Employers' Perception of Hiring Graduates of Vocational Education

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Abstract: While developing countries are striving to install a strong technical and vocational system in response to changes in technology and emerging jobs that require contemporary skills and unforeseen challenges, the Ethiopian system is in short supply for employers. It has left many graduates unemployed for several months and years. This study examined the perception of employers in hiring graduates from technical and vocational institutions in Addis Ababa, using a convergent parallel mixed method. Data collected from randomly selected 228 subjects (42 employers and 186 employees) through a semi-structured interview guide and self-administered questionnaire were analyzed using thematic analysis and descriptive and inferential statistics techniques. The study found that though employers have an understanding of the sub-sector, they tend not to hire graduates for reasons of incompetence, the complex nature of hiring, a lack of holistic knowledge of occupational areas, and employers' belief that graduates from the technical and vocational stream are prepared for self-employment rather than wage employment. The effort of training providers, authorities in the sub-sector, and policymakers in improving awareness of employers and the community at large remained weak.

Keywords: Vocational education and training, Competence, Graduates' employability, Graduates, Employers' perception

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1. Introduction

Vocational education is strongly linked to development because it enhances the productivity of people by equipping them with skills (Hagos & Kemenade, 2013; Paryono, 2017) critical to achieving the Sustainable Development Goal (SDG) targets in developing countries (Gupta & Dharap, 2024). Leka (2017) reported that vocational education improves the employability of people in the labor market. Moreover, as Shi and Bangpan (2022) contend, it gained global momentum as a means of alleviating poverty. The United Nations Educational, Scientific and Cultural Organization (UNESCO) also underscores the unprecedented impact of global disruptions such as digitalization, climate change, demographic change, and the Fourth Industrial Revolution on the world of work and world of learning (Subrahmanyam, 2020). Consequently, nations are expediting vocational systems in response to national and international changes that otherwise lower competitiveness. In response to changes in contemporary issues, the teaching and learning trend in vocational education has been re-conceptualized and is no longer regarded as a traditional teaching-learning practice. Instead, as Emms et al., (2024) display, it has become a multi-dimensional practice that incorporates learning at the workplace, in the community, and at home.

Understanding and implementing an effective vocational system in low- and middle-income countries is a challenging task that requires alignment of employers' needs and the labor market trends. The African Union (AU) encourages nations to install a strong vocational system, calling it critical for national development and poverty reduction by enabling the young and adults to join the world of work (AU, 2018). Although the African nations are heterogeneous, geographically, economically, and in population size (Allais, 2022), all demand skilled manpower from the lower-level craftsmen to engineers and technologists who contribute to building nations and the continent at large. Other studies, on the other hand, doubt the importance of TVET,

arguing that the number of works that is to be performed by lower and middle-level skills declined rapidly due to technological changes and economic restructuring (Shi & Bangpan, 2022). Godwin (1990) previously argued that prevocational and secondary education is more important than TVET. Since most African countries, particularly Sub-Saharan Africa, face challenges of access to education in general, nonetheless, they have started putting TVET on the critical agenda as an alternative educational pathway (Nunyonameh et al., 2024).

Despite frequent calls for expansion and recommendations from donors and international organizations, the literature around African TVET does not have conclusive agreement on the perception of political leaders, policy makers, and industries (employers) about the demand for and hiring of graduates from the sub-sector (Hagos & Kemenade, 2013). Jemiluyi and Jeke (2024), for instance, recommended the preparation of cities as urbanization increases, which requires effective policies of human capital development. Kissi (2020) specifically revealed strategies for TVET to improve the contribution of human capital in Ghana, including a learner-centered approach, problem-based learning, intellectual aptitude development, and activity-based learning. Kintu et al., (2019) reported that Ugandan TVET graduates were endowed with relevant basic skills and communication skills necessary to perform jobs.

The current shape of the Ethiopian TVET system has been in practice since 1994 with the launch of the new Education and Training Policy that envisioned developing the problem-solving capacity of individuals by training them in different occupational skills to cultivate the cognitive, creative, and productive potential of citizens. The government has also devoted a lot of efforts to TVET as human resource has the most contribution to growth and development. Moreover, the Growth and Transformation Plan (GTP) indicates the government's intention of transforming the economy from agriculture to a manufacturing-dominated one that requires a huge amount of skilled

manpower trained in the lower and middle qualification levels (National Planning Commission, 2016). Although magnificent achievements have been registered in expanding TVET institutions and enrolling trainees in various occupational skills across the country, the TVET system is reportedly challenged by problems associated with quality and relevance (MOE, 2018). Consequently, the government used a competence and an outcome-based training approach to improve the quality of training and hence the employability of graduates (Geda, 2016).

1.1. Theories

Perception in this research entails how people understand vocational education, which plays a significant role in making decisions about hiring graduates. TVET involves the acquisition of knowledge, skills, and attitudinal changes to be demonstrated in the real world of work. This process, however, consists not only of different knowledge and skills that are provided in a formal training integrated with work processes and practical exercises, but also personal convictions, norms, and values required in the profession (van den Bogaart et al., 2016). Highlighting some theories on perception, behavioral change, and making decisions could be important to explain how employers understand and characterize vocational education and their views on hiring vocational graduates. Consequently, theory on attitudes by Fazio (2007), theory of reasoned action by Ajzen and Fishbein (1975, 1988), and attitudes and the prediction of behavior by Ajzen and Cote (2008) were chosen as fit for this study.

Actions in learning skills involve acquiring perceptual information about the environment by entrants to and graduates from the system (Briscoe & Springle, 2015). The problem associated with bad perception towards the TVET system in Ethiopia, in part, results from a lack of perceptual information about the benefits of the system. An increasing number of unemployed TVET graduates, as reported by the Federal

government (FDRE TVET Agency, 2019; 2020), became a testimony that new entrants to the system came without perceptual information. Concerning employers, Dempsey and Mitchell (2010) displayed that consumers usually make quick decisions without or with little conscious thought, and they may not know why they make choices. Fazio (2007) also viewed attitude as a summary evaluation. Evaluation, however, tends to focus on self-initiated action or a freely chosen behavior (Bem and Allen, 1974). One of the strongest arguments of Fazio's model was its consideration of attitude as stemming from beliefs, affect, and/or behavioral information (Fazio, 2007) that directly reflects employers' pre-informed perception to hire vocational graduates.

Literature about theories of perception in vocational education maneuvers around the Input-Output Picture (Hurley, 1998). In this treatise, learning is found between the subject and some object awareness. This theory separates and treats perception from actions. It further argued their independence by relating the mind with work, self-consciousness, cognition, behaviorism, and so on. It fails to display and ignores the dependence between perception and action or decision-making. A free choice presented for new entrants to the TVET system, for instance, led to graduates with no employment opportunities. A person's behavior, thus, is determined by the intention to act on the intention, which is a function of their attitude towards the subject. Developed by Ajzen Icek and Martin Fishbein in 1975 was the Theory of Reasoned Action (TRA), which explores the relationship between attitudes and behaviors in human action. This has been widely used in technical and technological adaptation studies.

Before making decisions, people evaluate and create an association with an entity with their feelings, morals, characteristics, and previous experiences (Kisanga, 2020). Thus, theories in attitude often focused on evaluative judgment of an entity (Ajzen and Fishbein, 2008). People's decision-making in choosing entities depends on their feelings, previous knowledge (experience), and behavioral evaluations

(Dempsey and Mitchell, 2010; Fazio, 2007). Within the world of education, where the type and number of academic routes have flourished in this century, individuals are encouraged to make choices of their own. The theory of Reasoned Action, formulated by Ajzen & Fishbein (1988), helped to conceptualize learners' decision-making strategy to join TVET programs. The positive correlation between attitude and behavior (Otieno *et al*., 2016) implies the need for strategies in improving bad attitudes (perception) towards TVET by the community and the industries for the effectiveness of the sub-sector. TRA predicts how individuals would behave and act based on prior attitudes and intentions (Hong, 2018). This study, therefore, summarizes combined theories as guiding instruments of understanding the perception of employers and vocational graduates towards hiring graduates from vocational institutions.

1.2. Statement of the problem

Perception towards hiring graduates of TVET institutions greatly affects the process and outcome of the whole system. Vocational choices and employment opportunities rely on mental images (Brillet & Gavoille, 2016; Dubeau & Chochard, 2024). Research in the Ethiopian system, however, reported mixed findings on the issues of perception, quality, and relevance of TVET provision (Tekle et al., 2024). The evaluative section of the Education Development Roadmap reported lower participation of stakeholders in the TVET system and poor linkage between TVET providers and industries, which are potential employers of graduates (MOE, 2018). Geressu (2016) displayed that the Ethiopian vocational system was performing below expectations of the competence and outcome-based approaches. As a result, about half of the graduates in the academic years between 2014/15 and 2016/17 were left unemployed. Furthermore, Gelaw et al., (2022) found that about 44% of TVET graduates were unemployed, and those employed got jobs with the help of their families and financial support rather than exhibiting required competences. Though much of the research

displayed quality and relevance problems in the Ethiopian TVET, none of them showed a plausible reason, and that is why the problem persists. Yamada *et al*., (2018) found a direct relationship between attitudinal skills and learners' outcomes.

Employers are the destinations of graduates from TVET institutions. The official reports from TVET authorities and international organizations focused on quality issues impacted by a shortage of training inputs such as equipment, manpower, and infrastructure; however, they did not say anything about the attitude of employers in the sub-sector. Woldesemayat and Geressu (2023) found that the issue of graduates' employability was included in the government's policies and strategies, with minimal implementation.

1.3. Objectives of the study

The main objective of the study was to investigate the views of employers towards hiring graduates from TVET institutions in Addis Ababa.

1.4. Research questions

RQ1. How do employers and vocational graduate employees perceive TVET in general?
RQ2. What benefits and drawbacks do employers and employees consider when hiring graduates from TVET institutions?
RQ3. How do employers and vocational graduate employees perceive hiring graduates from TVET institutions?
RQ4. How do employers and vocational graduate employees characterize graduates of TVET institutions?
RQ5. What are the factors that hinder employers from choosing graduates of TVET institutions?

1.5. Significance of the study

This paper contributes to an understanding of issues related to the challenges vocational graduates face in getting jobs. As with the vocational institutions, the study will also benefit industries in getting competent employees, trained with relevant occupational skills, which also reduces the cost of inductive training during employees' probation periods. It provides information for the government to develop a legally binding framework between vocational institutions and industries that governs the overall school-to-work process.

The study will also alleviate the scarcity of literature around vocational education in developing countries such as Ethiopia, and particularly in relation to the issue of graduates' employability. Although some of the findings remained similar to previous study results, they could be used as a reminder and remain cognizant of the issue of unemployment, poor quality of training, and irrelevance of occupational skills. The study recognizes that it was conducted only in Ethiopia, with exemplary findings replicated in others.

1.6. Scope of the study

Although the findings of this study contribute to the existing body of knowledge and literature related to vocational education, cooperative training, and graduates' employability, further inquiries are required in areas unaddressed here, including the competence of trainers, leadership, curriculum, labor market, and policy issues. The study has taken a few variables only as determinants of the perception of hiring TVET graduates and the quality and relevance of vocational education. Future studies are thus encouraged to focus on other variables not addressed by this study. The study used graduates and employers from Addis Ababa city; thus, the results cannot be generalized to private vocational institutions, and there might be a variation from one city to another. We recommend comparable studies between public

and private vocational institutions in different cities, with the use of different informants.

1.7. Operational definitions of terms

TVET – Refers to technical and vocational education and training (also known as vocational education) that is regularly provided for secondary school completers to enable the acquisition of skills, knowledge, and attitude for either self-employment or wage employment.

Employer – An organization (business, service, or public) that employs graduates from TVET institutions.

Employee – A graduate from TVET institutions with a regular qualification framework or level, and who is a full-time employee or worker in an organization (business, service, or public).

2. Review of related literature

2.1. Linking vocational education with industries to enhance graduates' employability

Investigating the quality and relevance of training has been the common attention of researchers in vocational education. A skill mismatch between the vocational system and industries was reported by Zeleke (2022), while Lock and Kelly (2020) posed a concern over the readiness of graduates to meet the labor market demand. Although the Ethiopian vocational education system calls for a strong bondage between vocational education providers and employers, (Geressu, 2017; ILO, 2022; Lasonen et al., 2005; MOE, 1994, 2008, 2018, 2023), Zeleke (2022) revealed a mismatch between vocational education graduates' competence and the employers' expectations. Others, such as Demessew and Lumdi (2015), Geda (2016), and Killian et al. (2009) reported poor linkage between industries and vocational education

providers due to a lack of cooperation from the industries. However, none of these indicated the views of employers regarding hiring graduates from TVET institutions. ILO (2022), for instance, indicated that the majority of employers were not satisfied with the performance of vocational education graduates owing to the disconnection between training and industries. Udofia et al., (2012) discussed the significant relationship between training facilities and the delivery of employable skills, while Mbugua et al., (2012) further expressed the prevalence of a shortage of training materials and thus the use of inferior and obsolete training materials. In addition, Dubeau and Chochard (2024) praised the importance of cooperative training for better job opportunities for graduates. Only little evidence was found; however, there is a lot of influence of training materials on graduates' employability.

Global changes in the labor market and working environment brought an increasing perceived uncertainty about occupations (Lechner et al., 2016). The challenges associated with this kind of uncertainty, thus, cannot be overcome, as Rodrigues (2020) found the significant role of education and the labor market in the association between occupational skills and unemployment. The situation is quite precarious in the Sub-Saharan region, where there is still a debate regarding the relevance and effectiveness of vocational education compared with general education (Godwan, 1990). Nonetheless, an increasing body of literature in recent years has displayed the importance and benefits of vocational education for the economic and social development of African nations (See. Adams et al., 2024; Tekle et al., 2024; McGrath et al., 2022; Allais, 2022; Yamada et al., 2018).

Dysvik and Kuvaas (2008) reported the mediating effect of intrinsic motivation on the better employability of vocational graduates. The difference in the attractiveness of vocational education ranges from a study finding of the difference between training providers and employers in India (Schneider, 2023) to the profitability factor

influencing graduates' employability in the United Kingdom (Abel et al., 2008). Furthermore, Allan and Kyoung (2013) recommended integrated career development for enhanced graduates' employability. Graduates' opportunity for jobs, however, is a function of many factors. Sarsale et al., (2024), for instance, revealed that these factors are meeting present and future professional needs, exposure to the field of specialization, promotion, and personality development.

2.2. Graduates' employability

The concept of employability implies the possession of required skills, knowledge, and attitudes to succeed in a desired occupational area, which is beneficiary to individuals, the workforce, and the community (Knight & Yorke, 2003). Succeeding, securing, and retaining employability is a function of personal attributes and acquired skills and knowledge (Oliver, 2015; Chen, 2017), which in turn are affected by the availability of human and material resources (Allais, 2022; Geda, 2016; Udofia et al., 2012). Though Pheko and Molefhe (2017) described employability as a chance of getting initial jobs upon graduation, the context could extend to a change in a new position within an organization and securing the most exciting work to reach personal goals. Quality of vocational education, thus, is measured by graduates' employability and ultimate satisfaction of employers and employees (UNESCO, 2010). Graduates' employability, on the other hand, significantly depends on the perception and willingness of employers to accept applicants from a pool of TVET graduates and place trust in them. Vocational perception connotes how individuals view vocational education, which is subject to many factors such as personal interest, societal attitudes, and perceived value of occupational skills in the job market. Discrimination in perception has a negative consequence on students' career aspirations and societal interaction. It is when the perception of employers towards TVET graduates and the vocational system improves that the employability of graduates will improve.

2.3. Employers' demand for vocational graduates

The nature of globalization, advancement in technology, and demography brought inescapable change to the labor market around the world (Herrmann & Kühn, 2024; Marrero-Rodríguez & Stendardi, 2023). While the effort of maintaining a perfect match between supply and demand of skills remained elusive (Herrmann & Kühn, 2024; Allais & Wedekind, 2020), vocational education has been recognized as a key part of meeting global changes (Dickerson & Wilson, 2017). The role of education in Africa is generally debatable across the literature from different countries, which could be summed up as the irrelevance of preparing youth of the continent for meaningful occupations (Hamilton & Asiedu, 1987). This, in part, is attributed to the colonial regimes pressing the continent to depend on expatriates' curriculum.

There is a controversy in the worlds of work and education. While emerging businesses increasingly demand a large number of skilled laborers, the public prefers general education, which often prepares them for white collar jobs. Vocational education is less valued compared with general education (Clement, 2014). Most secondary completing students want to pursue their university education rather than joining vocational education (Aldossari, 2020). On the other hand, youth unemployment has been a global topic of investigation, which, beyond affecting young people's lives, also harms the future economic growth of a nation (Khan et al., 2024; Ngonda et al., 2024). There is a general agreement among academics that vocational education could be used as an instrument to tackle such youth unemployment (e.g., Zambelli et al., 2024; Coughlan, 2015; Nilsson, 2010).

This study is unique because it was conducted during a controversy of surplus supply of vocational graduates and shortage of skilled manpower on the side of the employers. In this regard, Killian et al. (2009) displayed the existence of unemployed vocational education graduates due to the irrelevance of skills. Geressu (2017) also

concluded that around half of the vocational education graduates in the year 2016/17 remained unemployed, and those employed failed to demonstrate their competence. Although there is no official tracer study about vocational education graduates' whereabouts, Krishnan and Shaorshadze (2013) reported that graduates from the public vocational institutions show lower employability than their private counterparts. Nonetheless, these studies still failed to indicate the perception of employers about hiring TVET graduates, which calls for an investigation.

3. Materials and methods

3.1. Research approach and sampling procedures

A convergent parallel mixed-methods design was used to assess employees' and employers' perceptions towards graduates from public TVET institutions in Addis Ababa City Administration. This method allowed the researchers to simultaneously collect both quantitative and qualitative data, merge them, and understand the research problem based on the results. Creswell (2015) puts the benefit of the convergent parallel method as a data collection type that provides strengths to offset the weaknesses of the other type, and that it enables a better understanding of the research problem.

Six polytechnic colleges in the city currently provide training from qualification levels one to five. Currently, level five is the highest TVET level in the country. The study purposefully selected four of the colleges that run similar training programs. Using a multi-stage sampling technique, employers that absorb graduates from the four colleges were sampled with a proportion of 54 (out of 101) from industry development; 126 (out of 256) from economic infrastructure; 2 (out of 5) from sport, culture and tourism; and 4 (out of 9) from trade. According to data obtained from the Vice Deans for Academics and Technology Transfer and Industry Extension Services, there have been 213 companies which hired graduates from these four colleges in the

last five years (2018/19, 2019/20, 2020/21, 2021/22 and 2022/23) in the city with total of 1080 TVET trained employees permanently working in the companies.

As shown in Table 1, a total of 42 employers, 37 males (88.1%) and 5 females (11.9%), and 186 employees, 99 males (53.2%) and 87 females (46.8%), were randomly selected. The employers included 24 owners (57.1%), 7 managers (16.7%), 9 owner-managers (21.4%), and 2 representatives (4.8%). In terms of years of experience, 13 (31%) had two to five years, 9 (21.4%) had six to ten years, 13 (31%) had eleven to fifteen years, and 7 (16.7%) had over sixteen years. Data on their academic qualification show that 27 (64.3%) were university graduates, 6 (14.3%) were TVET graduates, and 2 (4.8%) were from other institutions. The remaining 7 (16.4%) had just working experience but no certificate of any kind. Sampling distribution of the employees indicates that 54 (29%) were graduates from occupational areas of industry development, 126 (67.7%) were from economic infrastructure, 2 (1.1%) were from sport, culture and tourism, and 4 (2.2%) were from academic levels I & II, 2 (1.1%) were from levels III & IV, 96 (51.6%) were from level V, (72, 38.7%) had their first degree, and 15 (8.1%) had their Master's degree and above.

Using a purposive sampling technique, the authors ensured the representation of participants with relevant experience in the sectors chosen for the study. Consequently, the study determined employment sectors used for the study; enumerated companies and industries under each sector; communicated (face-to-face and telephone calls) with representatives of the companies and industries, and approached (face-to-face and telephone calls) respondents for the questionnaires. Qualitative data were thus gathered from sixteen managers (including owners and representatives) selected from different employment sectors in Addis Ababa. As indicated in Table 2 the respondents consisted of nine (56.25%) males and seven (43.75%) females, while 4 (25%) had a TVET certificate at levels IV and V, ten (62.5%) held

bachelor's degree, two (12.5%) held master's degree and none of them held PhD degrees (Table 1). Thus, the result indicated only four (25%) of the employers had a TVET background at levels IV and V, while the rest fourteen (75%) were graduates from universities.

Table 1: Samples of employers and employees

Employers					Employees					
Gender	**Male**	**Female**	**Total**		**Gender**	**Male**	**Female**	**Total**		
N	37	5	42		*N*	99	87	186		
%	88.1	11.9	100		%	53.2	46.8	100		
Category	Owners	Managers	Owner-Managers	Representatives	Age	Below 20	21-25	26-30	Above 31	
N	24	7	9	2	*N*	5	34	86	61	
%	57.1	16.7	21.4	4.8	%	2.7	18.3	46.2	32.8	
Experience (in years)	≤ 5	6-10	11-16	≥ 16	Occupation area	Industry development	Economic infrastructure	Culture, sport & tourism	Trade	
N	13	9	13	7	*N*	54	126	2	4	4
%	31	21.4	31	16.7	%	29	67.7	1.1	2.2	2.2
Academic Background	University graduate	TVET graduated	Others	Experienced	Academic level	Level I & II	Level III&IV	Level V	First degree	Master' and above
N	27	6	2	7	*N*	2	96	1	72	15
%	64.3	14.3	4.8	16.4	%	1.1	51.6	0.5	38.7	8.1
Occupation areas	Industry development	Economic Infrastructure	Culture, sport, and tourism	Trade	Experience	≤ 5	6-10	11-16	≥16	
N	14	21	3	4	*N*	74	82	12	18	
%	33.3	50	7.14	9.6	%	38.8	44.1	6.5	9.7	

Table 2: Characteristics of Respondents

	Participants	Employees	Employers	Count	(%)
Employees and employers	*Gender*				
	Male	7	2	9	56.25
	Female	5	2	7	43.75
	Total	12	4	16	100
	Qualifications				
	TVET graduates (Levels IV&V)	4	0	4	25
	Bachelor's degree	6	4	10	62.5
	Master's degree	2	0	2	12.5
	PhD and above	0	0	0	0
	Total	12	4	16	100
	TVET background				
	TVET graduates	4	0	4	25
	University graduates	8	4	12	75
	Total	12	4	16	100%
Companies	*Occupation areas*	No. of companies	No. of employees	Number of TVET-graduate employees	(TVET-graduate employees)
	Building Construction	6	122	4	25
	Automotive	4	80	9	56.25
	Electrical	2	42	1	6.25
	Information communications	4	96	2	12.5

3.2. Instruments

A questionnaire and a semi-structured interview guideline were used to collect data about the attitude of employers and TVET-graduate employees towards TVET. The questionnaire has two main parts: part one contains questions about demographic data of respondents, and part two contains five-point Likert scale questions related to the perception of the employers and employees about TVET. The second part of the questionnaire was further sub-divided into two categories as *items related to employers' perception* (10 items) and *employees' perception* (8 items). The items in the questionnaires were designed in a systematic way to address the inquiry regarding the perception of

employers and employees in hiring vocational graduates. An expert in the areas of TVET and educational research was consulted to check the content validity of the items, while the reliability of the items was checked using a reliability coefficient from correlation. Accordingly, a reliability coefficient was checked using Cronbach's Alpha (r) and was found to be 0.86, indicating highly reliable as the R-value is greater than 0.70, which is recommended by many scholars. All the respondents were given two days from May 8 to 9, 2024, to complete and return the questionnaire. In the absence of the researchers, an employee was recruited to collect the completed questionnaire. The employers were contacted through phone calls by the researcher. Finally, out of the 44 eligible employers and 190 employees, 42 (97%) from the former and 186 (98%) from the latter returned the completed questionnaire with an overall response rate of 97.5%. An interview was conducted with all sixteen respondents chosen for this purpose.

3.3. Procedures

A pre-test was conducted to pilot the instrument on 8 (7 males, 1 female) employers and 14 (10 males, 4 females) employees in one public polytechnic college. Based on the feedback from the pre-test, a few modifications were made to the questionnaire, such as rephrasing confusing statements, the order of questions, and text clarification. The polytechnic college used in the pre-test was not included in the main study. The Deans and Vice Deans (vice Dean for Academic Affairs and Vice Dean for Technology and Industry Extension Services) of the polytechnic colleges were contacted for the identification and location of employers of TVET graduates in the academic years of 2018/19, 2019/20, 2020/21, 2021/22 and 2022/23. The researchers personally approached the employers (managers, owners, representatives) and made a detailed explanation of the research objectives, procedures, and benefits. Consequently, based on the lists obtained from the polytechnic colleges, participants of the study were contacted for interviewing and filling out the questionnaire in their respective working

environments. They were briefed about the purpose, procedures, and benefits of the study.

3.4. Data analysis methods

Both descriptive and inferential statistical techniques were used to analyze the quantitative data using the Statistical Package for Social Sciences (SPSS) version 27 on Windows 10. Descriptive statistics, such as mean, frequencies, and percentages, were calculated. An independent sample *t-test* was also performed to analyze the difference between the mean attitudes of employers and employees about their perception of TVET. Cross-tabulation of some items was made to generate a relationship between the results of the two sources of data.

The study analyzed the qualitative data using thematic analysis, which helped to identify, organize, analyze, interpret, and establish themes from the information collected. The resulting themes and sub-themes were determined using an inductive approach, which was supported by a relevant literature review in line with the research questions that guided the study. The steps involved in the development of themes were: data familiarization; grouping similar codes to develop themes based on meaning; and relationship establishment.

4. Results

As indicated in Table 3, most of the employees (90%, *N*=186) and employers (57%, *N*=42) disagreed on the provision of training on TVET policy and strategy as a means of orienting and improving perception towards TVET by the community. Moreover, the majority of employees (88%) and employers (93%) responded in favor of companies' willingness to hire graduates of TVET institutions. However, a significant number of respondents (50%, employees and 78.6% of employers) strongly disagreed with the companies' prioritizing of TVET

graduates over university graduates during recruitment processes. On the other hand, the majority (75.8%, *N*=228) of them responded that hiring graduates from the TVET sub-sector was much complex than their university counterparts.

A closer look at Table 3 also provides evidence that most of the respondents (87.7%, *N*=228) agree to the fact that the companies consider TVET practitioners (in the form of apprenticeship or cooperative training) as their future employees while only 4.8% of the employers see them as an additional burden that impacts their daily operations and hence profitability. Nonetheless, a significant number of employees (73.8%, *N*=186) and employers (75.2%, *N*=42) disagreed on considering TVET as an alternative pathway to employment.

Table 3: Employees' and employers' responses on perception towards TVET

Perception Indicators	Responses	Employers		Employees		Total	
		n	%	*n*	%	*n*	%
Training on TVET policy and strategies to create awareness and improve perception	SD	10	23.8	75	40.3	85	37.3
	D	14	33.3	93	50.0	107	46.9
	UD	18	42.9	16	8.6	34	14.9
	A	0	0.0	1	0.5	1	0.4
	SA	0	0.0	1	0.5	1	0.4
Preferring TVET graduates over university graduates during employment	SD	1	2.4	1	0.5	2	0.9
	D	2	4.8	4	2.2	6	2.6
	UD	6	14.3	10	5.4	10	4.4
	A	0	0.0	78	41.9	84	36.8
	SA	33	78.6	93	50.0	126	55.3
Employers' willingness to hire TVET graduates for their vacant positions	SD	0	0.0	3	1.6	3	1.3
	D	0	0.0	8	4.3	8	3.5
	UD	3	7.1	11	5.9	14	6.1
	A	14	33.3	43	23.1	57	25.0
	SA	25	59.5	121	65.1	146	64.0
The view that hiring TVET graduates is more complicated than hiring university graduates	SD	13	31.0	40	21.5	53	23.2
	D	19	45.2	101	54.3	120	52.6
	UD	6	14.3	29	15.6	35	15.4
	A	2	4.8	12	6.5	14	6.1
	SA	2	4.8	4	2.2	6	2.6
Considering trainees as future employees of the organization	SD	0	0.0	3	1.6	3	1.3
	D	0	0.0	5	2.7	5	2.2

Perception Indicators	Responses	Employers		Employees		Total	
		n	%	*n*	%	*n*	%
	UD	7	16.7	13	7.0	20	8.8
	A	21	50.0	55	29.6	76	33.3
	SA	14	33.3	110	59.1	124	54.4
Treating trainees as an additional burden	SD	9	21.4	44	23.7	53	23.2
that impacts the profitability of the	D	19	45.2	79	42.5	98	43.0
organization	UD	12	28.6	30	16.1	42	18.4
	A	2	4.8	16	8.6	18	7.9
	SA	0	0	17	9.1	17	7.5
Considering TVET as an alternative	SD	12	28.6	31	16.7	43	18.9
pathway to employment	D	20	47.6	106	57.0	126	55.3
	UD	8	19.0	34	18.3	42	18.4
	A	2	4.8	4	2.2	6	2.6
	SA	0	0.0	11	5.9	11	4.8

Note: SD=Strongly disagree, D=Disagree, UD=Undecided, A=Agree, SA=Strongly agree

N=228 (186 employees and 42 employers)

The independent samples *t-test* result in Table 4 indicates a critical value of 1.97 greater than the *t* value of 0.88 (α = 0.05) for the communities' perception towards TVET. Moreover, the *p* value (0.38) is greater than 0.05 and the confidence interval between the lower (-.075) and upper value (0.20) crosses zero. In the same discourse, the result showed a greater critical value (1.97) than the *t* value (0.82) (α = 0.05), the 0.41 *p* value greater than 0.05 and the confidence interval between the lower (-.17) and upper value (0.07) crossing zero for the industries' perception towards TVET. The result, therefore, shows no significant difference between the means of employers and TVET-graduate employees on the communities' and industries' perception towards the TVET system.

Table 4: Independent samples t-test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Employers	Equal variances assumed	8.403	0.004	.878	226	.381	.06060	.06901	-.07539	.19659
	Equal variances not assumed			1.192	99.471	.236	.06060	.05083	-.04026	.16146
Employees	Equal variances assumed	0.143	0.705	-.819	226	.414	-.04896	.05982	-.16683	.06891
	Equal variances not assumed.			-.834	62.192	.408	-.04896	.05872	-.16633	.06840

Views of employers about graduates from TVET institutions

The first basic question of the study examined employers' views of TVET and graduates from TVET institutions.

Data gathered through open-ended questionnaire were analyzed to determine the most repeated response. As shown in Table 5, TVET was viewed by employees and employers as part of the education pathway that prepares people for employment through the acquisition of knowledge, skills and attitudes in various occupational areas for economic and social life development which coincides with the definitions of UNESCO and ILO of the sub-sector (UNESCO, 2010; ILO, 2022). The opinions provided by two informants (EMPL5 and EMPR1) also align with this definition of TVET. It, therefore, suggests that employees and employers were familiar with the concept of TVET in Addis Ababa. The interviewees further told the researchers that today's students have better opportunities in getting skills, though they [students] fail to pursue their higher education in the universities. The following are what some of the interviewees said.

> *TVET is an option for secondary school leavers to join and train in specific skills that enable them to work as an electrician, carpenter, or welder rather than waiting for employment.* (EMPR1.12:31)

> *TVET makes people skillful not only for employment but also for their lifestyle.* (EMPL5.04:19)

As illustrated by theories of Ajzen and Fishbein (2008), individuals make choices of their interest based on their previous knowledge (experience), their feelings, and values; thus, the finding indicates the prevalence of knowledge about TVET by employers. The decision on choice by individuals or groups also influences the decision of others (Hong, 2018; Otieno et al., 2016). A better understanding of TVET, nonetheless, may not guarantee better perception towards the same

entity, as there exist other determinants discussed in subsequent paragraphs.

Table 5: Employers' View of TVET

Variables:	Count
TVET is meant for those who failed to join universities at the secondary level of education.	3
TVET is part of the educational pathway that prepares people for employment through the acquisition of knowledge, skills, and attitudes.	9
Graduates of TVET institutions lack communication, leadership, and language skills.	2
Graduates of TVET institutions do not fit office work (they fit works that require technical and vocational education and training skills like installation, maintenance, and running machines).	2

What benefits and drawbacks do employers consider when hiring graduates from TVET institutions?

The results of this research question show that participants were well aware of the benefits and drawbacks of hiring TVET graduates. Table 6 shows this. Out of the 16 participants in the study, 7(43.75%) emphasized the drawbacks of graduates of TVET as poor in competence, requiring further training, and lacking holistic knowledge about the occupational areas they were trained for. On the other hand, some 5 (31.25%) of the participants favored TVET graduates, saying they were skillful and adjustable to work conditions. None of the participants went for training institutions having unqualified trainers, policies not allowing the hiring of TVET graduates, and prioritizing university graduates over TVET graduates.

A further interview with an employer revealed employers' preference for university graduates, though they believe TVET graduates were

more skillful (EMPR3 and EMPR4). This makes finding jobs difficult for TVET graduates (EMPL6).

> *A university graduate is much favored by many organizations [traditionally] because the earlier law considers only university graduates. But now, we encourage all to apply when a vacancy is available] all sit together for the exam and we interview them using the same tools. However, they [TVET graduates] do not pass the exams.* (EMPR3: 02.44).

> *They have better skills than others [university graduates], but they don't have theoretical knowledge, such as the English language (communication skills). They are trained only with specific skills, and they don't know further about the requirements of the job they apply for. They [TVET graduates] require additional training, or we assign another experienced employee to train them.* EMPR4: 08:13).

> *It took me several months to get a job after my graduation because companies prefer to hire university graduates rather than us [TVET graduates]. We [TVET graduates] are skillful, but they [employers] don't believe in us. Many of my classmates remained unemployed for years and are trying to learn in universities that require additional* costs. (EMPL6.05:02)

Table 6: Benefits and drawbacks employers consider in hiring graduates from TVET institutions

	Benefits and drawbacks	Counts
Training institutions	Shortage of adequate and relevant training facilities and resources	1
	Unqualified and incompetent trainers	0
	Poor promotional activities	1
	Irrelevance of the curriculum	1
Graduates of TVET institutions	Demonstrating poor quality of competence in the real work environment	1
	Requiring further training after hiring	3
	Lacking holistic knowledge	3
	Skillful and adjustable to work conditions (Benefit)	5
Government and/or policies	Not allowing hiring TVET graduates	0
	Prioritizing university graduates over TVET	0
	Lack of conclusive rule for career promotion and future academic opportunities	1

How do employers perceive hiring graduates from TVET institutions?

The third research question was about the pronouncements of employers about hiring graduates of TVET institutions. The analysis made to find the most repeated answers about this research question is illustrated in Table 7.

Table 7: Employers' view of TVET

Employers' consideration of graduates of TVET institutions	Count
Graduates of TVET institutions are trained with relevant skills and knowledge that employers demand.	1
Graduates of TVET institutions fail to exhibit the competence required by employers due to the poor quality of training.	6
The skills and knowledge that graduates from TVET institutions possess exceed the demand of employers.	0
Graduates of TVET institutions are trained for specific competence (tasks) rather than holistic knowledge that the labor market demands.	1
Graduates of TVET institutions are trained to enable them to create their own enterprises rather than being employed for a wage.	8

According to Table 7, half of the participants (50%) reported that graduates of TVET institutions were trained to create their enterprises rather than seeking wage employment, while 6 (37.5%) believed graduates of TVET institutions failed to exhibit the competence required by employers due to the poor quality of TVET delivery. Besides this, EMPR2 said:

> *The objective of TVET institutions is to produce future entrepreneurs who create job opportunities for others* (EMPR2:01:59).

Nonetheless, as EMPR1 explained, the training system faced quality problems:

> *The graduates of TVET institutions usually fail to fit the requirements of organizations [employers] because they are not trained by qualified trainers and with sufficient training materials* (EMPR1.02:06).

EMPR4 also said:

> *The Ethiopian TVET system was holistic in the former periods, hence graduates were better suited to fit vacant positions of employers. However, since the realization of the new policy, they [graduates] are qualified only with specific skills* (EMPR4.04:07).

One of the employers, however, argued:

> …*they* [TVET institutions] *have better equipment and machines than universities. Sometimes universities bring their students for practice in our college. My college has enough materials, though it is not compatible with several students* (EMPL4.10:35).

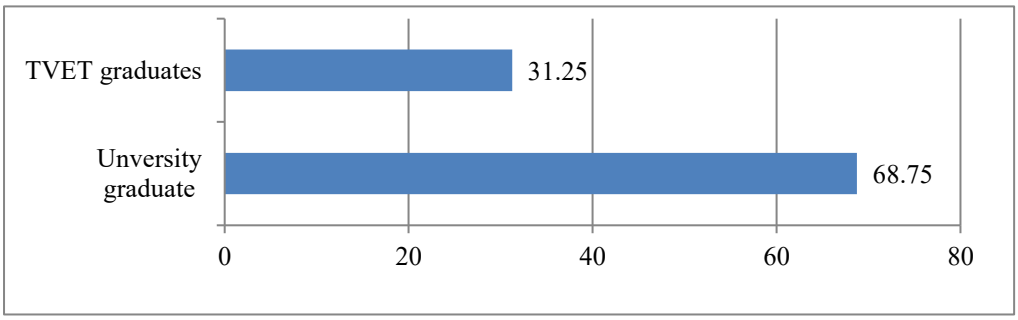

Figure 1 *Employers' preference between university and TVET graduates (N=16)*

Although the number of graduates from TVET institutions continues to increase from time to time, employers prefer hiring university graduates to TVET graduates because they assume university graduates are more competent and best fit for the vacant positions (Figure 1). The employers believe that the graduates lack holistic knowledge, unlike the university graduates.

How do employers characterize graduates of TVET institutions?

As seen in Table 8, most of the participants in the research agreed on the lower competence of graduates of TVET programs as compared with the needs of employers. Although employers also reported a lower qualification framework for the TVET academic route, the currently in-use policy (MOE, 2023) and occupational standards allowed upgrading options for TVET graduates from a first degree to master's and doctoral levels.

An interview with an employee (EMPL11) shows the glimpse of cooperative work between TVET institutions and universities to bridge the gap.

> *University graduates indeed have better communication and planning skills as they learn language (English) from knowledgeable teachers compared to us [TVET graduates]. They [university teachers] sometimes come and help teach us how to plan, design, and read and interpret designs before starting to work on any practice. You can imagine…. we have only level four or five, but they [university graduates] have a degree and a master's degree* (EMPL11.05:04).

Table 8: Employers' perceptions of graduates of TVET institutions

Characteristics	Counts
Lower level of competence compared with the employers' demand	9
Limit the unit of competence; only specific tasks	5
Lower qualification framework (not available in higher levels of qualification: BA, MA, PhD	2

What are the factors that hinder employers from choosing graduates of TVET institutions over university graduates?

The fifth research question of the study was about the factors that hinder employers from choosing graduates of TVET institutions over university graduates. Some 7 (43.75%) of the respondents favored hiring university graduates because it was easier for the selection process. It could be an indication that recruiting graduates from the TVET sub-sector takes much time and effort in the selection process. EMPR1 response supports this finding:

> *In some job positions, it is confusing to decide on statements like … a university diploma or TVET level IV. We usually treat level IV [for example] as a diploma, but other organizations may not. So, since it's a legal issue, we usually demand confirmations from regional or federal, public, and civil service offices before deciding on selection* (EMPR1.08:22).

In this regard, therefore, there are gaps in the rules and regulations used in selecting employees. A review of the *employee recruitment, promotion, and benefit management* document currently in use by the Central Ethiopian region shows the presence of confusion on whether it refers to the TVET graduate or university graduate qualification frameworks. An interview with another employee (EMPL5) also strengthens this finding.

> *Besides presenting academic credentials, taking examinations, and sitting for interviews, TVET graduates, just like university graduates, are further required to present a certificate of competence from the regional and national Competence Assessment and Quality Assurance Agencies, which are government-established entities to assure and control the quality of training* (EMPL5.05:48).

TVET providers' capability in delivering quality training and hence producing quality graduates was the other factor that employers cited as a hindrance in hiring graduates from TVET institutions. Though access to TVET drastically increased with the government's assignment of a considerable budget for expanding TVET providers across the country, the quality of training seemed poor, embellished by a shortage of training equipment, infrastructure, and poor industry linkage. The quality of training was especially jeopardized in TVETs located in rural areas, which have limited access to procuring and upgrading training materials (MOE, 2018; MSHE, 2020; Solomon, 2016; Tekle, et al., 2024; Geressu, 2017).

Table 9: Factors that hindered employers from choosing graduates of TVET institutions

Factors	Counts
Government policies and regulations	2
Training institutions' rules and guidelines	2
Ease of selection	7
Training institutions' capabilities	5

The findings in Table 8 and the interview results suggest that employers question the quality of graduates from TVET institutions and the challenges they face during the selection process. A similar result (Table 9) related to government policies and regulations and training institutions' rules and regulations also confirms the availability of problems associated with hiring graduates of a university over TVET.

5. Discussions

Perception towards TVET reflects graduates' successful combination of knowledge, skills, and attitude to achieve employers' objectives. This can be considered a good start to understand the policy and strategy of the sub-sector. The study was designed to examine and construct an understanding of the perception of employees and employers about the TVET system. Attitudinal changes are influenced by the information people get before making decisions (Ajzen and Fishbein, 2008). The majority of respondents' disagreement about training and orientation programs of the TVET system reveals that the community (students, parents, and companies) is not very well aware of TVET policies and strategies. With this minimal orientation towards TVET, which was also reported by Geda (2016) as a disconnection between TVET providers and employers, the companies, however, are willing to employ TVET

graduates, as expressed by employers and TVET-graduate employees. Employers' belief in the complex nature of hiring graduates from TVET institutions was derived from the negative views they have of TVET due to a lack of awareness about the policies and strategies. Notwithstanding, employers well understood the context of TVET, which coincides with the general definition given to the stream.

Employers believe that graduates of TVET are skillful and that they would like to hire them, but they tend to prefer university graduates because the former lack holistic knowledge and do not meet their requirements. The drawbacks identified were failing in job interviews and exams, and poor communication skills. Due to this reason, many graduates remained unemployed for several months and years after their graduation. In support of this, Geressu (2017) reported that nearly 50% of graduates in the last two consecutive years were not employed.

The results of the research indicated employees' and employers' agreement on the skillfulness of graduates of TVET institutions, but reported that they lacked holistic knowledge and hence required further training that demands additional cost, which employers consider a drawback. In this Skill-First era, employers in Ethiopia seem to stick to old-fashioned graduates from universities, whose curriculum is often questioned for being dominated by foreign countries through inexorable offers of donors and international organizations. The issue of new employees requiring further training is attributed to either the poor quality of training or the curriculum used for the training. In this regard, James et al. (2014) reported pressing concerns about the quality and relevance of TVET and limited pathways between the different educational structures.

A document analysis made on the policy and TVET strategy shows three major curriculum changes since the implementation of the policy in 1994. The first curriculum (1994-2007) was designed to enroll and provide training for secondary school completers at Grade 10 in

qualification levels of 10+1, 10+2, and 10+3, which seemed more holistic and also included 312 hours of apprenticeship training implemented by relevant business organizations. With the development of comprehensive TVET strategy in 2008, the second curriculum (2008-2021) was introduced with a different and increased occupational levels; level I, level II, level III, level IV and level V, which extensively disintegrated the former occupational skills into more specific areas that proliferated the number of training areas from twelve to more than sixty-one. The third and current curriculum (since 2022) further increased the occupational levels to VI, VII, and X, which equates with a university first degree, master's degree, and doctor of philosophy, and reunited the occupational skills in a somewhat holistic form like the first curriculum.

According to the TVET strategy (MOE, 2008), *competence* is seen as the entire range of skills, knowledge and attitudes necessary to perform a specific task while an official document from the Ministry of Science and Higher Education (MOSHE) entitled Ethiopian TVET Policy and Strategy (MOSHE, 2020) defined *quality* as fitness to the intended purpose. In this regard, one can judge that although graduates of the TVET sub-sector were skillful and adjustable to a versatile working environment, they lacked the competence and quality that the employers demand. In the global context, however, practical skills alone cannot guarantee full competence in labor. Rather, skills should be combined with relevant knowledge and attitudinal (behavioral) change (Yamada, 2021 et al., 2018). The TVET policy and strategy also reported poor quality of TVET delivery aggravated by a lack of adequate quality assurance system, inadequate and outdated equipment and infrastructure, and trainers' lack of industry experience (MOE, 2020).

The employers' perception that graduates from TVET need to create their own jobs rather than being employed and working for others should recognize two things. First, TVET institutions were not providing

training in relevant occupational areas that were demanded by local employers. Second, since the curriculum was changed and graduates were endowed only with certain skills, they could not demonstrate the competence that employers demand. From these findings, one can thus understand that the TVET system was challenged by the problems of relevance of occupational skills and a holistic curriculum of good quality. In this aspect, the policy (MOE, 2023) and TVET strategy (MOE, 2008; MOSHE, 2020) indicated that the mission of the Ethiopian TVET was to produce innovative and competent citizens who create their own businesses and contribute to a reduction in unemployment. Solomon (2016) concluded that TVET lacked alignment with employment capacity in the sense that a significant number of TVET graduates still remained unemployed, while employers complain about a shortage of skilled manpower. The participants also said the TVET institutions failed to exhibit competence in their job assignments, which is an indirect implication of a quality problem in the training system. In this regard, Lasonen et al. (2005) reported that graduates from TVET institutions had a lower employment rate than those from non-government institutions. Geressu (2017) also found that half of the graduates from TVET institutions failed to get jobs in the consecutive two years owing to poor involvement of stakeholders. The evaluative section of the Ethiopian Education Roadmap (MOE, 2018) further concluded that there was a poor image of the TVET system among students, parents, and employers.

The other debatable issue raised in the findings of this research was the complex nature of hiring graduates from TVET institutions, as it required them to present additional credentials such as a national certificate of competence and accreditation of the equivalence of qualification levels with higher education institutions, which was not required of university graduates. Nonetheless, employers' willingness to accept TVET practitioners in the form of apprenticeship and cooperative education becomes a signal for companies to participate in the training process. In case applicants scored similar points, however,

employers tend to prioritize university graduates over TVET due to the aforementioned reasons.

As articulated by Solomon (2016) and confirmed by both the education roadmap (MOE, 2018) and policy and strategy (MOSHE, 2020), the program failed to meet the demand of the employers for obvious reasons associated with shortage of training inputs, poor industry linkage and lower participation of stakeholders in the training process. The change in curriculum, at least three times in the past three decades, has confused employers, giving the impression that graduates were endowed only with a limited unit of competence, while employers demand a holistic skill for cost efficiency. The findings of this research concluded that graduates from TVET institutions failed to demonstrate the competence required by employers, which required further training. Consequently, TVET graduates, employees, and employers do not consider TVET as an alternative pathway for wage employment. Besides, though some researchers (for example, Mehari and Belay, 2017) reported a shortage of finance as the root cause of unemployment for TVET graduates, no finding was reported in this study.

6. Conclusions and Recommendations

A good understanding of TVET by employers could be taken as a step forward to the sub-sector; however, hesitation to hire graduates remained a serious problem. The complex nature of hiring TVET graduates, in comparison with other graduates, is the other pressing issue that needs immediate attention. The lack of a holistic nature in TVET curricula should be reviewed as employers demand this kind of skill, knowledge, and attitude from TVET graduates. Though both the policy and strategy equally considered TVET graduates to create their own jobs or be hired in other business organizations, a review of relevant literature indicated the government's encouragement of the former. While a considerable number of TVET graduates are left

without employment, it would be difficult for new entrants to be enrolled, which requires the special attention of training providers and authorities. The training qualification framework and the employment regulations of the country need to be commensurate with those of universities. Therefore, these issues are expected to be addressed through future studies in the area.

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