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Exploring Factors Affecting the Success of TVET-Industry Partnership: A Case Study of Adama Polytechnic College, Oromia Regional State, Ethiopia

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ABSTRACT: The purpose of this study was to explore factors affecting the success of TVET-industry partnerships. A case study design of the qualitative research method was used to achieve this objective. For the study, one polytechnic college of Oromia regional state, and two industries were purposively selected. From the sample polytechnic college and industries, a total of 17 sample respondents were selected. Out of 17 respondents, 10 respondents were selected using the snowball sampling method, and the rest 7 respondents were selected using the purposive sampling technique. The qualitative data were collected through an in-depth interview and document analysis. The data were analyzed using thematic approaches. The findings revealed that TVET-industry partnerships were found weak. Lack of key stakeholder's awareness shortage of improved training equipment and machines in polytechnic colleges, absence of trainee health insurance policy, lack of incentive mechanisms for private industries, lack of employer industries involvement in designing and developing occupational standards, and preparation of curriculum were some of the impediments of TVET-industry partnership. Based on the findings it was recommended that the Oromia TVET bureau in collaboration with other relevant concerned regional authorities and TVET colleges, set new strategies for creating strong awareness for industries, companies, and other relevant stakeholders on the purpose and advantages of implementing successful TVET-industry partnership. Finally, the Oromia regional government in collaboration with the TVET bureau needs to create policy-supported incentive strategies such as giving occasional privileges of duty-free import, tax reduction, and regional government recognition awards based on the level of partnership contribution to TVET institutions in promoting TVET-industry partnership.
KEY WORDS: *employability skills, industries, and partnership*

I. INTRODUCTION

In today's world, the revolution of knowledge, innovation, and information is considered an important factor regulating the psychological, technological, economic, political, and social world. Undoubtedly, Organizations are facing critical challenges such as globalization, the emergence of knowledge-based economies, strong competition, and rapid technological changes. The acquisition of workplace skills is seen universally as a key driver of economic and technological development. Therefore, it is imperative for effective leaders of institutions or organizations to be constantly adapting their approaches to fit the situation and organizational contexts (Bolman and Terrence 2003). The essential role of Technical Vocational Education and Training (TVET) in facilitating skills development for the socio-economic and technological development of countries globally accounts for the increasing importance that is being attached to TVET (UNESCO, 2009).

Technical and Vocational Education and Training (TVET) is an educational approach that is oriented by the training process and emphasizes what is to be done in the workplace to meet the industry's requirements and also to enhance individual development. There is a need for increased networking and integrated approaches to influence the outcomes of technical and vocational education. Adequate collaboration between technical and vocational education and training (TVET) institutions and industries would lead to the provision of relevant practical skills that would contribute to the graduate's employability.

Adequate supply into the labor market of graduates with viable skills underpins a nation's ability to position itself against global competitors and increase its capacity for innovation and enterprise. Thus, amidst the increasing global socio-economic challenges, nations are investing in education that will produce highly self-reliant, confident, and competent graduates (World Bank, 2019; ILO, 2015). Stakeholders in education including employers of labor needed to be concerned about the graduate acquisition of skills relevant to today's

world of work. The increasingly important role of technical and vocational education and training, and the needs of the labour market are changing the training approaches of TVET institutions. There is a need for increased networking and integrated approaches to influence outcomes of technical and vocational education (Atchoereria, &Delluc, 2001; Afeti, 2006). One of the salient features of TVET is its alignment towards equipping graduates with employable skills through Competency-Based Education and Training (CBET) (Dasmani, 2011). Consequently, to guarantee employable skills among graduates, Ethiopia has made efforts to improve TVET by establishing a federal TVET Agency, designing a national TVET strategy, the developing of national TVET qualification framework among other things.

The major customer of TVET is the industry. To meet the manpower needs of the 21st-century workplace, the manpower workforce has to possess the right skills, up-to-date knowledge, the right attitude, and abilities to do the work in line with the demands of the occupation. All these can be achieved through a functional and effective TVET-industry partnership. Without the linkage with the industry, TVET graduates cannot maintain professional competencies and also the industrial output can't grow only with low-level human resources (World Bank, 2017). The goals of preparing graduates with enhanced employability skills without adequate collaboration between technical and vocational education and training (TVET) institutions and industries will not be possible. Industry participation in TVET curriculum and workplace training opportunities is the primary way of achieving this. If employers are not involved in the process of the specific skills attitudes and behaviors required by graduates, they are less likely to see any relevance between TVET and their skills needs. Training is a strong determinant of achieving the objectives of education programs such as Technical Vocational Education and Training (TVET). However, a series of reports from the labor market (such as the International Labour Organization) on the status of TVET graduates in Africa shows that TVET graduates do not possess employable skills. This nonpossession of employable skills is a result of the TVET delivery system in Africa; which is characterized by inadequate human and material resources amongst others (World Bank, 2017; ILO, 2015)

Globally, developed countries have given more attention to TVET due to its importance to economic development. For instance, in Germany, training involves a dual system whereby 80% of instruction is done in industries and 20% of instruction in schools to equip learners with relevant employable skills. Training is largely employer-driven and the emphasis is on action-oriented, practice-oriented, and application-oriented modes of teaching and learning (UNDP, 2010). In Singapore, there is a National Manpower Council that ensures training is relevant to the needs of the labor market. In the same way, in Australia training curriculum is defined by industries and not the government or TVET institutions and it combines both school-based and workplace training. This ensures that the training curriculum remains relevant and trainees are linked to the market needs. Udofia, et.al (2012) revealed that there is a significant relationship between trainer quality, training methods, training facilities, and acquisition of employable skills by trainees. The study conducted in South Africa by Maeko &Makgato (2014) revealed that the quality of TVET teachers is poor since they do not have frequent exposure to relevant industries to keep abreast with the latest technological developments. A trainer of vocational and technical subjects must not only teach but must use methods that will enhance trainees' acquisition and development of knowledge, skills, interest, and self-concept formation.

According to the Education and Training policy of the Federal Democratic Republic of Ethiopia (FDRE), the technical and vocational education and training strategy described TVET as an education system that promotes competency-based training (MoE, 1994). In connection with this, the national TVET strategy indicated that TVET has to respond to the competence needs of the labor market and create a competent, motivated, and adaptable workforce capable of driving economic growth and development (MoE, 2008). TVET is, therefore, it is an avenue to empower the youth to be self-employable, to have employable skills, and to boost economic development.

The objectives of the Ethiopian national TVET Strategy were designed with this alignment; to create a competent, motivated, adaptable, and innovative workforce in Ethiopia contributing to poverty reduction and social and economic development through facilitating demand-driven, high-quality technical and vocational education and training, relevant to all sectors of the economy, at all levels and to all people (MoE, 2008). Moreover, the Ethiopia Occupational Standards (EOS) is the core element of the Ethiopian National TVET Strategy and an important factor within the context of the National TVET-Qualification Framework (NTQF). The national standards define the occupational skill requirements and expected outcomes related to a specific occupation without taking TVET delivery into account (MoE, 2008).

The acquisition of relevant skills through training is a prerequisite for graduates' employment and productivity at work. The Ethiopian Growth and Transformation Plan (GTP II) assigns a key role to the

education sector for accelerating economic growth, achieving development goals, and becoming middle-level income countries by 2025. Specifically, technical Vocational Education and Training has undergone qualitative and quantitative changes in Ethiopia. The number of TVET institutions and trainee enrollment has highly increased. The budget allocated for TVET and the institutional capacities of regional TVET agencies are elevated nowadays. Following the Education and Training Policy of 1994, TVET in Ethiopia was not only tremendously expanded and diversified, but efforts were made to make it relevant to the national development needs of the country. In connection with these, the Ethiopian national TVET strategy has been developed to respond to the competence needs of the labor market by creating a competent, motivated, and adaptable workforce capable of driving economic growth and development. Despite the ever-increasing effort from the government, particularly through the practice of an outcome-based training system, interventions for skill development, and attempts to make the TVET system more responsive to the labor market, the unemployment rate of TVET graduates is significant (MoE, 2008). In an outcome-based approach, the linkage between TVET and industry is very necessary. For the TVET graduates, industry is the main place for the job market and for the industry, technical and vocational and training institutions are the main. School-based training, internships, apprenticeships, and cooperative training programs are major forms of training integrated into the training activities of the TVET education system in Ethiopia. Although such training approaches have been in place, the results of the TVET-industry partnership towards the intended goal were not effective.

The national TVET strategy indicated that the cooperative training modality requires trainees to spend 30% of their time in the TVET institution to develop basic skills and 70% in industry to acquire practical skills in the workplace. This study is designed to examine factors affecting the success of TVET-industry partnerships using the following basic questions. 1) How does, the status of the TVET-Industry partnership is described as perceived by Polytechnic college deans and trainers, industry managers, and employed TVET graduates? 2) What are the major factors hindering the success of the TVET-Industry Partnership as perceived by Polytechnic college deans and trainers, industry managers, and employed TVET graduates?

Different local studies revealed that the status of a partnership between the TVET training institutions and stakeholders at all levels is found to be low resulting lack of chances for the trainees to be trained in industries to acquire and develop their employability skills in addition to class-based training (Bayisa 2016; Birhane, 2014; Bantalem, 2014). Moreover, most employers in the country foreword complaints about TVET graduates as possessing low-level skills required for employment in industries, low practical knowledge, and lack of confidence in carrying out their duties and responsibilities. These studies also found that graduate competencies in using skills and knowledge acquired, and the status of collaboration between TVET institutions and stakeholders have been found weak. Empirical evidence showed that the success of workplace-based training is more possible through an enduring partnership between TVET institutions and industries.

International recommendations of UNESCO for the improvement of technical and vocational education and training systems systematically referred to the need to form closer links between training and the labor market. It was found that industrial attachment was the most pronounced linkage; lack of initiative by TVET institutions and poor response from the industries were among the major challenges facing the partnership of TVET and industry (UNESCO, 2015).

The relationship between industry and academic institutions occurs in various ways. Theoretically, there are three types of partnership programs. The partnerships between industry and academic institutions have three major foci: philanthropic, research-related, and training-related (Austin and Peter, 2000). The first is Philanthropy: This type of partnership program is the most common structure of partnership between industry and higher education, engaging the industry as the corporate donor and the institution as the recipient (Austin & Peter 2000). Furthermore, philanthropic partnerships generally demand the minimum strategic arrangement, and relationship management, once established, can lead to opportunities for research or training partnerships. The second is Research-based: Research-based partnerships include a wide range of partnering activities ranging from individual faculty engagements to complex research contracts forged at the institutional level (Washburn 2005; Bok 2003). The third is Training-based partnerships: Training-based partnerships have become better known in the last few decades, existing in many forms since the growth of vocational education, to address issues such as the acquisition and development of employee skills, specifically in the areas of technology and science. Different scholars state that training-based partnerships are considered as an “add-on,” and tangentially linked to the main academic mission. Training partnerships (including outsourced training or outside training) are a form of training provided by professional training organizations. These include private companies, educational institutions such as colleges and universities schools, and publically supported training centers for organizations both in the private and public sectors (Allen 2002). Moreover, the transfer of knowledge is accomplished through a teaching and learning environment where the curriculum is related at least to some extent to industry partner needs. Successful partnership demands paying considerable attention to factors that

have a significant impact on their success. In this regard, Bray and Scalzo (2005:98) indicated that Partnerships, like other commercial activities, "have to be carefully planned, managed, evaluated, and nurtured over time' (Bray & Scalzo 2005:98).

Different scholars pointed out that, partnership programs cannot be viewed simplistically as a 'one-way street' favoring only the industrial or educational institution's interest (Giesecke 2012; Borrell-Damian. et al., 2010). The partnerships between TVET institutions and industries are built on the recognition of mutual needs and perceived value. Bowie (1994) pointed out that, the industry partner can obtain an advantage through access to skilled scholarly researchers connected to research facilities; tailored training and collegiate programs for their workforces; and improved vision and reputation based upon partnership with training institutions. In addition to the acquisition of new employee competencies, these partnerships may impact the competitive benefits industry (Bowie 1994; Meister 2003). For the TVET institution, a partnership with industries can create the opportunity to get access to modern technologies for their trainers and trainees, and customize their training to the nature and the needs of the industry, it also offers a new source of income including access to finance for research endeavors in a vocational area (Meisler 2004; Meister 2003; Newman, Couturier & Scurry 2004).

The theoretical framework of this study was based on the strategic partnering theory. The conceptual framework covers three key impacting factors in training partnerships. These include environmental factors influencing training partnerships, training factors in partnerships, and people factors impacting partnerships. These three key elements are needed in building strategic partnerships: environment, training/process, and people (Lendrum 2003). According to Lendrum, the environment defines the borders within which partnerships function, 'as this will be determined in large part by the culture, strategy, and structure of the partnering organizations and the marketplace in which they operate' (Mohr &Spekman 2006; Callan and Ashworth, 2004; Lendrum 2003). Environmental factors relate to the diverse aspects of the work environment and workplace which either facilitate or impede effective training partnerships. The environment provides the borders within which partnerships work (Lendrum, 2003). The training model consists of a diversity of profit and non-profit drivers for training provision. These include considerations regarding the flexibility and customization of training partnerships, administrative arrangements before and during training activities, and insight into the expected return on investment in training (Callan & Ashworth 2004; Cruz & Marques 2012; Ivery 2010:20-37; Meister 2003; Palmer and Mullaney, 2001). In developing partnerships, people issues play a significant role, in which both parties use a variety of mechanisms to maximize the level of communication and quality of relations within the partnership, as well as ensuring a high level of trust (Callan & Ashworth 2004). However, the environmental factors mentioned earlier are important; Callan & Ashworth noted that people skills are seen as more important than some environmental factors in developing successful partnerships. Supporting this idea, Porter (2000) also states that environmental drivers alone are inadequate in establishing successful training partnerships. Accordingly, Callan and Ashworth (2004:20-21) suggest that to achieve success, 'organizations need to develop personal relationships, have face-to-face contact, a shared interest, and develop long-term relationships with local institutions such as research groups and training providers'. Finally, Lendrum (2003) concludes that partnership success will not happen without the involvement of the right people from the managerial level and individuals in the organization. Wollenborn. (2010) pointed out that, it is essential to comprehend the management styles, communication, involvement of staff, allocated funding and resources involved, trust, and other issues that impact relationships in a partnership and their quality. These factors presented by Lendrum, Callan, and Ashworth are similar to the current impacting factors on partnerships between TVET institutions in Ethiopia such as Polytechnics and their industry partners. Therefore, this model was selected as a theoretical framework for this study.

TVET programs in the Ethiopian context are currently categorized into four sectors having different training components within them. The sectors are the agriculture sector, economic infrastructure sector, culture, and sport and tourism sector, industry development sector. The industry development sector encompasses textile and garment, metal manufacturing, furniture making, and information technology as training components. The TVET-industry partnership related to textile and garment technology, and metal manufacturing fields of the industry development sector were considered in this study. Using the aforementioned theoretical lenses, the researchers want to explore factors affecting the success of TVET-industry partnership

II. METHODOLOGY

2.1. Research Design

The study comprised a qualitative paradigm to explore the views of the TVET leaders, trainers, employed graduates, and employer industries towards factors influencing TVET-industry partnership. This study is located within the interpretive paradigm which describes the view that knowledge about reality is socially constructed and can only be accessed through direct social interaction with people's shared meaning,

language, experiences, and consciousness (Cresswell, 2003; Myers, 2009; Cohen, & Morrison, 2011). This paper explored factors that affect the success of TVET-industry partnerships in the case of Adama Polytechnic College. To answer the research question, a qualitative approach with a case study design was employed. The design was considered appropriate because it enabled the researchers to interact with the participants in their settings. The case was about factors affecting the TVET-industry partnership. In the views of Denzin and Lincoln, qualitative inquiry situates the researcher within a world or group of interpretive activities that makes the world observable to the researcher. In other words, the researcher is intimately involved in the process (Denzin & Lincoln, 2011). The data generated in a qualitative inquiry conveys the views, actions, and motives of individuals and the environment in which they find themselves (Myers, 2009). When a study aims to provide answers to the "how" and "why" questions, where, the researcher does not have control over the flow of information from participants, and then a case study is employed (Yin, 2008; Shuttleworth, 2008).

2.2. Source of Data

In this study, Primary data sources were TVET leaders, trainers, employed graduates, and employer industries. Secondary data sources mainly covered technical document analysis (TVET strategy, occupational standard, and curriculum). For qualitative researchers, the selection of a document for analysis should be strictly based on its relevance to the study at hand and the time frame allotted to carry out the study (Bell 2010; Kaplan & Maxwell (2005). Based on this assumption, a critical review of the following three national documents (2008 TVET national strategy, OS, and curriculum for garment technology and metal manufacturing level III) was reviewed. These documents provide the necessary information needed for the study.

2.3. Sampling Techniques and Sample Size

This study was conducted at Adama Polytechnic College, ETUR Textile PLC, and Adama Steel Factory. Participants of the study were TVET leaders, trainers, employed graduates, and employer industries managers/supervisors. Considering their active collaboration for industrial attachment, the ETUR Textile PLC and Adama Steel Factory which have a partner relationship with Adama Polytechnic College for cooperative training, internship, and apprenticeship, were selected purposively. Qualitative data collection (interviews) was conducted with 2 Managers and 6 supervisors) in the said company, from Adama Polytechnic College (1 dean, 2 vice-deans, 2 sector heads, 6 trainers), and 5 employed TVET graduates.

2.4. Methods of Data Collection

To answer the research question of the study, a semi-structured in-depth interview guide was used. Some of the major topics addressed in the interview were identifying the current status of the TVET-industry partnership, factors affecting the TVET-industry partnership, and the contribution of the TVET-industry partnership on the acquisitions of skills for employability of TVET graduates.

2.5. Method of Data Analysis

Data analysis involved transcribing, coding, and categorizing data from interviews and developing them into three major themes. The themes were environmental, training, and. People. Therefore, thematic analysis was used in this study.

III. RESULTS

This section will focus on the presentation of the results related to factors that influence the partnerships between the TVET institution and industry, and their impacts on the acquisition of TVET graduates' skills for employability. These factors include environmental, training, and people factors (Lendrum 2003). Based on the research questions (How is the status of TVET-Industry partnership described as perceived by Polytechnic college deans and trainers, industry managers, and employed TVET graduates?, What are the major factors hindering the success of TVET-Industry Partnership as perceived by Polytechnic college deans and trainers, industry managers, and employed TVET graduates?) factors emerging consistently from the respondents that impacted the success of partnerships between TVET institutions and partner industry are discussed below:

3.1 Environmental factors

This section of the paper covered a range of environmental factors influencing TVET-industry partnership towards acquisition skills for the employability of TVET graduates. It specifically focused on answering the "How is, the status of the TVET-Industry partnership described?" "What are the major environmental factors affecting the establishment of partnership and its success as perceived by trainers, employed graduates, and employer industry managers? How does the awareness of TVET institutions and industry staff affect TVET-industry partnerships? How do industry readiness to accept trainees for cooperative training, apprenticeship, and internship programs be described?

From the views of TVET institution trainers, and employed TVET graduates perspective, the study revealed that low level of commitment from TVET institutions to functionalize the partnership relation with industry, and lack of readiness from industries to accept trainees for cooperative training make partnership relations functional are the major challenging factor that is currently affecting the TVET-industry partnership. In addition, employers reflected that, however, they believe in cooperating the training institution through cooperative training and other modes of training as their social responsibility, the issue of trainee's health insurance or the basics of workplace safety and environmental protection while working on machine, the resources to be used for training purpose, mismatch between the number of trainees and capacities of the industry to accommodate, and lack of related incentives from the government are their major concerns related to the implementation of TVET-industry partnership.

Respondents consistently revealed that there is generally a weak collaborative work culture between TVET College and that of partner industries. The level of awareness towards, the benefits of a partnership between TVET trainers, employed TVET graduates and employers also varies. TVET trainers and employed TVET graduates have a better understanding than employers of the institutional benefits of TVET-industry partnership. No difference in the perception of the benefits of TVET-industry partnership between TVET trainers and employed TVET graduates was revealed in this study. In connection with these, the results of a review of the national TVET strategy (MoE, 2008) generally stated that to encourage stakeholders the government is prepared to share responsibility proportionate to the capacity of the respective stakeholders and entertain different interests and opinions. However, the TVET strategy document does not indicate anything specifically related to trainees' and trainers' health insurance or basics of workplace safety, and incentive mechanisms for industries who are involved and working in partnership with TVET institutes. Participants of this study from TVET College and Industries have shared similar perceptions towards the location and proximity advantages their respective organizations have to strengthen partner relationships.

About the commitment to strengthen the TVET-Industry partnership, TVET trainers and employed TVET graduates have shared similar ideas expressing industries managers/ supervisors are not fully committed to a facilitated cooperative training environment for assigned trainees as per the requirement rather in some conditions cooperative trainees are considered as supplementary work-force or placed on unrelated activities of the industry.

3.2 Training Factors

This section covered issues related to training factors and specifically focused on answering "How does the practice of training design adjustment described in their customization, and administrative arrangements enhance TVET graduate skills for employability as perceived by trainers, employed graduates, and employers?"

Training is one of the key drivers of partnerships between industry and educational institutions. Training may be affected by various factors; the availability of training materials, necessary human resources, proper curriculum, models of delivery, and technologies are some of the major factors. Regarding the training materials, this study revealed that the variety of training materials available for school-based training does not match with the modern materials available in the industry. This mismatch caused, the cooperative training in partnering with industry to be challenged. This belief is commonly shared by TVET trainers, employed TVET graduates, and industry managers. Moreover, employed TVET graduates also added that the problem of mismatching between the curriculum requirement to be considered during cooperative training, and the real operation in the industry is also one of the major challenges that force the industry not to accept the trainees for cooperative training.

TVET trainers and industry partners mainly expressed their satisfaction with the administrative arrangement on how they had managed the administrative processes during the training process
However, Industry managers and supervisors indicated that the TVET institute did not provide information about the tasks to be performed as per the work nature of their industry. They also added that, during cooperative training, TVET institutes expect only their training requirement without customizing it to the needs and operational standard of the industry which implies misalignment between training standards and workplace training requirements.

3.3. People Factors

How does, the TVET management of training partnership is described as perceived by trainers and employers?
The results of this study revealed that those information providers have a positive outlook towards TVET-industry partnerships for mutual benefits. However, the TVET-industry partnership in practice was not effective

due to different obstacles arising from the TVET institution and the industries. Low commitments of industries, low level of awareness and understanding of the industries on the curriculum to be implemented were mentioned as some of the major obstacles posed by TVET trainers. On the other hand, informants from the industries as employers/consumers indicated that lack of operational capacity of TVET institutions in arranging collaboration, the curriculum is static while the needs of the labor market are dynamic, the risk of health insurance to accept trainees for cooperative training are the contributing factors for the TVET-industry partnership to unsuccessful. Industry managers and supervisors reflected that the TVET institution lacks commitment to working to build trust in the capacity of TVET trainers to prepare their trainees properly to suit industrial operations and the relevance of TVET-acquired skills to their industry. On the other hand, TVET deans and trainers complained that industries are not willing to create an encouraging environment for frequent communication on how the relationship is to be managed in the training partnership

IV. DISCUSSION

Based on the findings, this research has highlighted several challenges faced by both TVET colleges and industries to practice effective TVET-industry partnerships. A series of interviews to explore the major challenges faced in enhancing TVET-industry partnerships were conducted for both TVET providers and industries. The first challenge that was highlighted and explained by TVET Providers was the lack of readiness from the industries to strengthen their partnership with TVET colleges. About the readiness of industries towards the partnership work with the TVET College trainer, one respondent narrated the following:

> Whenever we deal with industry managers/supervisors for cooperative training, provided that they agree to work in collaboration, we feel bad because they (especially some of them) consider us a noise or troublemaker in their work environment. They simply treat us assuming that the situation may cause them negative consequences from the government side. Most of the time they cannot say no rather, they use different delaying mechanisms to accept trainees for cooperative training. Similarly, other sector heads, from the TVET College said that the majority of industry managers/supervisors of our partner have no clear awareness of the relevance of collaborative work, they cannot consider it as a mutual benefit but they perceive it as a burden to their industry. Even if they accept trainees for cooperative training the probability that trainees are assigned to the expected appropriate job is low. With all the situations we are forced to use the given chance whether where the trainees assigned in the industries are appropriate or not (PI04, APTC, Interview data, February 2020)

On the other hand, the information providers of the industry reflected the low level of commitment from the TVET colleges to enhance the TVET-industry partnership. In this regard, one of the supervisors said the following:

> We believe in working with TVET collaboratively as partners even though we are profit-making companies and it is our company's responsibility to do so as part of the community service. However, the training providers lack to understanding of the work environment of the industries and they are not committed to improving the partnership with all the challenges. We are partners and serve them based on their request but we may not fulfill their requirements due to various reasons such as shortage of resources, capacity to accommodate their demand, risk of health insurance to let trainees work on machines, etc(PI_{01}, ECI, Interview data, February 2020)

To implement a successful collaboration, both TVET providers and the industry should feel that they have mutual benefits; more importantly, the industry should feel that linking with TVET delivery will lead them to significant benefits. However, TVET colleges and Industries in Adama city administration of Oromia region were not operating in this alignment. Industries have not seen the benefits and do not feel encouraged to realize industry collaboration with TVET. Similarly, TVET College also showed a low level of commitment to knocking on the door of the industries and facilitating their relationship with them. This practice deviates from the assumption of Callan & Ashworth (2004) that posits the importance of readiness of the partner industries as one of the environmental factors affecting the success of TVET-industry partnerships. These findings confirmed the conclusions of UNESCO that indicated a lack of initiative by TVET institutions and poor response from the industries are among the major challenges facing the TVET-industry partnership (UNESCO, 2015)

Empirical evidence showed that successful business partnerships or collaborations commence through comprehension of how to create effective and productive partnerships between two or more organizations. TVET institutions and Industries shared many common views on both opportunities and challenges that a partnership or collaboration offers them. Partnership programs cannot be viewed simplistically as a 'one-way street' favoring only the industrial or educational institution's interest (Giesecke 2012; Borrell-Damian. et al., 2010) The benefits of creating partnerships for both TVET institutions and industry can involve increasing their impact within an industry, finding new opportunities for generating revenue, offering opportunities for

access, and establishing a way to preserve the organization's autonomy in the marketplace. Similarly, the benefits of partnerships for TVET institutions, and especially for their trainer staff and trainees, are that as they study the requirements of an industry and gain real-life experience in practical problem solving, they are also gaining skills, knowledge, and experiences that cannot be obtained in school-based training (Peter 2003; Wollenburg, 2010). Therefore, the mutual benefits of the partner organizations should be considered as one of the central elements to enhance effective partnerships (Thacker 2002; Roever 2000).

Other ranges of environmental factors such as the issue of trainee's health insurance, collaborative work culture, and level of awareness towards the benefits of TVET-industry partnership among the partners were explored. The findings showed that the absence of trainee health insurance during their placement for cooperative training, weak collaborative work culture, and differences in the level of awareness towards the benefits of TVET-industry partnership among the partner organization were pointed as the challenging factors impeding the success of TVET-industry partnership. These findings are not in agreement with the positions of different scholars that put these factors as key drivers of partnerships between industry and educational institutions like TVET (Thacker 2002; Roever 2000). The critical consideration of these factors can only be feasible through an effective TVET-industry partnership.

In connection with the training factors the research findings highlighted that there is a misalignment between the real operational situation of the industry or the needs and operational standards of the industry and the training/curriculum standards. One of the industry supervisor respondents said that:

> …most of the time there is a mismatch between the technology we are using in our industry and the technologies TVET colleges are expecting to find from our industry as per their curriculum requirement… we are more advanced since we must move with the needs of the labor market. Due to such factors sometimes, we are challenged to accept trainees for cooperative training purposes as one of the work components in our partnership (PI_{01}, APTC, Interview data, February 2020)

Studies indicated customization and operational flexibility in working with partner organizations play a critical role in success. The concept of customization and flexibility has attracted the attention of several fields including education and training (Cruz & Marques 2012; Ivery 2010; Meister 2003). Therefore, TVET institutions need to focus on working with customization and flexibility of the training requirements as per the needs and operational standards of the industry. Supporting this idea Cruz and Marques (2012) note the importance of a certain level of freedom within systems, providing the necessary flexibility and adaptability to deal with the necessary change. In the same way, customers of technical and vocational training need to vary the requirements that should be addressed with a flexible and varied approach to conducting cooperative training.

Regarding the basics of People factors that affect partnership, this study revealed that TVET institution leaders lack the commitment to working to build trust in the capacity of trainers to prepare their trainees properly to suit industrial operation and the relevance of TVET-acquired skills to their industry. On the other hand, leaders of TVET complained that industries are not willing to create an encouraging environment for frequent communication on how the relationship is to be managed in the partnership. Empirical evidence indicated the importance of the administrative management process during the commencement of partnerships between partner organizations (Palmer and Mullaney, 2001). The development and implementation of partnership management strategies determine the continuous growth and maintenance of the collaboration between TVET institutions and industries (Mohr &Spekman 2006). This is closely connected to the partner organizations' leaders' role and commitment. Supporting this idea Bolman and Terrence (2003) argue that effective leaders of institutions or organizations should constantly adapt their approaches to fit the situation and organizational contexts. This is particularly so for technical and vocational education and training and industries in partnered situations.

V. CONCLUSIONS

Technical vocational education and training are considered the foundation of industrialization in developed countries the world over because of their impact on productivity, and social and economic development. In a developing country like Ethiopia, most training programs in TVE institutions are designed in line with the needs and aspirations of the labor market and the industries. However, practical experiences showed that the linkage between TVE institutions and the industries is very weak. The Ethiopian TVET system generates several interesting features for skills acquisition. One of the interesting features as a component of the competency-based training approach is cooperative training and school-based training that dictates 70 percent of training is believed to be provided in enterprises and 30 percent in TVET colleges. The implementation of such a strategy can only be feasible through effective TVET-industry partnerships. However, the status of the TVET-

Industry partnership was found to be low such as in the case of Adama Polytechnic College. This is a result of poor awareness from the side of employer industries and maybe the TVET institutions on the mutual benefits of a partnership. Many problems influence the effective implementation of partnership collaboration between TVET institutions and industries. Some of the major problems are poor responses from industries, the low commitment of TVET institutions to strengthen partnership relations with industries, lack of national policy and strategy support for trainee's health insurance during cooperative training in industry or workplace, lack of curriculum flexibility and customization of curriculum for training in industry, lack of modern training infrastructure in TVET institution to cope up with the needs and demands of work operation in the industries, and lack of leadership commitment as per expectation. Therefore, various efforts of the government, TVET institutions, and industries, related to creating a conducive partnership environment for industries, policy guidelines related to trainee and trainer's health insurance, awareness creation, curriculum flexibility, and updating are imperative support for enhancing TVET-industry partnerships success.

VI. IMPLICATIONS

Based on the findings of the study, it is recommended that the Oromia TVET bureau in collaboration with other key stakeholders should set new strategies for creating strong awareness for industries, companies, and other relevant stakeholders on the purpose and advantages of implementing successful TVET-industry partnerships. This new awareness creation strategy forms a platform at the national and regional levels composed of different stakeholders' who consistently conduct panel discussions, conferences, and workshops, increase the campaign for the awareness creation on the mutual benefits of partnership, and assess the status of TVET-industry partner relationship and provide feedbacks may significantly contribute to the enhancement of TVET-industry partnership. Secondly, to support and encourage industries towards their partnership with TVET institutions, the government should create policy-supported incentive strategies that enable industries to get the advantage of duty-free import and tax reduction based on the partnership commitment those industries have with TVET colleges. Finally, the industry-agreed competency standards need to be developed. In connection with this, the TVET curriculum should be reviewed and updated to cope with the constantly changing needs and demands of the labor market. So, the gap between the requirement of training through a cooperative approach on the part of the TVET institutions and the real work situation in the industries will be minimized.

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