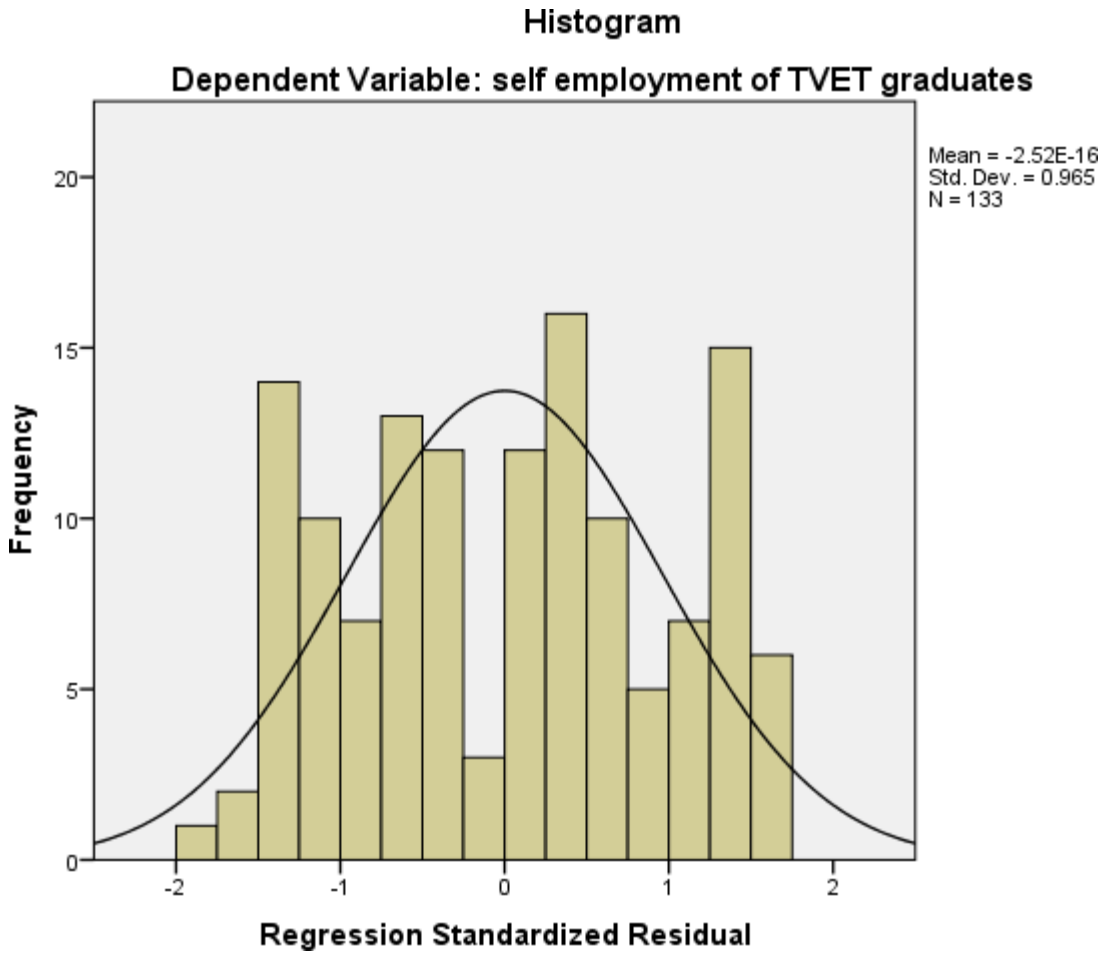
98

**Table10.** **Multcollinearity test**

| Model | | | Collinearity Statistics | |
|---|---|---|---|---|
| | | | Tolerance | VIF |
| 1 | | Self-employment(constant) | | |
| | | Attitude of graduates | .876 | 1.14 |
| | | Creativity skills | .887 | 1.12 |
| | | Business development skills | .804 | 1.24 |
| | | motivation of TVET graduates | .654 | 1.52 |

**Source: Own Survey Data (2021)**

In order to ensure the appropriateness of the outputs from the regression analysis; first of all, three assumptions of multiple regressions should be checked. The other value given is the VIF (Variance inflation factor), which is just the inverse of the Tolerance value (1 divided by Tolerance). According to Pallant (2005), the VIF values above 1 and Tolerance value below 1 indicates multi co linearity. Therefore, both tolerance values (>1) and the VIF values (<1) are all acceptable VIF values above 10 would be a concern here, indicating multi co linearity.

Thus, from the above table 10, one can infer that the tolerance values are 0.876 for attitude, 0.887 for creativity skills, .894 for business development skills, and 0.654 for motivation. Therefore, linearity Statistics indicated that there was no multicollinearity because tolerance of all variables was less than 1. In addition, the VIF values were 1.14 for attitude, 1.12 for creativity skills, 1.24 for business development skills and 1.52 for motivation. The result indicated that there is existence of no serious association between the variables, and all the possible discrete variables were included in the model.

## Histogram

### Dependent Variable: self employment of TVET graduates



Mean = -2.52E-16
Std. Dev. = 0.965
N = 133
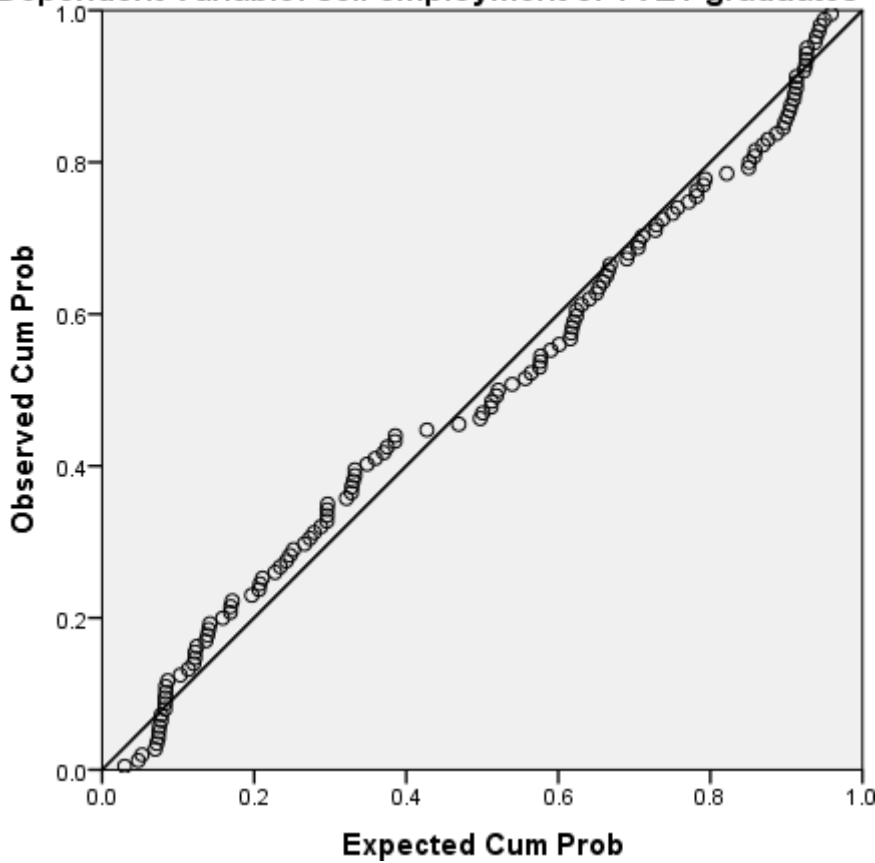
**Source: Own Survey Data (2022)**

**Figure 2: Normality Test**
The above figure, it is indicated that residuals are normally distributed. Since a histogram of sample data produce a perfectly smooth normal curve. As long as the data is approximately normally distributed, with a peak in the middle and fairly symmetrical, therefore, the assumption of normality has been met.
**Linearity test**

## Normal P-P Plot of Regression Standardized Residual
### Dependent Variable: self employment of TVET graduates



**Source: Own Survey Data (2022)**

In the third case it is checked the assumption of linearity. Accordingly the plot below is a check on linearity; the plotted points should follow the straight line. Serious departures would suggest that linearity assumption is not met. Here we have no major cause for concern, which shows that no violation of linearity, so the assumption is met.

## 4.5.2 Multiple Regression Analysis Result

After all the assumptions were complied with, the multiple regressions analysis was carried out. Regression analysis shows how dependent variable is influenced with independent variables. The following section presents the outcomes of regression analysis. A multiple regression analysis was conducted to generate model of fitness, analysis of the variance and regression coefficients. The results of the multiple regressions are shown in table below

**Table 11: Model Summary**

| Model Summary | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Change Statistics | | | | | |
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | R Square Change | F Change | df1 | df2 | Sig. F Change | Durbin-Watson |
| 1 | .896a | .803 | .800 | .14725 | .803 | 256.161 | 5 | 314 | .000 | .891 |
| A. Predictors: (Constant): Attitudes, Business Development Skills, Creativity Skills And Motivation | | | | | | | | | | |
| B. Dependent Variable: Perception On Self-Employment | | | | | | | | | | |

As shown in the above table the overall bundle of the independent variables explains 80.3 % (R2
= 0.803) of the dependent variable (self-employment). This suggests that the model or the predictor variables have accounted for 80.3 % of the variance in the criterion variable (self- employment), while the remaining 19.7 % is determined by other unaccounted factors in this study.  The reason R square is high as it indicated in the analysis from table 4.15 bundle of the independent variables were given attention. This implies that all variables were playing a role in self-employment in selected TVET College.

### 4.5.3 Overall Multiple Regression
#### Table 9: Overall Regression

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T |
|---|---|---|---|---|---|
| | | B | Std. Error | Beta | |
| 1 | (Constant) | .025 | .072 | | .350 |
| | Right attitudes | .187 | .009 | .526 | 20.816 |
| | Creativity Skills | .201 | .013 | .394 | 15.617 |
| | BDS | .204 | .013 | .395 | 15.645 |
| | Motivation | .218 | .014 | .405 | 16.085 |
| a. Dependent Variable: Self Employment | | | | | |

From the above regression table; The higher the beta value, the strongest its contribution becomes.

103

Accordingly, attitudes training (Beta=.526) with p=.000) makes the strongest contribution to explaining the dependent variable in which the results revealed that, a one-unit positive change in attitude training would lead to a 0.526 unit positive changes on self-employment after graduation.

Further, motivation (Beta=.405 with p<0.05), business development skills training (Beta=.395 with p=000) and creativity skills training (Beta=.394 with p=000) make the relative low contributions to explaining the dependent variable as compared to attitudes.

Thus, a one-unit positive change motivation training, BDS skills training and creativity skills training would lead to a 0.405, 0.395 and .394 unit positive changes on self-employment of TVET graduates respectively.

**In general,** as table above clearly shows, among the four factors, multiple linear regressions (Standardized Beta coefficients) analysis revealed that, attitudes training is the most significant
factor affects effectiveness of self-employment followed by creativity skills training, business development skills training respectively

**GENERALLY, THE REGRESSION MODEL IS;**
*$Y = 0.025 + 0.187 X1 + 0.201 X_2 + 0.204 X_3 + 0.218 X_4 + 171x5 + e$*

These results show that a change in four independent variables of the study will definitely lead to a positive change in self-employment of TVET graduates.

# \CHAPTER FIVE

## 5. Summary of Major Findings, Conclusions and Recommendations

### 5.1    Introduction

The main purpose of this study was to assess the effects of entrepreneurship training on self- employment of TVET graduate in case of Kolfe Industrial College, as representative of the rest. The descriptive survey method was employed as a method of the study. The sources of data were candidate graduates assigned for training, trainers, training experts and TVET leaders.

 To seek answers to the research questions, the data were gathered through questionnaires and interviews supporting with related annual reports and documents. The questionnaires were filled out and returned by 133 graduates. Interview session was conducted with, totally 28 respondents who have enough experienced and ample knowledge regarding the issues. The data obtained through the above instruments were analyzed quantitatively using frequency and percentages, mean and standard deviation using SPSS. Finally, based on the analysis of the data, the following major findings, conclusions and recommendations were obtained from the study as research questions.

### 5.2    Summary of Major Findings

The effects of entrepreneurship on attitude (M=2.68, SDEV=10.92) and business plan development skills (M= 2.22, SDEV= 0.63) was better as compared to others, like motivation (m=2.29, SDEV=0.64) and creativity skills (M=2.50, SDEV=0.61). This indicated that entrepreneurship training has low effects on BDS skills, motivation, attitudes and creativity skills of graduates towards self-employment in order of ascending.

As far as motivation was concerned, the study indicated that willingness and ability of an individual to seek out investment opportunities in an environment and be able to establish and run business enterprise successfully based on the knowledge and skills acquired was less affected by training intervention. Entrepreneurial motivation training transforming aim at transforming from ordinary individual to power full persons and also motivates them in their business in order to achieve well and satisfy their customer. However, the graduate still believes that training without money is nothing. Because they believe the only way to self-

employment is not having creativity mind but getting enough money.

- Regarding creativity skills, graduates were not equipped well with creativity skills. This is because, they believe that managing money and knowing business strategy in business can affect negatively their capital and does not help them to calculate possible risks. However, effective management of money in a business is one of the factors lead to success in business world. This result was against Custer (2005) which stated that entrepreneurship programs should enhance graduates" entrepreneurial skills, and encourage them to create new businesses. Therefore, the range of creativity skills and parameters appear stable and unaffected by the entrepreneurship training intervention. The result was also against the idea of Desai (2001) stated that educational process needs to ensure deep understanding, which enables the individual to be open to opportunities, be able to assess risks, be willing to learn from errors, and be motivated to start business.

- Entrepreneurship training intervention produced strong effects on participants" self-reported business skills. A major objective of the entrepreneurship track was to equip students with technical knowledge on how to produce a business plan and practical experience in developing a project. However, the result revealed that, the graduates did not perceive the use of business plan in self-employed and it assistance to get fund from lenders or investors.

- Adapting the business plan to the target specific stakeholders and according to the outcome pursued makes it an excellent tool that gives a better understanding of the business. However, the study revealed that the candidate graduates trainees assigned to the entrepreneurship training were not fully acquired the technical knowledge that was taught and then, their business development skill was unaffected.

- The graduate trainees were offered entrepreneurship training to be graduated. The training was not practical in approach. No any business plan preparation competition between trainees. The business plan development skills of trainees were not measured theoretically or practically like other major courses. The training methodology itself was full of problems in effectiveness of the training

- With respect to the importance of creating new things in creating employment, the role of entrepreneurship training in motivating them to be self-employed, the uses of equipped with creative mind in making quality/unique product on the market rated low by the graduates assigned for training. On the contrary, the candidate graduates perceived that having starting

  capital help them and give the chance to starting business rather than creativity mind. The results indicated that the willingness and ability of an individual to seek out investment opportunities in an environment and be able to establish and run business enterprise successfully based on the knowledge and skills acquired through entrepreneurships training was unaffected by training intervention.

🖶 Gibb (2007) arguing that entrepreneurial attributes are creativity, opportunity seeking, initiative taking, motivation, achievement orientation, autonomous behavior, need for challenge and willingness to learn from failures are required for successful business start-ups. Considering these points, the graduate trainees were asked their future decisions and stands after entrepreneurship training and graduation. The lowest mean value and disagreement is recorded that they did not received positive advice that help them in the employment service, they also disagreed with the idea that having awareness of entrepreneurship is not determinant factors to join the world of work. . In additions, they did not think that they have enough skills and education to be competitive in the current job market, therefore, they have no confidence enough and ready to challenge the situation makes them unemployment after graduation.

🖶 The graduates were afraid of being unemployed on the one hand, but confused and remand indifferent with the comfortably of self-employment over government employment. The results were against Diana (2005) which argued that entrepreneur"s skills are the ability to recognize and take advantages of opportunities, his/her resourcefulness, creativity, independent thinking, risk taking and hardworking abilities, optimistic nature, innovativeness, visionary capabilities and leadership qualities.

## 5.3    Conclusions

The study conclude that candidate graduates of selected TVET college were not equipped with sound technical knowledge to start their own business, and have low confidence to become self- employed and connecting their future with ever-changing market of world. Instead, they focus on having initial capital as the main things for creating job rather equipped with creative mind. Result also revealed that, the graduates did not perceive the use of business plan in self- employed and it assistance to get fund from lenders or investors. Thus, they were not fully acquired the technical knowledge that was taught and then, their business development skill was unaffected. Furthermore, as far as the graduate trainees future decisions and stands were concerned, they agreed on that having awareness of entrepreneurship is not determinant factors to join the world of work. In additions, they did not think that they have enough, confidence, skills and education to be competitive in the current job market. They were not ready to challenge the situation makes them unemployment after graduation and they were full of fear of being unemployed. Therefore in selected TVET college, the effects of entrepreneur training in creating skills and knowledge to recognize and take advantages of opportunities, having creativity mind, independent thinking, risk taking and hardworking abilities, optimistic nature, innovativeness, visionary capabilities and leadership qualities was remain without meeting its objectives.

Finally, overall regression of study revealed that there was significant relationship between the independent variables since all the p-values were less than 0.05. Thus, a multiple regression found out that the overall independent variables- self-employment model was satisfactory as it is supported by coefficient of determination (also known as the R-square) of 0.803(.803*100%).

This means that all the independent variables contribute to 80.3% of the variations in the dependent self-employment variable.

The study established that there is a strong and positive influence of entrepreneurship training dimensions on self-employment

## 5.4    Recommendations

Based on the findings and conclusions of the study, the researcher would like to forward the following recommendations in the hope that it may help to entrepreneurship training program and to overcome challenges forwarded as per findings.

- The study depicted that graduates were not equipped with sound theoretical and technical knowledge to start their own business and their attitudes towards the usefulness of entrepreneurship training in developing the confidence of graduate trainees to become self-employed and connecting their future with ever-changing market of world was low. The TVET college and other concerned bodies need to give due attention to change the usefulness and importance of business plan in business success.
    - The study also indicated that candidate graduates were not equipped well with creativity skills. Therefore the focus of entrepreneurship programs in the TVET College should enhance graduates" entrepreneurial skills, and encourage them to create new businesses rather training completion criteria. The training instruction and methodology needs to ensure deep understanding, which enables the graduates to be open to opportunities, be able to assess risks,  be willing to learn from errors, and be motivated to start their own business after graduation.The study indicated that, the candidate graduates were assigned for entrepreneurship training. However, the training was not practical in approach. There is also no any business plan preparation competition between trainees. The business plan development skills of trainees were not measured theoretically or practically like other major courses. Therefore, the training methodology of entrepreneurship like other major competences, need to include practical  training link with business world.
- Lastly, the study revealed that candidate graduates perceived that having starting capital help them and give the chance to starting business rather than creativity mind. Therefore the College need to give attention to create graduate that may think out of the box rather than focusing on initial capital as only thing for starting their own business

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# 5.MANAGEMENT ON EMPLOYEES COMMITMENT: THE CASE OF THE SOFT DRINKS INDUSTRY IN ETHIOPIA.

**By:** Getachew Mohammed (Ph.D)[1]

**ABSTRACT**

Workers are a key resource and core strength of any organization and their well-being is very crucial because when their wellbeing is threatened everything become secondary. The purpose of this study is to examine the effects of occupational health and safety on the employees' commitment in the case of the soft drinks industry in Ethiopia. Out of 4,000 target population a sample size of 384 respondents was considered using (Cohen, 1997) sample size formula. The study adopted an explanatory research design and quantitative analysis. The results of the descriptive analysis shows that the level of employee commitment in the in the industry is more than average with a mean value and the status of the occupational health and safety practice is also more than average. Safety procedures and Risk Management (SPRM), Safety and Health Rules (SAHR), First Aid Support and Training (FAST), Occupational Hazard Prevention (OHP) and Organizational Safety Support (OSS) with a mean value of 3.5333, 3.1274, 3.4032, 3.3864 and 3.2667 respectively.The findings of the study correlation analysis using the Statistical Package Socsoftware revealed that there is significant and positive association between Occupational Health and safety and Employee commitment. Further the regression analysis demonstrated the effect of Occupational Health and Safety on Employee commitment.

The study concludes that workers who feel healthy and safe in the performing their duties, develop emotional attachment and have a sense of obligation to their organization and which highly affects their level of commitment. Every organization dream about success, thus, management should pay attention to the overall well-being of their employees to excel their employee's commitment which has many favorable outcomes towards success.

*Key Words: Occupational health, occupational safety, employee commitment*

# 5. THE EFFECT OF OCCUPATIONAL HEALTH AND SAFETY PRACTICE ON EMPLOYEES' COMMITMENT: A COMPARATIVE ANALYSIS IN THE SOFT DRINK COMPANIES ADDIS ABABA, ETHIOPIA

BY: **DR. GETACHEW MUHAMMED SEID**

## 1. Background of the Study

Employees are the prime resource and core strength in any industry. Therefore, Organizations need to pay attention on how to take a good care of their employees and excel their overall well-being (Naseem & scheikh, 2011). Occupational health and Safety is the focusing point to this end; It deals with complete physical, mental and social well-being of workers . This aims to provide physical and psychological services suitable and support for workers; which is closely connected to physiology, psychology, economics, technology, medicine (Leka et,el 2003). Occupational health and safety can be measured in terms of the five dimensions which are: Safety procedures and Risk Management (SPRM), Safety and Health Rules (SAHR), Frist Aid Support and Training (FAST), Occupational Hazard Prevention (OHP) and Organizational Safety Support (OSS).

On the other hand, employee commitment can be defined as the degree to which the employee feels devoted to their organization (Akintayo, 2010). It reflects the extent to which employees identify with the organization and is committed to its goals. Meyer and Allen's (1991) model describes the commitment of employees in terms of affective commitment, normative commitment and continuance commitment and many scholars have agreed on this model. Poor working settings can endanger the health and safety of workers and leads to low psychological & physiological state of employees which creates low capability and commitment, poor performance and productivity. Workers who feel healthy and safe in the performance of their duties, develop emotional attachment and have a sense of obligation to their organization and are most likely committed to the organization. Creating healthy and safe workplace and matching employees and their work environments is one of the most important management issues because the workplace condition affect employees and their commitment and impact the success that every organization looking for.

## 2. Statement of the Problem and Research Gaps

The existence of practicable policies towards to Occupational health and safety management is crucial for companies' success (ILO). As well as for the improvement of employees' loyalty and commitmen.t However, Majority of companies in Ethiopian, don't have such policies; thus, suffering from lack of effective enforcement, monitoring and control system of OHS practice in work places and facing problems in provision of the necessary information, statistical data and reports.

An International Labor Organization (ILO) report indicates that annually, occupational accidents and work-related diseases cause 2 million fatalities, out of which over 350,000 are caused by occupational accidents and close to 1.65 million by work related diseases (ILO, 2020). As a result, approximately 5,500 people die every day due to these causes: occupational accidents kill nearly a 1,000 people every day and work-related diseases provoke the death of approximately 4,500 more individuals. There were also over 313 million non-fatal occupational accidents requiring at least four days of absence from work and occupational accidents provoke injury or ill health for approximately 860,000 people every day. (Jilcha and Kitaw, 2016)

*Research gap*

In Ethiopia, there are limited Empirical literatures on Occupational health and safety management practices, The Companies' Comparative analysis, and its Effect on Employees commitment. Occupational health and safety management and possible impact of it; as an academic field and as an area of research has received little attention. Moreover, most business companies operate in traditional norms, inexistence of specific policies on the issues. Although there are a number of research works on the issues, but they possessed a lot of methodological and technical problems and are outdated.

Therefore, the focal point of this study was therefore to assess the comparative practices of Occupational health and safety management and investigate the cause and effect between Occupational health and safety management practices and Employees' Commitment

## 3. Objectives of the study

The main objective of this study was to analyze the Effect of Occupational Health and Safety Practice on Employee Commitment: - A comparative analysis in the Soft Drink companies- Addis Ababa, Ethiopia

*More specifically, the purposes of this study were to:*

1. To assess the Occupational Health and Safety Practices - in the Soft Drink companies
2. To investigate the extent to which Employees are Committed - in the Soft Drink companies
3. To appraise the Companies Difference in Practicing Occupational Health and Safety Management

4. To analyse the relationship between Occupational Health and Safety Practices and the Employees' Commitment
5. To analysis the effect of Occupational Health and Safety Practices on Employees' Commitment

# 4. The research question

*In order to address the above stated objectives, the study should answer the following major research questions:*

1. *What is the Occupational Health and Safety Practices - in the Soft Drink companies?*
2. *What is the extent of Employees' Commitment - in the Soft Drink companies?*
3. *What is the Companies' distinction in Practicing Occupational Health and Safety Management?*
4. *What is the relationship between Occupational Health and Safety Practices and the Employees' Commitment?*
5. *What is the effect of Occupational Health and Safety Practices on Employees' Commitment?*

## 5. *Scope of the study*

The study focus on the effect of occupational health and safety practices on employees' commitment. One of the focal area is occupational health and safety practices, more specifically; the practicing of safety procedure and risk management, Safety and Health rule, First Aid support and Training, Occupational hazard prevention, and organizational safety Support.

And the other focusing area is employees' commitment; which is indicated by affective commitment, normative commitment, and continual commitment. Moreover, this study is limited to workers at MOHA Soft Drinks Company and Coca-Cola Soft Drinks Company in Addis Ababa

# 6. Conceptual framework and Hypothesis
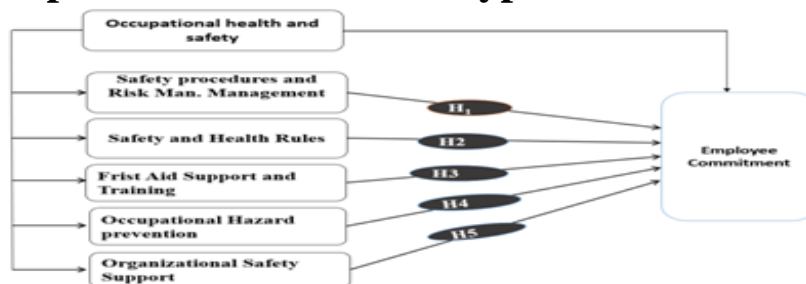


## Hypothesis

$H_1$: The effect of Safety procedures & Risk on Employee commitment is significant and positive.
$H_2$: The effect of Safety and Health Rules on Employee commitment is significant and positive.
$H_3$: The effect of First Aid Support & Training on Employee commitment is significant and positive.
$H_4$: The effect of Occupational Hazard Prevention on Employee commitment is significant &positive.
$H_5$: The effect of Companies Safety Support on Employee commitment is significant and positive.

## 7. Variables of the study

I. Dependent variables- the dependent variable of this study was Employees' Commitment

II. Independent variables: the independent variables were Occupational Health and Safety Practices. More specifically,

❖ Safety procedures & Risk Management Practices
❖ Safety and Health Rules Practices
❖ First Aid Support & Training Practices
❖ Occupational Hazard Prevention Practices
❖ Organizational Safety Support

III. Control variable-Companies' sizes and types

## 8. Research Approach and Research Design

The study has used mixed research approach (quantitative & qualitative). Both Descriptive and Explanatory design have been appropriate design for this study.
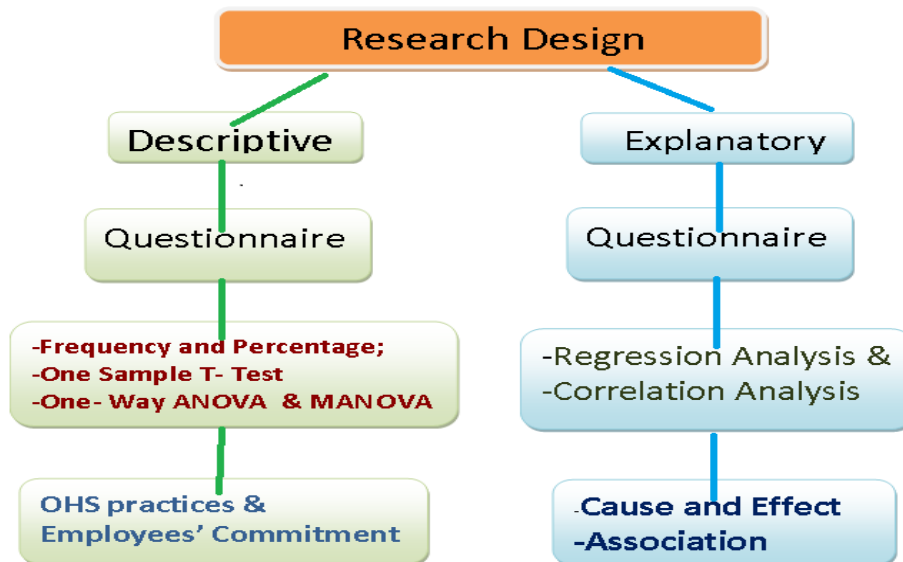


## 9. Population and Sample Design

### Sample design, data requirement and sources

The Soft Drinks Industries in Ethiopia is dominated by East Africa Bottling SC (EABSC) and MOHA Soft Drinks Industry (MOHASDI). The soft drinks industry market is dominated by these two companies. East Africa Bottling S.C is a subsidiary of Coca-Cola Beverages Africa (CCBA) . The study was conducted on these Soft drink Companies in Addis Ababa with purposively selecting the two dominant companies in the industry. For MOHASDI, there are three plants in Addis; Nifas Silk Plant, Teklehaimanot plant, and Summit Plant. And For EABSC, there is one plant located Lideta Sub-city

This study has employed both primary and secondary Sources of data- Primary data were major sources. The target respondents were employees in production and related department. Total population of Operational employees was 478 in MOHA Sift drink Company and 232 in COCA-COLA Soft drink Company. Totally 710
the Sample determination formula administered in this paper was Taro Yamana Formula. Moreover, there were 10% contingency amounts

$$ n = \frac{N}{1+N(e)^2} $$

.

| Respondents | Sample size |
|---|---|
| MOHA Employees | 190 |
| Coca-Cola Employees | 93 |
| Total Respondents | 283 |

In order to draw the sample from the population, this study has employed Proportional Stratified sampling. To take a sample from each stratum, it was done via simple random sampling.

# 10. Data Collection and Data Analysis

## Data collection techniques

In order to address the objective of the study, **Questionnaire** has been the most important method of data collection.

## Data analysis techniques

All data analysis was done independently by using STATA 12 software. So as to assess and conclude on the practices of Occupational Health and Safety management and to describe the extent to which Employees are committed, the study used Descriptive statistics; more specifically, Frequency, Percentage, and One sample T-test. Moreover, to compare their practices and commitment in the identified companies, the study employed one-way ANOVA. Furthermore, In an attempt to analysis the effect of Occupational Health and Safety Practices on Employees' Commitment, this study administered Inferential Statistics /Explanatory/ particularly, regression and Correlation Analysis. The regression Model fit was checked through Linearity Test, Normality Test, Multicolleniarity test, and Hetrocedastic test
The below multiple regression models were used:

115

- **EC= $\beta_0$+ $\beta_1$ OHP + $X_2\beta_2$ SPRM+ $X_3\beta_3$ OSS+ $X_4\beta_4$ FAST+ $X_5\beta_5$ SAHR + e**
Where:
- ✓ EC: Employee commitment
- ✓ $\beta_0$: Constant term
- ✓ $\beta_1$: Occupational Hazard Prevention dimension of OHS
- ✓ $\beta_2$: Safety procedures and Risk Management dimension of OHS
- ✓ $\beta_3$: Organizational Safety Support dimension of OHS
- ✓ $\beta_4$: Frist Aid Support and Training dimension of OHS
- ✓ $\beta_5$: Safety and Health Rules dimension of OHS
- ✓ e: error term
- ✓ $X_1, X_2, X_3, X_4$ and $X_5$, are coefficients

## 11. Descriptive Statistics
### I.     Safety     Procedures     and     Risk     Management     (SPR

```
. ttest OHSprocedure == 3

One-sample t test
```

| Variable | Obs | Mean | Std. Err. | Std. Dev. | [95% Conf. Interval] | |
|---|---|---|---|---|---|---|
| OHSpro~e | 283 | 3.081272 | .060812 | 1.023017 | 2.961569 | 3.200975 |

```
    mean = mean(OHSprocedure)                              t =    1.3364
Ho: mean = 3                            degrees of freedom =       282

     Ha: mean < 3              Ha: mean != 3              Ha: mean > 3
  Pr(T < t) = 0.9088       Pr(|T| > |t|) = 0.1825      Pr(T > t) = 0.0912
```

This table indicates a one sample t-test result; which is to describe the extent of practicing **Safety Procedures and Risk Management (SPRM).** According to the table, the expected average was 3; But, the actual average value of the practice indicates to 3.08 and the P- value (two tail test) is 0.18; it is statistically insignificant. Thus, there is medium extent of practicing towards to **Safety Procedures and Risk Management.**

### II. Safety and Health Regulations (SAHR)

```
One-sample t test           ttest OHSregulation == 3
```

| Variable | Obs | Mean | Std. Err. | Std. Dev. | [95% Conf. Interval] | |
|---|---|---|---|---|---|---|
| OHSreg~n | 283 | 3.219081 | .0766123 | 1.288818 | 3.068277 | 3.369886 |

```
    mean = mean(OHSregulation)                            t =    2.8596
Ho: mean = 3                            degrees of freedom =       282

     Ha: mean < 3              Ha: mean != 3              Ha: mean > 3
  Pr(T < t) = 0.9977       Pr(|T| > |t|) = 0.0046      Pr(T > t) = 0.0023
```

116

The table shows T- test results; the actual mean value reached at 3.22; which is above the expected average value 3. And the P- value is 0.0046 (in a two tail test). it is statistically significant under 5% significant level. Thus, towards to **Safety and Health Regulations (SAHR)**, there is  statistical  evidences to conclude that the selected companies have  well design regulation towards to occupational **Safety and Health**.

## III. First-Aid Support and Training (FAST)

```
. ttest OHSaidtraining == 3

One-sample t test

─────────────────────────────────────────────────────────────────────────────
Variable │     Obs        Mean    Std. Err.   Std. Dev.   [95% Conf. Interval]
─────────┼───────────────────────────────────────────────────────────────────
OHSaid~g │     283     2.80212    .0553979    .9319368    2.693074    2.911166
─────────────────────────────────────────────────────────────────────────────
    mean = mean(OHSaidtraining)                                t =  -3.5720
Ho: mean = 3                                  degrees of freedom =       282

    Ha: mean < 3                  Ha: mean != 3                   Ha: mean > 3
 Pr(T < t) = 0.0002        Pr(|T| > |t|) = 0.0004         Pr(T > t) = 0.9998
```

This T- test results is to appraise the extent of practicing **First-Aid Support and Training (FAST).** Accordingly, the average value  implies to 2.80  and the P- value is 0.0004; which is below 0.05. It is statistically significant with the hypothesized average value 3. Hence, it is possible to say that the companies have **First-Aid Support and Training practices to low extent.**

## IV. Occupational Hazard Prevention (OHP)

```
. ttest OHShazard == 3

One-sample t test

─────────────────────────────────────────────────────────────────────────────
Variable │     Obs        Mean    Std. Err.   Std. Dev.   [95% Conf. Interval]
─────────┼───────────────────────────────────────────────────────────────────
OHShaz~d │     283    2.819788    .0581448    .9781463    2.705335    2.934241
─────────────────────────────────────────────────────────────────────────────
    mean = mean(OHShazard)                                     t =  -3.0994
Ho: mean = 3                                  degrees of freedom =       282

    Ha: mean < 3                  Ha: mean != 3                   Ha: mean > 3
 Pr(T < t) = 0.0011        Pr(|T| > |t|) = 0.0021         Pr(T > t) = 0.9989
```

This one sample T- test result  reviews the **Hazard Prevention practices.** The actual mean Indicates to 2.82 ( it is less than the hypothesized average of 3). And the P- value is 0.0021; which is < 0.05 in 95% confidence levels. There is statistically significant evidence. Hence, it signifies that there is low extent of **Hazard Prevention practices in the companies.**

117

## V. Organizational Safety Support (OSS)

```
. ttest OHSsupport == 3

One-sample t test
```

| Variable | Obs | Mean | Std. Err. | Std. Dev. | [95% Conf. Interval] |
|---|---|---|---|---|---|
| OHSsup~t | 283 | 2.992933 | .0525025 | .883228 | 2.889586    3.096279 |

```
    mean = mean(OHSsupport)                                    t =  -0.1346
Ho: mean = 3                                    degrees of freedom =      282

    Ha: mean < 3              Ha: mean != 3                Ha: mean > 3
 Pr(T < t) = 0.4465     Pr(|T| > |t|) = 0.8930        Pr(T > t) = 0.5535
```

This T- test result is to evaluate the Organizational Safety Support practices.  Based on this, the actual average value reached at 2.99; the P- value is 0.8930. It is statistically insignificant. Therefore, it is possible to conclude that the  Organizational Safety Support practices is to the medium extent

## VI.       Total       Occupational       Health       and       safety       Practices

```
. ttest AvrOHS == 3

One-sample t test
```

| Variable | Obs | Mean | Std. Err. | Std. Dev. | [95% Conf. Interval] |
|---|---|---|---|---|---|
| AvrOHS | 283 | 2.983039 | .0273642 | .4603367 | 2.929175    3.036903 |

```
    mean = mean(AvrOHS)                                       t =  -0.6198
Ho: mean = 3                                    degrees of freedom =      282

    Ha: mean < 3              Ha: mean != 3                Ha: mean > 3
 Pr(T < t) = 0.2679     Pr(|T| > |t|) = 0.5359        Pr(T > t) = 0.7321
```

This table illustrated the total practice of Occupational Health and safety. Consequently, the actual average value of the total practice indicates to 2.98 and the P- value (two tail test) is 0.5359; which is statistically insignificant with the expected average value of 3. Therefore, it is possible to declared that there is moderate level of practicing towards to Occupational Health and safety.

118

### VII. Total Employees' Commitment

```
. ttest AVRCIMMIT == 3

One-sample t test
```

| Variable | Obs | Mean | Std. Err. | Std. Dev. | [95% Conf. Interval] |
|---|---|---|---|---|---|
| AVRCIM~T | 283 | 3.11543 | .035004 | .5888589 | 3.046528    3.184332 |

```
    mean = mean(AVRCIMMIT)                                    t =    3.2976
Ho: mean = 3                                  degrees of freedom =       282

    Ha: mean < 3              Ha: mean != 3                    Ha: mean > 3
Pr(T < t) = 0.9994      Pr(|T| > |t|) = 0.0011        Pr(T > t) = 0.0006
```

This is a one sample T- test result; the actual mean value depicts to 3.115; which is above the hypothesized average value 3. And the P- value is 0.0011 (referring to a two tail test). it is statistically significant under 5% significant level. Accordingly, there is statistical evidences to conclude that the **Employees of the companies are Committed and dedicated**.

# 12. Comparative Analysis
## I. Occupational Health and safety Practices-Comparative Analysis

```
                       anova AvrOHS Companytype

               Number of obs =       283    R-squared      =   0.0036
               Root MSE      = .460336    Adj R-squared =   0.0000
```

| Source | Partial SS | df | MS | F | Prob > F |
|---|---|---|---|---|---|
| Model | .212153768 | 1 | .212153768 | 1.00 | 0.3179 |
| Companytype | .212153768 | 1 | .212153768 | 1.00 | 0.3179 |
| Residual | 59.5464326 | 281 | .211909013 | | |
| Total | 59.7585864 | 282 | .211909881 | | |

This is a one-way ANOVA; to analysis the group difference of Moha soft drink and Coca-Cola soft drink Companies. Accordingly, the F value of the model Indicates to 1.00; P= 0.3179, which is not statistically significance at 0.05. Therefore, there is no significant difference with practicing **Occupational Health and safety in the companies**

119

**II.** **Employees' Commitment:** Comparative Analysis

```
anova AVRCIMMIT Companytype
                Number of obs =        283    R-squared      =  0.1770
                Root MSE      =  .53515    Adj R-squared =  0.1741
```

| Source | Partial SS | df | MS | F | Prob > F |
|---|---|---|---|---|---|
| Model | 17.3104992 | 1 | 17.3104992 | 60.44 | 0.0000 |
| Companytype | 17.3104992 | 1 | 17.3104992 | 60.44 | 0.0000 |
| Residual | 80.4743516 | 281 | .286385593 | | |
| Total | 97.7848509 | 282 | .34675479 | | |

This is to assess the employees' commitment difference in the companies. According to this one-way ANOVA result the F-value Indicates to 60.44; and P= 0.0000, which is statistically significance. So, there is statistically **significant employees' commitment difference in the companies**

# 13. Association Analysis

This is to analysis the relationship between Occupational health and safety practices with Employees' commitment

```
. pwcorr OHSprocedure OHSregulation OHSaidtraining OHShazard OHSsupport AvrEMPcommitment, sig
```

| | OHSpro~e | OHSreg~n | OHSaid~g | OHShaz~d | OHSsup~t | AvrEMP~t |
|---|---|---|---|---|---|---|
| OHSprocedure | 1.0000 | | | | | |
| OHSregulat~n | 0.2722 | 1.0000 | | | | |
| | 0.0000 | | | | | |
| OHSaidtrai~g | 0.0651 | 0.0983 | 1.0000 | | | |
| | 0.2753 | 0.0989 | | | | |
| OHShazard | 0.3792 | 0.8666 | 0.1265 | 1.0000 | | |
| | 0.0000 | 0.0000 | 0.0333 | | | |
| OHSsupport | −0.0642 | 0.1588 | 0.4921 | 0.1296 | 1.0000 | |
| | 0.2818 | 0.0074 | 0.0000 | 0.0293 | | |
| AvrEMPcom~t | 0.0040 | 0.0172 | 0.5026 | 0.0407 | 0.7412 | 1.0000 |
| | 0.9470 | 0.7738 | 0.0000 | 0.4948 | 0.0000 | |

Accordingly, the correlation analysis shows that **First-Aid Support related practices  and Organizational Safety Support** have positive and statistically significant association with employees' commitment (r = 0.5026, p<0.01 and r=0.7412,  p<0.01 respectively). However, **Safety Procedures ,  Safety and Health Regulations, and Occupational Hazard Prevention** doesn't have statistically significant relationship with employees' commitment (r = 0.0040 at p=0.9470), r-0.0172 at p=0.7738), and r=0.0407 at p=0.4948) respectively.

## 14.   Regression Analysis

The regression model fitting was tested with Linearity Test, Normality Test, Multicolleniarity test, and Hetrocedastic test; as a result, the model is fitted.

# Model Assumption Test Results



| heteroskedasticity | chi2(1)      =      89.96 |
|                    | Prob > chi2  =   0.0000 |

Test for multivariate normality    chi2(10) = 284.239   Prob>chi2 = 0.0000

| covariance matrix is diagonal | Adjusted LR chi2(10) =      529.56 |
|                               | Prob > chi2 =   0.0000 |

Linearity |    **Tested**
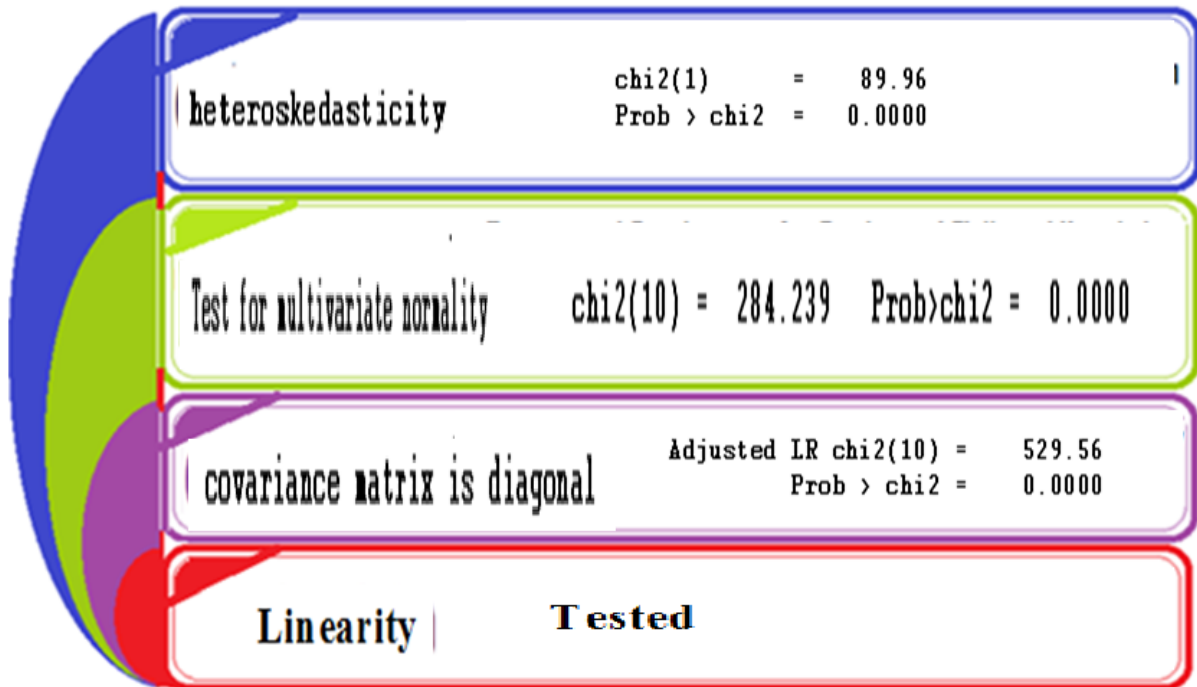
Source: The authors' analysis

# Multiple Linear Regressions

`. regress AvrEMPcommitment OHSprocedure OHSregulation OHSaidtraining OHShazard OHSsupport`

| Source | SS | df | MS | | | |
|---|---|---|---|---|---|---|
| | | | | Number of obs = | 283 | |
| | | | | F( 5, 277) = | 80.06 | |
| Model | 93.7343973 | 5 | 18.7468795 | Prob > F = | 0.0000 | |
| Residual | 64.8663094 | 277 | .234174402 | R-squared = | 0.5910 | |
| | | | | Adj R-squared = | 0.5836 | |
| Total | 158.600707 | 282 | .562413854 | Root MSE = | .48392 | |

| AvrEMPcommit~t | Coef. | Std. Err. | t | P>\|t\| | [95% Conf. Interval] | |
|---|---|---|---|---|---|---|
| OHSprocedure | .0513898 | .035353 | 1.45 | 0.147 | -.0182049 | .1209844 |
| OHSregulation | -.160146 | .0701997 | -2.28 | 0.023 | -.2983386 | -.0219533 |
| OHSaidtraining | .1627111 | .0417509 | 3.90 | 0.000 | .0805218 | .2449004 |
| OHShazard | .0572587 | .0752345 | 0.76 | 0.447 | -.0908453 | .2053628 |
| OHSsupport | .5834634 | .0386394 | 15.10 | 0.000 | .5073992 | .6595276 |
| _cons | .4696108 | .1595456 | 2.94 | 0.004 | .155535 | .7836866 |

The table is indicating to the multiple linear regression analysis result. $R^2$ measures about to what extent these identified independent variables able to explain the dependent variables. Based on the table, the value of $R^2$ reached at 0.59, meaning 59 % probability of explaining the overall Employees Commitment by OHS predictor variables.

As far as concerning to F- test value, (F=80.06, p<0.01). Therefore, the overall equation was found to be statistically significant. Accordingly, it is possible to declare that the Overall Employees' Commitment is influenced by the OHS practices indicators collectively.

**With taking into account the coefficient of regression, first-Aid Support related practices and Organizational Safety Support** have positive and significant effect on employees' commitment. According to the results of the regression coefficient, a one unit increase in the **First-Aid Support** brings a 0.16 unit increase in employees' commitment. Likewise, a one unit raise in the **Organizational Safety Support** can assure a 0.5834 unit of increment in employees' commitment

Moreover, attitude towards to **Safety and Health Regulations** has a negative significant effect on employees' commitment. Because the results of the coefficient and p-value ( Beta =-0.16 and P-value is 0.023) is supportive. Therefore, a one unit change of attitude towards to **Safety and Health Regulations** will has **16%** of negative effect on employees' commitment

However, In line with **Safety Procedures  and Occupational Hazard Prevention ,** they don't have statistically significant influence on employees' commitment

## 15. Conclusion

With considering the practices of occupational health and safety  management, the result of this study concludes the followings



| | |
|---|---|
| First-Aid Support and Training Occupational Hazard Prevention | Low Extent |
| Safety Procedures & Risk Management Organizational Safety Support | Medium Extent |
| Safety and Health Regulations | High Extent |
| Total Occupational Health & safety Practices Total Employees' Commitment | Medium Extent High Extent |

As far as concerning to the cause and effect analysis of occupational health and safety practices on employees' commitment, the result of this study bring to a close that the employees' commitment is positively and significantly determined by First-Aid Support related practices as well as  the oorganizational Safety Support practices. However, the improved attitudes of the respondents towards to Safety and Health Regulations will leads to significant negative effect on the employees' commitment. In line with **Safety Procedures and Occupational Hazard Prevention, they** are not determinants of the employees' commitment.

## 16.Recommendations

Every organization wants to be successful should consider the employees as the prime resource and core strength to reach to the success. the organizations looking for. Improving commitment and success; should not often give attention to technology, clients and structures superior than their workers. The fact is, it is the worker who drive the technology and structures and meet the clients need which govern the overall organizational success.

The factual information's about the status of occupational health and safety and the level of employee commitment helps at EABSC and MOHA management where the actual situations are and plan the future for excellence in their OHS practice and EC. In this regard the results show that the overall OHS and EC status in the industry is to moderate extent/average but this is not adequate compare to what is at stake. The FAST, SPRM & OHP system in the industry has performed better compare to their SAHR & OSS system and top management should work bettering them.

The overall Occupational health and safety practices affect employees' commitment significantly and positively, therefore, the management at EABSC and MOHA should recognize the fact that workers who feel healthy and safe in performing of their duties develop emotional attachment and have a sense of obligation to their organization and this excels commitment and enhance their OHS practice in order to excel employee commitment. Therefore, the organization should prepare the policies, approve budgets for implementation, provide training, assigning independent officers and office for well practicing of Occupational health and safety management

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