

The role of regional horticulture **Technical and Vocational Education and Training**  
in the graduates' employability and employment outcomes

Insights from Ethiopia



**Utrecht University**

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## Abstract

The Ethiopian government organized Regional Horticulture TVET Programs (RHTPs) to counteract the lack of skilled workers and entrepreneurs in the horticulture sector. However, studies on the effectiveness of these programs is limited and largely on a national level. The role of the regional level context is scarcely considered. Hence, the central question of this research is: *How do factors regarding economic, social and cultural capital impact the effectiveness of regional horticulture TVET programs in employability and employment outcomes of Ethiopian horticulture TVET graduates in comparison with national TVET studies?* The considered three capitals (economic, social and cultural) are part of the academic literature which are vital assets for employment. Various factors based on the three capitals were considered to analyse the effectiveness of RHTPs in training competent employability skills and providing the necessary employment services for TVET graduates. Following a single case study design, the focus of this research was a TVET (regional) college, located in the Oromia region. 54 participants were interviewed from four stakeholder groups: TVET graduates, TVET associates, federal Ethiopian government and private horticulture enterprises. The data was analysed using the Constant Comparative Method (CCM) which was appropriate for comparing the data of the different stakeholders, and regional with national results. In line with prior literature, this research indicates that employability promotes the graduates' competition in the labour market while employment is promoting immediate access to employment prospects. Several differences appear among RHTPs and results from national TVET studies regarding the employability and employment outcomes. Going beyond prior studies, considering the cultural capital related to employability outcomes two factors cause the skills mismatch among RHTPs in the Oromia region; the federal government is not creating awareness among enterprises when establishing the Occupational Standards, and RHTPs are not uniformed and do not operate with a holistic approach. Further differences were found in aspects of the knowledge transfer from vocational teachers to students. Regarding the employment outcomes in the formal sector considering the economic context, differences were found in the long bureaucracy processes for employment and the employment services which resemble in lack of employment opportunities. No differences were found regarding the employment outcomes in the formal sector in the context of social capital. Finally yet importantly, regarding economic capital and self-employment, land lease is a hindering factor in the Oromia region for entrepreneurship among TVET graduates. This research increased insights into factors which are important for the effectiveness of RHTPs in the Oromia region to successfully train students with the relevant employability skills and providing the necessary employment services to easily realize employment among TVET graduates. It has also raised the importance of the collaboration between the approached stakeholders to address the factors which challenge the effectiveness of RHTPs in the Oromia region. Such collaboration will make TVET graduates more attractive in the labour market and boost their opportunities for obtaining a job. More research will be needed to close the gap of the skills mismatch and to make the employment system more efficient.

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## List of Abbreviations

ALAA	Agricultural Land Administration Authority
COC	Center of Competence
CCM	Constant Comparative Method
CT	Cooperative Training
DA	Development Agent
ESDP V	Education Sector Development Programme V
EIC	Ethiopian Investment Commission
EHAIA	Ethiopian Horticulture and Agricultural Investment Authority
EHDA	Ethiopian Horticulture Development Agency
EHPEA	Ethiopian Horticulture Producer Exporters Association
FDIs	Foreign Direct Investors
GDP	Gross Domestic Product
GTP II	Growth and Transformation Plan II
GoE	Government of Ethiopia
ICRA	International Centre for Development Oriented Research in Agriculture
ILO	International Labour Organization
LQS	Listening, Questioning and Summarizing
MoANR	Federal Ministry of Agriculture and Natural Resources
MoA-TVET	Federal Ministry of Agriculture Technical and Vocational Education and Training
MoE-TVET	Federal Ministry of Education Technical and Vocational Education and Training
MoLSA	Federal Ministry of Labour and Social Affairs
MoP	Federal Ministry of Planning
MoE	Memorandum of Execution
MSMEs	Micro, Small and Medium Enterprises
NGO	Non-governmental Organization
Nuffic	Netherlands Universities Foundation for International Cooperation
OS	Occupational Standards
RHTPs	Regional Horticulture TVET Programs
TVET	Technical and Vocational Education and Training
UNESCO	United Nations Educational Scientific and Cultural Organization



## 1. Introduction

The introduction is attempting to disclose information about the association between Technical and Vocational Education and Training (TVET) and employment, and to justify why this research is important in the field. It will set the topic in a broader context, gradually narrowing it down to a research problem and a research question.

### 1.1 Background

In the 21<sup>st</sup> century, developed as well as developing countries are facing the demands of a rapidly changing and increasingly globally competitive world. Significant forces are bringing change in the labour market, consisting of technological development, the outline of new manufacturing processes and amplified economic integration between countries. These combined driving forces of economic globalization inevitably lead to industrialization of various sectors, particularly in development countries (Tripney et al., 2013). Such industrialization induces employment and global market competition demanding for excessively skilled workforce, for which developing countries need specific skills development aimed at employment, often referred to as TVET (Esa & Abdul Rahman, 2014; Pavlova & Huang, 2013). The provision of employment opportunities through industrialization has not only raised the premium on skills but has also reinvigorated the economic status of developing nations where countries such as China and India have significantly upgraded their position in the global economy. However, the impact of economic globalisation has been unequal as other developing countries have not fared so well (Tripney et al., 2013). According to Tripney et al. (2013), there is an increase of jobs in the informal sector, characterised by a dependence on unskilled workers combined with reduction of employment in the formal sector. Moreover, they indicated that there are more skilled employees in the world than accessible jobs. As well, global unemployment is increasing as shocks incited by the international financial crisis endure to decrease the capacity of the global economy to supplement new jobs particularly in developing countries (Tripney et al., 2013). In essence, Ethiopia as a developing country to date is facing critical unemployment challenges among youth. Through TVET programs, the Government of Ethiopia (GoE) is trying to train graduates competent for employment to meet the demand of skilled employees of the country's emerging industries (Nganwa, Assefa & Mbaka, 2015; MoE, 2015). Among these, the horticulture industry is currently in the process of industrialization and provides employment prospects for skilled human resources (Alemu & Berhanu, 2018; EIC, 2017; Asfaw, Tolossa & Zeleke, 2010). In Ethiopia, there are various factors playing a role in the effectiveness of TVET programs to train graduates with the necessary employability skills and there is an ongoing debate regarding the employment prospects (in the formal sector and self-employment) of TVET graduates (Tripney et al., 2013; Brewer & Comyn, 2015; Hailu, 2012; Edukans, 2012; Biazen & Amha, 2009; Dibie & Dibie, 2014). Hence, it is crucial to investigate the conceivable factors that impact the effectiveness of horticulture TVET programs in Ethiopia regarding the employability and employment outcomes of graduates.

### 1.2 Prior literature

TVET can best be explained in consonance with the United Nations Educational Scientific and Cultural Organization's (UNESCO) explication that TVET programs are designed to "acquire the practical skills, know-how and understanding necessary for employment in a particular occupation" (AU, 2007). Middleton (1993) summed up the TVET approach in a relevant way to the African experience arguing that the prevailing view points to the idea that "TVET improves attitudes towards skilled, manual work, and thus diverts at least some young people from seeking the white-collar jobs that are in increasingly short supply". These arguments in support of TVET have meant that TVET programs are primarily regarded as occupational education referring to the provision of manual jobs occurring due to the driving forces of industrialization in developing countries demanding for skilled workers (Esa & Abdul Rahman, 2014; Pavlova & Huang, 2013; Tripney et al., 2013). In post-independence Africa many governments reverted to supporting TVET, based on the encouraging arguments of TVET. Hence, massive support from international assistance agencies was directed towards

establishment and expansion of TVET programs (Middleton, 1993). At this state, the work of Philip Foster (1965) in the 1960s was the first to challenge the notion that TVET is what African countries needed to address youth unemployment. He argued that it might be more productive to “encourage TVET schemes closely associated with the actual ongoing developments and quite divorced from the formal educational system”. Supporters of TVET have driven policies in favour of TVET in Africa. One is that TVET can be a cure to youth unemployment by training youth with employability skills for the manual jobs provided by industrialization, where governments will equip them with practical skills necessary for employment in the labour market (Psacharopoulos, 1997). In addition, Psacharopoulos’ (1997) argument that “instilling TVET based on what happened during the British industrial revolution, followed by Germany and Japan” is a conventional acceptance that economic progress gradually depends on technological skills. Hence, TVETs are seen to offer prospects to academically less competent scholars who are too impotent to advance through education, as not everyone can be qualified for top level occupations, which are in short supply in developing countries (Psacharopoulos, 1997).

Various factors in TVET educations are found to be relevant for the graduates’ personal development for employment. Hence, the significance of this research is following Occam’s razor principle which according to Taba (2015) “represents a scientific and a philosophic rule according to which interpretation of a complex phenomenon is made using the simplest theories in order to avoid repetition and ambiguous explanations.” Taking this into account, Rojewski (2009) set essentialism alias employability outcomes, and the reconstructionist strand of pragmatism alias employment outcomes, as the simplest and most relevant philosophies covering a wide range of factors for TVET educations to be effective in training graduates competent for employment. Employability outcomes pertain to the purpose of TVET to prepare graduates for (self-)employment by using a sequential organized curriculum, delivering employability skills demanded by the industry, having teachers with extensive industry-related experience and following a system based on practical experiences separate from the academic education. Employment outcomes refer to the purpose of TVET as an education to become more proactive in the transition process from student to worker, meaning TVETs should adopt a posture against injustice and inequity in employment issues for TVET graduates (Rojewski, 2009). According to Oketch (2007) and Blaug (1973) the indication from primary research did not match the prementioned welfares by Middleton (1993) that were attached to TVET. Regarding employability outcomes, Blaug (1973) stated that TVET graduates do not obtain the necessary employability skills matching the industries’ demands, and considering employment outcomes, Oketch (2007) argued that TVET graduates remain unemployed as they face employment challenges after graduation. Blaug (1973) designated that vocationalisation is unable to train scholars for specific careers with employability skills and condense mismatch between educational programs and the labour market. According to Oketch (2007), those who had undergone TVET often faced employment challenges and remained unemployed, as TVET’s are delinked from unemployment solution functions. Such strong arguments against the effectiveness of TVETs have to date not deterred African countries from continuing TVET programmes in education systems. As nowadays, addressing unemployment through TVETs is still a fundamental concern in many developing countries in Africa, including Ethiopia (Dibie & Dibie, 2014).

Ethiopia is facing critical unemployment issues among youth, which is one of the most essential development problems in the country (Nganwa, Assefa & Mbaka, 2015). Consequently, the GoE continuously looks for ways to address unemployment and alleviate poverty. Therefore, the government’s objective is to establish demand-oriented TVET programs to train competitive human resources with employability skills required by the country’s emerging industries to address (youth) unemployment (MoE, 2015; Benti, 2014). In this regard, a major concern is whether the employability skills of the trained young Ethiopian graduates through TVET programs respond to and match the practices demanded by the industries (Brewer & Comyn, 2015). Regarding employability outcomes, studies (Kellow, Ayele & Yusuf, 2010; ILO, 2017) have shown that a skills mismatch in

TVET programs was evidenced because most curricula used in TVET are not developed according to the Occupational Standards (OS), which are based on industry generated standards developed by the Ethiopian government in cooperation with industries. Due to this deficiency as well as other factors, a significant number of graduates remain unemployed after graduation (Kellow, Ayele & Yusuf, 2010; ILO, 2017). In the essence of employment outcomes, Oketch (2007) implied that it is challenging for TVET graduates to become employed after graduation despite their employability skills. Ethiopian context studies (Biazen & Amha, 2009; Dibie & Dibie, 2014) have shown that employment prospects for skilled labour force, such as the TVET graduates, are very limited in the formal sector. Furthermore, Dibie & Dibie (2014) implied that Ethiopian TVET graduates are not easily provided with financial capital to commence their own enterprises and therefore ultimately prefer to work for wages.

Both factors employability and employment outcomes play an important role in the effectiveness of TVET programs to train graduates competent for employment. Bourdieu's (1986), theory 'forms of capital' introduced three capitals, namely economic (finance), social (networks) and cultural capital (knowledge and attitude), which are crucial for the individuals' success in society in different areas, including employment. It is beneficial for the effectiveness of TVET programs to orientate their employability and employment outcomes in the context of the three capitals to make graduates more attractive in the labour market and enhance their employment prospects. To place Bourdieu's (1986) three capitals in the frame of TVET regarding employability and employment outcomes, Gu, Gomes & Brizuela's (2011) introduced four success factors for TVET programs to be successful; (1) embedded knowledge, skills and attitude, (2) pedagogical approaches, (3) partnership, and (4) leading by example. The four factors consist of various components addressing a wide range of challenges of TVET programs introduced in the academic literature implying how TVET programs should operate to train graduates effectively. The four factor's components, according to their significance can be divided under Bourdieu's (1986) three capitals. Both theories, Bourdieu (1986) and Gu, Gomes & Brizuela (2011) are used to further investigate the factors that impact the effectiveness of TVET programs in terms of the graduates' employability and employment outcomes.

### 1.3 Literature gap

Ethiopia's TVET factors that limit the effectiveness of TVET programs have been mainly researched on a large scale at a national level (Nuffic, 2010; Hailu, 2012). Only two studies (Dadi, 2014; Fukunishi & Machikita, 2017) were conducted at a regional level. Insight into the differences in effectiveness between regional TVETs in Ethiopia is limited. TVET institutions are heterogenous with respect to factors regarding superiority of teachers, characteristics and quality of training, and supply of services such as job placement assistances (Dadi, 2014; Fukunishi & Machikita, 2017). As one can see, it can be theorized that the operational environment of TVETs per region differ (Dadi, 2014; Fukunishi & Machikita, 2017) and policies from national studies might not be as applicable to single cases (Kennedy, 1979). Thus, a closer look at various cases is important to draw differentiated and area-specific lessons (Kennedy, 1979). The conditions are that a set of factors have been distinguished in which regional TVETs are heterogenous (Dadi, 2014; Fukunishi & Machikita, 2017). Therefore, a region-specific case study is important as studies in one region cannot be taken as a replica for the other region (Hagos Baraki & van Kemenade, 2013; Kennedy, 1979). In this regard, regional attention can be valuable to increase the effectiveness of TVET programs from a specific region as national results may not generalize to individual cases (Kennedy, 1979).

### 1.4 Objective and approach

This research addressed the factors which impact the effectiveness of Regional Horticulture TVET Programs (RHTPs) on the graduates' employability and employment outcomes, taking Holeta TVET college as a single case study in the Oromia region in Ethiopia. Differences and similarities between Holeta TVET college and those from

national results were documented. For this research it was decided to particularly focus on horticulture TVETs as the sector currently plays a major role in employment prospects for skilled human resources in Ethiopia (Alemu & Berhanu, 2018; EIC, 2017; Asfaw, Tolossa & Zeleke, 2010). Four target groups were approached through in-depth interviews. Associates from Holeta TVET college and TVET graduates provided information about the relevance of the employability skills trained at the college, factors influencing the quality of the skills, and essential factors impacting the employment prospects of the graduates. The private sector and government bodies conveyed information on how a sovereign implementation of horticultural TVET programs takes place in practice in the Oromia region considering both the employability and employment outcomes.

### 1.5 Contribution

The combined theories of Bourdieu's (1986) three capitals and Gu, Gomes & Brizuela's (2011) four success factors build a rare research setting for the comparison of the effectiveness of Holeta TVET college in the Oromia region with national TVET results. Through this comparison, the research is expected to contribute to aspects regarding the two factors; employability and employment outcomes important for the effectiveness of RHTPs in the Oromia region. Prior literature (Dadi, 2014; Fukunishi & Machikita, 2017) thus far, only provides limited insights about the differences on both factors among regional TVETs. As previously stated, policies from national studies might not apply to single cases (Kennedy, 1979) in this instance, results from national TVET studies might not be as applicable to RHTPs due to the fact that the operational environment of TVETs per region differ (Dadi, 2014; Fukunishi & Machikita, 2017). Based on the found differences and/or similarities both factors, employability and employment outcomes can represent a significant contribution to knowledge and theory-building in the importance of improving the employability and employment outcomes of RHTPs in the Oromia region. However, this approach can also direct policy makers and refocus future investigations in the broader spectrum to make RHTPs from other regions more effective in training graduates with competent employability skills and providing the necessary employment services.

### 1.6 Research outline

The roadmap of this research is structured as follows. The second chapter is building up the theoretical framework presenting a review of relevant literature. The geographical context of Ethiopia is presented in the third chapter. The fourth chapter presents the design and methodology of the research. The fifth chapter grants the empirical results. The sixth chapter contains the discussion of findings, policy implications, limitations of the research and recommendations for further research. The seventh chapter outlines the conclusion of the research.

## 2. Theoretical framework

### 2.1 Effectiveness of TVET programs

The effectiveness of TVET programs according to Rojewski (2009) equals the employability and employment outcomes of TVET graduates. Employability outcomes contend with the relevance of the graduates' employability skills, and various factors which influence the quality of the skills (e.g., the knowledge transfer and teaching experience of the vocational teachers) (Rojewski, 2009). Hence, employability refers to an individuals' capability to gain the necessary skills for entering and maintaining employment (Hillage & Pollard, 1998). Employment outcomes relate to the graduates' employment prospects where TVET institutions should interfere with employment challenges of TVET graduates in the labour market (Rojewski, 2009). The employment prospects are divided into employment in the formal sector and self-employment (Tripney et. al, 2013). Hence, employment concerns the ability to obtain a job in both prospects and make transitions between jobs (Hillage & Pollard, 1998). Considering both factors, the employability and employment outcomes of TVET graduates (Rojewski, 2009); one can argue that both are central for the effectiveness of TVET programs since TVETs are designed to train graduates with employability skills demanded by industries conveying competent workforce for employment to the labour market (Esa & Abdul Rahman, 2014; Pavlova & Huang, 2013).

For employment to be realized, it does not only depend on the graduates' characteristics but also the skills and assets (e.g., financial capital) the graduates possess regarding the economic, social, and cultural context in which work is desired (Tripney et. al, 2013). Hence, a shift in skills was seen in the 2012 Education for All Global Monitoring Report, that reinforced the emphasis on TVET skills, and services improvement with the aim to increase employment opportunities for TVET graduates (UNESCO, 2012). For instance, according to Hailu (2012), employment (as part of self-employment) in the context of economic capital requires financial assets for which collaboration between TVET programs and micro credit services is needed to help minimize the restraint of start-up capital for graduates. Considering social capital, employers want assurances that employees applying for jobs can employ their proficiencies to take initiatives and communicate with co-workers, rather than just pursue prescribed routines (UNESCO, 2012). Regarding cultural capital, Almeida, Behrman, and Robalino, (2012) indicated that employers need workers whom possess a proper working attitude and know how to behave in the working environment. In this view, employability skills regarding economic, social and cultural capital imply how employment is deliberated and have a great power of differentiating TVET graduates into the labour market. The fact remains that economic, social and cultural capital are essential for the employment of TVET graduates. Especially in the formal sector when possessing social and cultural capital, enterprises will be less inclined to recruit employees on the basis of other principles of division in the labour market (Almeida, Behrman & Robalino, 2012).

The labour market field is structured in hierarchy in the sense that certain employees occupy dominant and others subordinate positions which depend on the amount of specific resources (e.g. skills, networks) the employee possess (Bourdieu, 1986). Bourdieu (1998) refers to these field-specific resources as 'capital', which he categorizes into economic, social and cultural capital that are invested in the labour market field. When possessed, these capitals enable membership to the field, leading to employment (Bourdieu, 1986). For this reason, Bourdieu's (1986) three capitals are taken as a fundamental framework for this research. Gu, Gomes & Brizuela's (2011) four success factors for TVET programs were considered, to define the employability and employment outcomes in the form of the three capitals (Bourdieu, 1986). The four success factors ((1) embedded knowledge, skills and attitude, (2) pedagogical approaches, (3) partnership and (4) leading by example) consist of a number of components such as employability skills, teaching methods and employment services which impact the employability and employment outcomes of TVET graduates. Based on the components' significance they can be divided under Bourdieu's (1986) three capitals. The significance of the

components referred to the ones which were most relevant in relation to the three capitals and most common based on other academical studies from the TVET sector. The following section comprehensively elaborates on Bourdieu's (1986) three capitals followed by Gu, Gomes & Brizuela (2011) four success factors.

## 2.2 The forms of capital

Bourdieu's (1986) theory forms of capital is applicable for this research because it postulates theoretical concepts as resources that individuals need to be successful in society. As stated earlier, various authors (Hailu, 2012; UNESCO, 2012; Almeida, Behrman, & Robalino 2012) emphasised the essence of economic, social and cultural capital for how employment is measured and to be realized. However, Bourdieu (1986) posits the idea further by introducing the conversion of economic, cultural and social capital which can likely flow from any one capital to another under appropriate circumstances. For instance, economic capital, is convertible into money as well as property rights (Bourdieu, 1986). For TVET graduates to be successful in entrepreneurship financial capital is required to thence income (Hunde & Tacconi, 2017). Social capital composed of networks, in certain situations, can be converted into economic capital (Bourdieu, 1986). Social networks can be mobilized in particular situations to achieve certain goals, such as a job acquisition within a company through a personal relationship with an employee referral (Montgomery, 1991). Cultural capital consists of educational qualifications and, on certain conditions such knowledge and skills can also be converted into economic capital (Bourdieu, 1986). Although Veenstra (2009) argues that personal educational credentials do not necessarily always allow the acquisition of economic capital, however, diplomas acquired through companies' support based on practical experiences do provide higher conviction of economic returns. Meaning, the graduate's tacit knowledge, often translates rather directly into job positions within companies to generate incomes (Veenstra, 2009).

The conversion of capitals is important for TVET programs because the employability skills and services relevant for employment provided by TVET programs based on the three capitals, can be converted when the milieu fits. This is crucial as the converting of social and cultural capital into intermediary interest leading to economic capital is necessary to sustain career aspirations for the TVET graduates (Bourdieu, 1986). In this manner, TVET graduates are ideal-typical employees and entrepreneurs and, thus, provide the empirical basis for this analysis as they are being mobilized with economic, social and cultural capital of practical skills and knowledge. Hence, graduates' attempt to build competence that in turn presents them as 'subject value' (Hesmondhalgh & Baker, 2011). Through these capital mobilisations graduates come to present themselves as ready and willing to be recruited in rapidly changing, trend driven markets (Bourdieu, 1986). From this broader perspective, it is the convertibility of the types of capital that transforms skilled graduates into potential market returns (Hesmondhalgh & Baker, 2011). Taking the three capitals as an entry point, the following then examines how Bourdieu's (1986) forms of capital are readily available resources to be converted in the struggle to build a career. Therefore, the focus is on the ongoing and adept use of capitals.

According to Bourdieu's (1986) theory forms of capital, an individual is part of society and society consists of a number of sub-spaces or fields, and this can be in multiple different contexts like institutions, social groups, workplaces and so on. While entering these spaces the individual always has with him or her the habitus. The habitus are the resources, the combination of the amount and type of capital that the individual has (Bourdieu, 1986). All these forms of capital are transformed into so-called symbolic capital (capitals symbolising the value of an individual), which is an automatic process that happens when the individual enters the field. Each field has its own rules or so-called doxa. According to those rules the social group in an aggregated level would evaluate the individual based on his or her symbolic capital and describe the persons' legitimate position in the field (Bourdieu, 1986).

When applying Bourdieu's (1986) forms of capital to the case of TVET programs, one must look at the proficiency graduates have achieved after completing the education. When graduates enter the industry field

to become employed, their success depends on the certain symbolic capitals (e.g., knowledge, practical skills) they possess and can be seen as the degree of competence they acquire overall. The industry will evaluate the graduate based on the capitals and will determine his or her legitimate position in the field, meaning whether the graduate is competent to become employed or not. Therefore, it is crucial for TVET programs to train graduates with employability skills and provide employment services founded on the three forms of capitals. In succession, Gu, Gomes & Brizuela (2011) introduced four success factors consisting of various components for TVETs to be effective in training employability skills and providing employment services, which can be linked to the three capitals.

### 2.3 Four success factors for a TVET program

Gu, Gomes & Brizuela (2011) propose four success factors (consisting of various components such as skills, employment services, teaching methods etc.) necessary for a TVET program to acquire to be effective in training graduates competent for employment. The first factor is “embedding with employability knowledge, skills, and attitudes”, which refers to the standardized courses in the program like communication, mathematics and so on. The second factor is “adopting relevant pedagogical approaches”, referring to practical training through active and experiential learning methods, among others. The third factor refers to “partnering with key stakeholders” such as government bodies or the private sector to establish a competent curriculum or enable employment. The fourth and final factor is “leading by example”, which refers to the quality of teachers. The four factors cover a broad scope of aspects which, if not incorporated well, can hinder TVETs performance in training graduates with the necessary employability skills and employment services, ultimately making the factors work against the effectiveness of TVET programs. As previously mentioned, most significant components of all four factors according to their relevance have been divided under Bourdieu’s (1986) three capitals for which, the original names of the four factors have not been used further.

### 2.4 The forms of capital and four success factors for TVET programs

In this section a review of existing studies is provided based on the employability and employment outcomes of TVET graduates by addressing a number of components of the four success factors introduced by Gu, Gomes & Brizuela (2011), applied to Bourdieu’s (1986) framework forms of capital.

#### 2.4.1 Employability outcomes

The components presented in this section are explicitly linked to cultural capital as the components acquire knowledge and skills, which by and large, through social capital can be converted into monetary income, economic capital.

##### 2.4.1.1 Cultural capital

Bourdieu (1986) explains cultural capital as knowledge developed in the socialisation process such as educational qualifications and training, where in the case of TVET programs it refers to training graduates with employability skills for employment. For the graduates, the employability skills tied to cultural capital provide a use-value as a competence in the economy. More importantly, through this mobilisation, the graduates can use their skills and knowledge as their potential exchange-value when consecrated through social networks (provided by TVET programs) which ultimately will generate future paying opportunities in the labour market. For this reason, social and economic capital are used as instruments (in the form of services) to apply the ultimate potential of cultural capital in the labour market for obtaining employment.

#### **Essential employability skills for (self-)employment**

Gu, Gomes & Brizuela (2011) raised mathematic skill, as an important component for graduates to become employed. Mathematics play a vital role in numeracy processes and can advantage graduates to easily understand financial prosperities and other practices which include numeracy activities (Hartl, 2009). Barkley

(1991) argues that mathematics is an important skill for agriculture alumni in their current employment. As production agriculture has become increasingly complex regarding decision-making when operating with technological advances giving the ongoing agricultural development curricula which must accommodate the changing needs in the economy (Barkley, 1991).

Another employability skill important for employment is collaborative learning which is a soft skill referring to teamwork (Gu, Gomes & Brizuela, 2011). Teamwork refers to an appropriate environment for developing social skills as it is learning with and through others by continuous interactions, such as group assignments (Abebe, 2009; Bandura, 1978; Bandura & Walters 1963). Teamwork skills are part of the cultural context and can resolve in gaining social capital as individuals emerge and build connections in a group with different entities (Blowers, 2003). According to Bourdieu (1986), such collaborations with individuals can eventually lead to employment, converting teamwork skills as cultural capital into economic capital. Nevertheless, collaborative skills are also significantly valued by employers, as companies prefer students who have team spirit and are ready to join groups (Luca & Torricone, 2001).

Other cultural capitals important for employment are communication skills and basic English language, recognized as soft skills that play a vital role in establishing networks in the labour market and with associates within the working environment (Gu, Gomes & Brizuela, 2011; Archer & Davison, 2008). Communication and basic English language have been widely identified as the most significant skills by employers once recruiting new employees as both competencies enable workers to share and understand information in a proper manner on the work floor. Bidwell et al., (2008) argue that basic English language is an important competency for youths to develop networks and become employed particularly in occupations that supply to a regional, national or international business, rather than just the local market. As lots of proficiencies for youths are offered in international companies where basic English is a required skill (Bidwell et al., 2008). In Bourdieu's (1986) framework, communication and English language are cultural capital which can be used to establish networks with individuals and be converted into social capital giving a rise to employment prospects, thus economic capital. Furthermore, after becoming employed such cultural capital has an ongoing value where graduates can continuously build networks within and outside the company and lead to transitions between jobs (Leana & Van Buren, 1999).

Nevertheless, it is also crucial to teach students how to manage changes in working environments and learn about the behavioural codes of companies. Such practical preparations assist students to adjust towards changes in workplaces effectively and to increase operational abilities which suit the working environment needs of a company (Svanström, Lozano-García & Row, 2008). It trains students how to be resilient (e.g. able to recover quickly from difficult conditions), assertive (e.g. being confident without being aggressive) and determinate (e.g. keep working towards a goal despite setbacks) (Svanström, Lozano-García & Row, 2008). Such cultural capital makes graduates high potential employees in the labour market. As companies not only find practical skills important for employment but also whether the employees' personal characteristics would fit within the company's cultural working environment (London, Hur & London, 2013).

### **Essential employability skills for self-employment**

An important practice in the context of TVET programs considering self-employment is entrepreneurial training (Gu, Gomes & Brizuela, 2011). Regardless of the fact whether graduates have the necessary start-up capital to start their enterprises it is vital to possess skills on how to maintain and run a business (Maigida, Saba & Namkere, 2013). Entrepreneurial training includes development of a business plan, evaluating market opportunities, as well as managing and running a business (Maigida, Saba & Namkere, 2013). In the absence of such skills, becoming an entrepreneur is challenging. However, implying Bourdieu's (1986) theory conversion of capitals, cultural capital such as entrepreneurial skill is challenging to apply in practice and convert it into



economic capital unless graduates possess or through social capital have access to finance.

The discussed cultural capitals are essential factors for TVET programs to train students with the necessary employability skills as they can be converted into economic capital (when appropriate, through social capital) enabling graduates to generate income. In the following section, a number of practices are discussed important for the effectiveness of TVET programs to train students with competent cultural capital for employment.

### **Essential factors influencing the effectiveness of employability skills**

Firstly, Gu, Gomes & Brizuela (2011) stressed the importance of active and experiential learning which refers to practical working activities obtained during the cooperative training. Such practical working activity apply to the active participation of the students in working activities where they gain knowledge through practical experiences operating with training materials (Biggs, 1996; Biggs, 2011). Hence, most of the knowledge students acquire, has been learned by talking things through with co-workers or working together in a shared problem-solving environment (Fukuda-Parr & Lopes, 2013; Alagaraja & Arthur-Mensah, 2013). Nevertheless, practical activity is significant, as it is an introduction to the labour market (Oyebolu & Oshin, 2011). Thus, providing students with the adequate cooperative training is crucial for the quality of the graduates' practical skills and experiences since a TVET education is primarily founded on practical knowledge (Zirkle & Martin, 2012). Hence, under the auspices of Bourdieu's (1986) framework, the appropriate provision of cultural capital in respect of practical working skills through cooperative training enables graduates to increase their competence in the economy that in turn, grants them as valuable employees. Through this capital enlistment graduates become more attractive in the labour market and can easily convert their practical experiences into economic capital through employment.

Secondly, establishing a close collaboration between TVET institutions and the industry is critical for TVET programs to contemplate the local context in terms of cultural capital and outline the core competency skills demanded by industries (Gu, Gomes & Brizuela, 2011). For such collaboration between TVET programs and the industry to be successful, social relations must be established between both parties (Lee, 2010). However, as the ultimate goal of the collaboration between industries and TVETs is to provide graduates with cultural capital in the form of skills and knowledge demanded by industries, it was decided to present such social relations as a factor of cultural capital. Furthermore, the extracted cultural capital through the collaboration between TVET programs and the industry can be perceived in the context of Bourdieu's (1986) conversion of capitals. Converting such cultural capital into monetary income through employment is easier due to the possessed cultural capital required for employment in the labour market.

Thirdly, Gu, Gomes & Brizuela (2011) discussed the quality of vocational teachers as an impacting factor for effectively training students for employment. Therefore, there are preconditions required to be a vocational teacher, which include a bachelor's or a master's degree and a relevant work experience (Grollmann, 2008). The educational background and work experience are important for the effectiveness of TVET programs. As when a TVET teacher does not hold up to the required preconditions, it results in ineffective knowledge transfer which will hinder the quality of cultural capital graduates possess (Boahin & Hofman, 2014; Grollmann, 2008).

Fourthly, Gu, Gomes & Brizuela (2011) discussed the importance of contemporary knowledge of vocational teachers as another factor influencing the teaching quality of TVET programs. In this regard, Eicker, Haseloff & Lennartz (2017) introduced the practice of in-service-training, referring to the essence of teachers being regularly trained by enterprises. Wesselink (2010) further adds that such training is a practice to transform teachers into industry specialists by working part-time as professionals. Indeed, Dasmani (2011) explains that if teachers' knowledge does not line up with industry trends it can result in a transfer of inadequate employability skills to students. To train graduates with competent skills, it is necessary for vocational teachers

to be industry specialists, possessing knowledge of current challenges in the industry, equipment techniques, and practical training methods (Chappell & Johnston, 2003).

Fifth and finally, the number of vocational teachers a TVET institution employ is another factor for training knowledge and skills for employment effectively (Gu, Gomes & Brizuela, 2011). As lack of teachers can result in crowded classes hindering the quality of practical training methods for TVET students (Ansari & Wu, 2013).

In sum, the preconditions required to be a vocational teacher, the importance of contemporary knowledge of teachers and the number of teachers a TVET institution employs are likely to impact the effectiveness of TVET programs in training graduates with employability skills effectively (Gu, Gomes & Brizuela, 2011). If lack of the three factors is evidenced in TVET institutions, this would make graduates less competent in becoming employed, or following Bourdieu's (1986) framework, to convert their knowledge into economic capital.

## 2.4.2 Employment outcomes

In this section various factors that influence the employment prospects in the formal sector and self-employment are addressed.

### 2.4.2.1 Economic capital

Bourdieu (1986) explains that economic capital signifies monetary income and/or property rights. Hence, economic capital is an essential asset for TVET graduates to become self-employed (Palmer, 2009). However, the economic aspect is also relevant for graduates to find jobs in the formal sector. For instance, it is crucial for TVET programs to map the labour market demand of the industry in which they teach, to provide competent staff based on the economic necessities of a country (Gu, Gomes & Brizuela, 2011; Mnse, Province & Pascal, 2009). In the following section both self-employment and employment in the formal sector are comprehensively explained in the economic context.

#### **Essential factors influencing employment prospects in the formal sector**

Gu, Gomes & Brizuela (2011) addressed the importance of TVET programs adapting to the labour market demands of a specific industry with the aim to train students related to the economic necessities of a country. Such an approach is important because it ensures higher employment opportunities for graduates. In fact, a TVET provides training but not a job guarantee. Even the world's most effective educational program is condemned to fail if the labour market does not have the capacity to absorb the supply of students, despite their knowledge and skills (Mnse, Province & Pascal, 2009; UNDP, 2018). Therefore, TVET programs should give attention to training the right number of students by lining up with the growing labour demand of the chosen sector. Considering the assumptions that underlay Bourdieu's (1986) theory converting of capitals as well as the context of developing countries, mapping of the labour market demand of a chosen industry by TVET programs will enable graduates to easily apply their cultural capital into the labour market to become employed and generate income. Further, the quality and competencies of employees are also key to easily enter the labour market as it results in the companies' performance and efficiency (Edvinsson & Malone, 1997). While many companies state that the employability skills of workers are the main source for their companies' productivity, others argue that most employees do not depend on them (Brown & Lauder, 2001). Indeed, manual jobs require less than a month on-the-job training for employees to learn the job well (PIU, 2001). Accordingly, this makes employability skills trained in TVET programs debatable, whether such cultural capital is conditional by industries for employment.

#### **Essential factors influencing self-employment prospects**

Gu, Gomes & Brizuela (2011) discussed that start-up capital is an important asset for the self-employment of TVET graduates. Research (Palmer, 2009) shows that TVET graduates have difficulty obtaining financial capital

after completing their education. The study further implies that this is due to the condition that graduates need to provide an amount of previous savings before receiving a loan. Most graduates are unable to raise the 20% contribution needed to secure a bank loan and banks are unwilling to lend to graduates with no collateral to track. Hence, the restriction of bank loans for TVET graduates limits their opportunities to use their entrepreneurial skills to generate economic capital through self-employment (Palmer, 2009).

#### 2.4.2.2 Social capital

According to Bourdieu (1986), social capital is the sum of network activities that can be realized through involvement in social networks of actors and organizations. Social capital creates opportunities for TVET graduates to convert cultural capital into economic capital. It is through these network activities of consecration that mobilised social capital converts into symbolic capital and thus generates economic capital.

#### **Essential factors influencing employment prospects in the formal sector**

Establishing networks with institutional experts is a vital approach to increase job prospects for TVET graduates (Banner & Orda, 2007). Research shows (Portes, 1998) that activities which involve building social relations of those in the lower occupational hierarchy are very shallow and narrow. The social connections of such individuals may not have any jobs to offer and, if so, the jobs are transitory or dead-end thus providing limited bridges to other jobs or mobility. Brown & Scase (1997) indicate that to understand employability one must also look at the importance of social networks with institutional experts. Integration between TVETs and companies can create beneficial networks for graduates to enhance their employment opportunities after graduation (George & Chaze, 2009). In Bourdieu's (1986) framework, this shows that for graduates to ultimately apply their employability skills in the formal sector and become employed, social capital is a vehicle for converting their cultural capital into income.

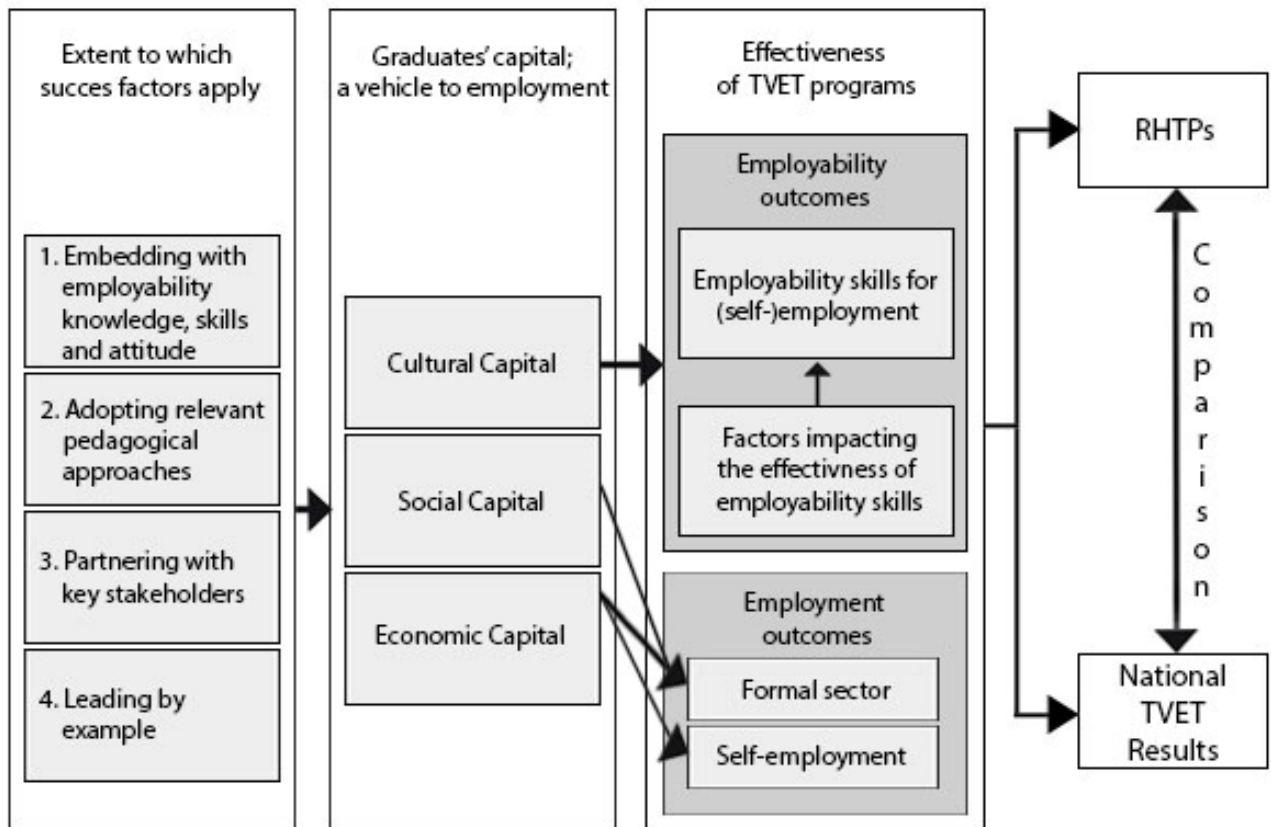
Relatedly, Gu, Gomes & Brizuela (2011) introduced the practice of career advice services. Such practice can be seen as an extension for mapping the employment prospects in the formal sector of the chosen industry for the TVET graduates. Siriwardene (2009) discussed that TVET systems associated with career guidance programs were creating networks with stakeholders to advise students about job-market information, career prospects and employment possibilities. Such practices can serve as social capital and can be vital for TVET graduates to spot job opportunities and become employed.

In sum, prior literature indicates that various TVET practices and services are impacting factors for the effectiveness of TVET programs and play an important role for TVET graduates to convert their employability skills into economic capital. Moreover, as previously introduced the provision of certain employability skills by TVET programs is also vital for the employment of TVET graduates. Based on these factors, the following section presents the research questions and the aim of this research based on the graduates' employability and employment outcomes.

### 2.5 Research questions and conceptual model

For this research it was decided to focus on a specific region (Oromia region) and industry sector (horticulture) in Ethiopia, taking the case of Holeta TVET College. As mentioned earlier, differences among regional TVETs are scarcely considered and the effectiveness of TVETs is largely researched on a national level. As national studies might not generalize to individual cases, the aim is to detect factors regarding economic, social and cultural capital from national TVET studies which are similar or different from results of RHTPs, obtained from Holeta's horticulture TVET program. The objective is to draw area-specific lessons regarding employability and employment outcomes of RHTPs in the Oromia region. Based on the volume of the different factors between national TVET results and RHTPs, it can be further appraised whether the conceptual model presented in Figure 1. can be applied for both, regional and national studies in the future.

Figure 1. Conceptual model (Source: Developed by researcher based on literature)



To address the impact of RHTPs on the graduates' employability and employment outcomes the central research question has therefore been formed into the following;

**Research question:**

How do factors regarding economic, social and cultural capital impact the effectiveness of regional horticulture TVET programs in employability and employment outcomes of Ethiopian horticulture TVET graduates in comparison with national TVET studies?

**Sub-questions:**

1. Which employability skills from cultural capital should regional horticulture TVET programs consider for their graduates' (self-)employment prospects in comparison with national TVET studies?
2. What factors are essential for the effectiveness of the employability skills from the cultural capital trained at regional horticulture TVET programs in comparison with national TVET studies?
3. What factors regarding social and economic capital should regional horticulture TVET programs consider for the graduates' employment prospects in the formal sector in comparison with national TVET studies?
4. What factors regarding economic capital should regional horticulture TVET programs consider for the graduates' self-employment prospects in comparison with national TVET studies?

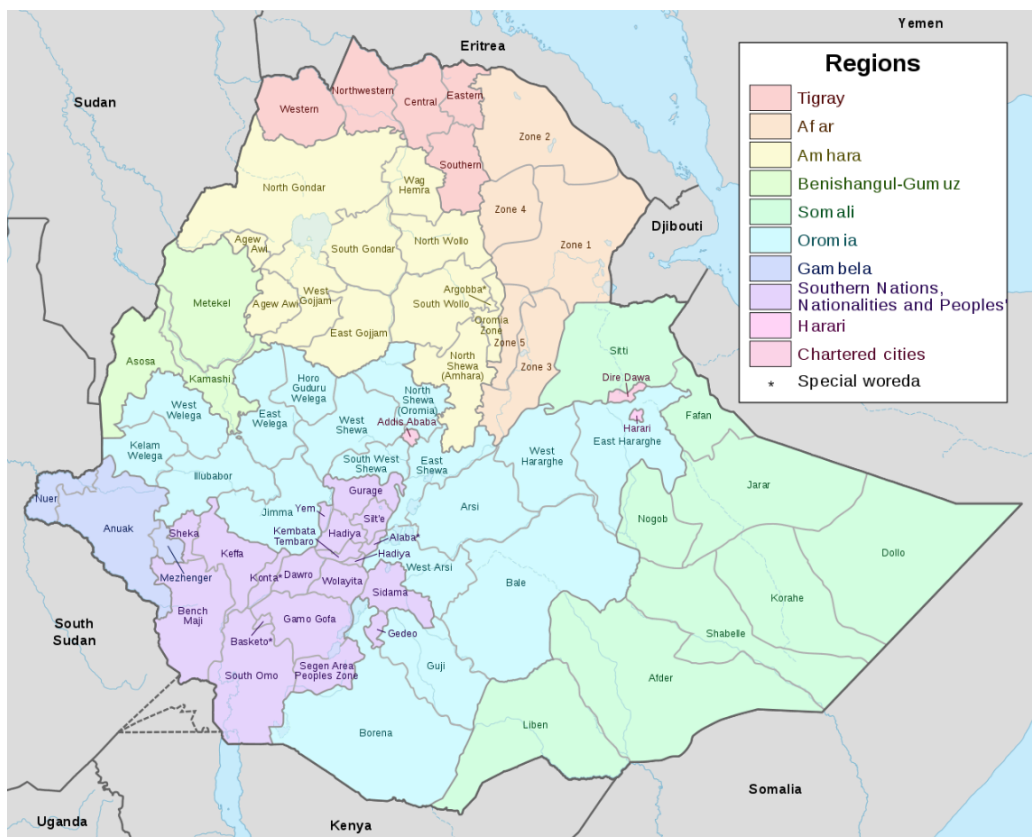
### 3. Regional and thematic review

In the following chapter, background information is presented to grant an understanding of the regional context in which the research was conducted. It further includes information about the employment and agricultural status in Ethiopia, followed by information about the TVET system in the country. Finally, information on the effectiveness of the employability and employment outcomes of TVET programs on national level in Ethiopia is presented.

#### 3.1 Regional context

Ethiopia is a landlocked country on the horn of Africa, in the east of the continent, and covers 1.104.000 km<sup>2</sup> (WB, 2018). Ethiopia's neighbouring countries are Eritrea, Djibouti, Somalia, Kenya, South Sudan and Sudan (WB, 2018). The country's population is approximately 102 million, with a growth rate of 3.02% per year (WB, 2018). Unique among African countries, Ethiopia has never been colonized, one exception being the occupation by Italy in 1936-1941 (NO, 2018). Primarily Ethiopia's shared independent existence unites the country's many nations. It harbours more than 80 ethnic groups and as many languages of which prior spoken language is Amharic. The two largest ethnic groups are Oromia at 34.4% of the country's population and the Amhara group, accounting for 27% (CIA, 2017). The Oromia region sprawls over the largest part of the country and accounts for 45.7% of the country's total area (EGP, 2018). Ethiopia's demographics regarding religion account for 43.5% Orthodox Christian's, 34% Muslims and 18.5% Protestants (CIA, 2017). Figure 2. shows the geographical location of Ethiopia surrounded by its neighbouring country.

Figure 2. Map of Ethiopia (Source: UNOCHA, 2018)



#### 3.2 Employment in Ethiopia

Ethiopia accounts for the largest youth population (28.3%) in Sub-Saharan Africa. The high youth unemployment rate (around 41%) is one of the critical development problems facing Ethiopia (Korpela, 2017; Guarcello & Rosati, 2007; Selassie, 2017; Nganwa, Assefa & Mbaka, 2015). A study conducted by the International Labour Organization (ILO) (2017) indicated that the highest number of unemployed citizens in

Ethiopia is in the age group of 18-29 years old. Research shows (Dibie & Dibie, 2014) that potential causes of youth unemployment are the population growth combined with rural-urban migration, low level of job creation and mismatch between supply and demand of labour.

Furthermore, two other causes; to trade internationally and regulation were found to be significant factors impacting unemployment in Ethiopia (Gwartney et. al, 2018). Regarding freedom to trade internationally, Ethiopia has a restrictive system for international trade having high tariffs, inefficient administration of customs, no freely convertible currency, and high controls on the movement of human capital. Imposing restrictions which decrease the capability of companies to be involved in trade of goods and services with other countries, economic prosperity is diminished. Diminishing economic prosperity of companies impacts their revenue and thereby influencing the provision of employment prospects by the formal sector. Considering regulation, the GoE has difficult procedures which limit the right to exchange, obtain credit, hire or work for whom individuals desire, or easily run a business. Ethiopia has complex credit and market regulations, as well as labour market regulations (hiring and firing conventions, bargaining positions for minimum wages etc.) and business regulations (administrative requirements, starting a business, licensing restrictions etc.). Meaning, Ethiopia has governing restraints that limit the autonomy of exchange in credit, labour, and product markets which again impacts the employment prospect in the formal sector and self-employment (Gwartney et. al, 2018).

One can see that unemployment is a critical socio-economic problem in Ethiopia (Tolossa & Etana, 2014). However, regarding the available jobs in the country, the economy of Ethiopia has primarily remained dependent on employment prospects in the agriculture sector, which provides about 44% of the Gross Domestic Product (GDP), over 80% of export revenue and about 80% of employment (Abate, Semie & Ayenew, 2017).

### 3.3 Agriculture in Ethiopia

As indicated previously, Ethiopia is currently facing critical employment challenges among youth. The GoE has established a new five-year plan for 2015/16-2019/20: the "Growth and Transformation Plan II" (GTP II) (NPC, 2016). According to the GoE, the plan aims to develop Ethiopia into a middle-income country by 2025 through the industrialization of the agricultural sector by promoting investment projects to Foreign Direct Investors (FDIs), resulting in new job opportunities and thereby addressing unemployment among youth (NPC, 2016). The Ethiopian Horticulture and Agriculture Investment Authority (EHAIA), (as cited in Gashaw, 2018) indicates that 130 FDIs are currently operating in Ethiopia in the horticulture sector, providing a large portion of job proficiencies. To further support this intervention, the Ministry of Agriculture and Natural Resources (MoANR) in collaboration with relevant organs such as the Agricultural Land Administration Authority (ALAA) are promoting agricultural commercialization like land and commercial farming. Furthermore, the GoE also cooperates with the Ethiopian Horticulture Development Agency (EHDA) with the aim to promote the commercialization of horticultural crops with a link to domestic production (Alemu & Berhanu, 2018). Moreover, the industrialization project of the horticulture sector is concentrated in four regions in the country, out of which the Oromia region is one (Alemu & Berhanu, 2018). Cognisant of the potential role of agriculture as a mean of accelerating economic transformation, reducing poverty and generating employment opportunities for many Ethiopians, the GoE has put a high premium on the need to improve the performance of the horticulture sector (Alemu & Berhanu, 2018). In this regard, the sector has currently created jobs for over 200.000 citizens and the rapid growth of the horticulture sector creates a growing demand for skilled labour forces in Ethiopia (Alemu & Berhanu, 2018). To meet the growing demand for skilled labour and reduce unemployment, in the Education Sector Development Programme V (ESDP V) for 2015/16-2019/20 the GoE outlines how the program through a National market-driven TVET Strategy will focus on training appropriate marketable and entrepreneurial skills. The program focuses on training a skilled workforce to meet the labour demand for the transiting economy from agriculture-based to industrialization (MoE, 2015). Hence, the vision of the National TVET Strategy in Ethiopia is to strengthen the culture of employment and support innovation in

the Ethiopian economy (Killian, Tendayi & Augustine, 2009). In sum, the availability of investment projects and skilled labour in the horticultural sector in Ethiopia can be a significant pull factor for future FDIs (Alemu & Berhanu, 2018).

### 3.4 TVET institutions in Ethiopia

In Ethiopia, there are two types of TVET programs, formal and non-formal, in different occupations (e.g., metalwork, woodwork, agriculture and so on). Formal TVET programs provide training from level I to level V. They are long-term programs of 6 months period per level. Formal TVET programs are provided for those students (age between 16-20 years old) who have reached 10<sup>th</sup> grade and have failed to achieve the score for admission to preparatory level. Non-formal TVET programs (short-term programs of approximately two weeks) are followed by a wide range of stakeholders such as school dropouts, individuals with below grade 10 education, entrepreneurs and others (Hagos Baraki & van Kemenade, 2013). This research mainly focuses on graduates who have followed a formal TVET education (16-20 years old), as according to ILO (2017), this target makes up the most substantial portion of unemployed youth in the country. Furthermore, in the Ethiopian system there are both publicly as well as privately owned TVET institutions.

Holeta TVET College, the focal case for this research, was established in 2001 and is a public regional college supervised under the Oromia Regional GoE. They offer training from level I to level IV in both agricultural and non-agricultural divisions out of which each division is provided in both formal and non-formal education. Holeta has four different divisions; Horticulture, Information and Communications Technology, Dairy, and Natural Resources Management. The college has graduated 2.445 level I-IV trainees from 2012-2016 (Worku, Fayssa & Kabo, 2017). The Dutch Ministry of Foreign Affairs financed a three-year project (2014-2017) at Holeta TVET College to assist in alleviating shortages of skilled human resources in the country (Nuffic, 2010). The project aimed to train employable skilled workers for the labour market, contributing to economic development and poverty reduction. The project was administered by the Netherlands Universities Foundation for International Cooperation (Nuffic), a Dutch organisation for internationalisation in education. Nuffic, in active collaboration with the International Centre for Development Oriented Research in Agriculture (ICRA), was responsible for developing the TVET program with strong consideration for the needs of the local labour market (NICHE, 2016). The following section presents the effectiveness of TVETs in Ethiopia on a national level and how they have developed according to the needs of the labour market demand.

### 3.5 The forms of capital and four success factors for TVET programs

In this section pre-existing literature of national studies on TVET programs in Ethiopia are indicated following the conceptual framework founded on Bourdieu's (1986) forms of capital and Gu, Gomes & Brizuela (2011) four success factors.

#### 3.5.1 Employability outcomes

A number of factors have been considered as employability skills important for the effectiveness of TVETs and factors influencing the knowledge transfer to students at TVET programs in Ethiopia on national level.

##### 3.5.1.1 Cultural capital

As previously explained, Bourdieu (1986) defines cultural capital as knowledge obtained through educational qualifications and training. Hence, the employability skills trained at TVET programs on national level presented in this section have been asserted as cultural capital necessary for employment.

#### **Essential employability skills for (self-)employment**

As argued earlier, mathematics is an important employability skill for the graduates' employment (Hartl, 2009). In the Ethiopian context Fessehaye (2006) implied that TVET programs do not train mathematic skills, as the

mathematical background of students is too weak to concentrate on teaching courses with numeracy background. The exclusion of mathematics hinders students from understanding numerically related tasks of other courses as well as finance. Elucidating this in the framework of Bourdieu (1986), the exclusion of mathematics could make the transfer from student to employee more challenging.

Another employability skill discussed earlier was teamwork. Geressu (2014) emphasized that TVET programs in Ethiopia lack the provision of teamwork, which ultimately harms the effectiveness of TVET programs. Abebe (2009) further indicates that in Ethiopia soft skills such as teamwork are better developed in industries rather than at TVET colleges as students can custom such skills in practice. Following Bourdieu's (1986) conversion of capitals, the poor provision of teamwork skills could create employment challenges for graduates as they lack cultural capital necessary for employment to obtain economic capital.

Furthermore, Abebe (2009) indicates that TVET institutions in Ethiopia pay little attention to communication skills and fail to succeed in providing classes for basic English. However, offering courses for basic English at TVET programs can be beneficial for the graduates' competence as such a skill would enhance the communication process between graduates and employers (Ali, Firissa & Legesse, 2017; Bidwell et al., 2008). Meaning, when TVET graduates lack knowledge of basic English makes them less competent in the labour market, especially in international companies where basic English is a required skill (Bidwell et al., 2008). Thus, in the framework of Bourdieu (1986), obtaining a job particularly at international companies becomes challenging when lacking communication skills and basic English. As FDIs are currently a source for employment in the horticulture sector in Ethiopia (Alemu & Berhanu, 2018; EIC, 2017; Asfaw, Tolossa & Zeleke, 2010).

Other employability skills considered earlier, were competencies regarding the working environment, focusing on being resilient, assertive and determinate (Svanström, Lozano-García & Row, 2008). In the Ethiopian context Geressu (2017) disclosed that TVET programs barely include training about practical information of the working environment. The deficiency of such skills would not append economic capital for TVET graduates easily, since the employability skills are vital for entering the labour market.

### **Essential employability skills for self-employment**

The main skill that was considered regarding self-employment was entrepreneurship training. According to Hailu (2012), entrepreneurship trained at TVET programs in Ethiopia is substandard and does not contribute to entrepreneurship of graduates. The government presumes that graduates do not become self-employed due to lack of initial capital, unfamiliarity of how to evaluate market opportunities, and lack of experience in managing and running a business. Annotating the poor quality of entrepreneurship training by TVET programs it is a hindering factor for graduates to prioritize entrepreneurship as a source of income (Hailu, 2012).

### **Essential factors influencing the effectiveness of employability skills**

Gu, Gomes & Brizuela (2011) proposed several factors important for TVET programs to train employability skills effectively. Firstly, TVET's in Ethiopia have integrated cooperative training designed for students to spend 30% of their time in TVET institutions to develop theoretical understanding and basic skills, and 70% in industries as a cooperative training to acquire depth of practical skills in the work place (MoE, 2015). TVET institutions are also responsible to identify potential enterprises to provide cooperative training for students (Krishnan & Shaorshadze, 2013). Studies have shown that TVET programs do not reach the stipulated 70% of cooperative training due to budget limitations and lack of cooperation with industries (Alemu, Cook & Gubo, 2015; Geda, 2016). Hence, it is necessary for TVET programs in Ethiopia to establish and maintain networks with companies to enable cooperative training for students at industries as it is a significant source for obtaining competent practical skills (Alemu, Cook & Gubo, 2015; Geda, 2016). Considering the practical skills, study (Hunde & Tacconi,



2017) shows that TVET programs have insufficient training materials due to lack of financial capital, hence, fail to engage students in constructivist approaches of practical experiences. As a result, students are not showing interest in practical activities because teachers are not doing what they are expected to do, which makes the training of practical maintenance challenging and limited (Hunde & Tacconi, 2017). Therefore, equipping colleges with modern technologies and learning materials is a source to enhance the effectiveness of the constructivist approaches for students (Okoye & Chijioke, 2013). Annotating the lack of cooperative training and training materials, both have a significant impact on the quality of cultural capital in the form of practical skills. In line with Bourdieu (1986), such deficiency hinders the subject value of graduates when entering the labour market to convert employability skills into economic capital (Bourdieu, 1986).

Secondly, the collaboration between TVET programs and the industry, to determine the core competencies demanded by enterprises was considered as another factor important for the effectiveness of TVETs (Lee, 2010). Such collaboration is vital for TVET programs to train effective and relevant skills for employment. In Ethiopia, the core competencies are probed by the Federal Government of TVET Education. The government first standardizes occupations and defines various units of competencies for each TVET sector and level. The Federal Governments' OS serve as a guideline for both Federal and Regional TVETs to further develop their curriculum. The curricula for regional TVETs are accredited with the respective Regional TVET Government, in accordance with the OS defined by the Federal Government (Hailu, 2014). However, in relation to outlining the required core competency skills by industries TVET colleges do not maintain close collaboration with enterprises to sustain with the rapidly changing market (Hailu, 2014). Conversely, lack of partnership between TVET institutions and stakeholders has been evidenced on most of the curriculum design in Ethiopia by the skills mismatch caused by TVET programs (Likisa, 2018; Dibie & Dibie, 2014; Edukans, 2012; Killian, Tendayi & Augustine, 2009). Therefore, scholars recommend (Likisa, 2018; Geressu, 2017) that there is a need for strengthening partnerships among TVETs and industries to involve curriculum and industry experts into the TVET program development process. According to Bourdieu's (1986) framework conversion of capitals, such mismatch of employability skills can reduce the employment prospects for TVET graduates as graduates with inefficient cultural capital are less attractive in the labour market.

Thirdly, Gu, Gomes & Brizuela (2011) point out that the quality of teachers as another factor impacting the effectiveness of employability skills provided by TVET programs. In Ethiopia, two parameters have been set to select competent teachers. The first precondition is the educational qualification, where each teacher lecturing at a certain TVET level must have a particular educational background. There are three levels of TVET teachers in Ethiopia: (1) A-level teachers, possessing at least a level III TVET degree (teaching at level I-III); (2) B-level teachers, possessing a Bachelor degree (lecturing at level IV); and (3) C-level teachers, holding a master's degree (teaching at level V) (Eicker, Haseloff & Lennartz, 2017). The second precondition is the ethical and technical competence to teach, resulted in possessing a Center of Competence (COC) certificate and having a minimum working experience of five years (Hunde & Tacconi, 2017). In this regard, studies (Kedir & Geleta 2017; Killian, Tendayi & Augustine, 2009) indicate that the current qualification status of vocational teachers in Ethiopia is below the minimum criteria.

Fourthly, in-service-training for vocational teachers is another important factor for the quality of knowledge transfer, which refers to teachers maintaining with the latest production mechanism by working part-time at enterprises (Wesselink, 2010). In this regard, collaboration between TVET programs and industries is vital to offer working and training opportunities for vocational teachers (Wesselink, 2010). Recent study conducted by Geressu (2017) indicated that teachers in Ethiopia insufficiently engage with industries for follow-ups of unit competencies.

Fifth and finally, is the number of teachers TVET colleges possess, which also impact the quality of employability skills trained to TVET students (Ansari & Wu, 2013). Killian, Tendayi & Augustine (2009) implied that TVET institutions in Ethiopia experience a shortage of vocational teachers due to the underfunding of TVET programs. Other studies (Hartl, 2009; Killian, Tendayi & Augustine, 2009; Hunde & Tacconi, 2017) showed that the shortage of TVET teachers in Ethiopia is caused by the major demand for vocational teachers caused by the government's plan to admit 80% of grade 10 completers to TVET colleges. TVET programs in Ethiopia are not equipped to absorb the overload of grade 10 completers due to the shortage of qualified vocational teachers in the country. In this regard, Hartl (2009) indicates that for Ethiopian TVET programs to be more effective, it is important to be equipped with the necessary number of teachers to effectively train students.

In the Ethiopian context all three factors (preconditions for vocational teachers, in-service-training and the adequate number of teachers in TVETs) are unfavourable for the effectiveness of TVET programs, contributing to a poor-quality provision of employability skills (Kedir & Geleta 2017; Killian, Tendayi & Augustine, 2009; Geressu, 2017). To epitomize the three factors into Bourdieu's (1986) framework, converting cultural capital of insufficient employability skills into job prospects could be challenging for TVET graduates who do not stand out in the labour market.

### 3.5.2 Employment outcomes

In this section, again, pre-existing literature of national results on TVET programs are presented including factors that influence the graduates' employment prospects following Bourdieu's (1986) framework forms of capital.

#### 3.5.2.1 Economic capital

In this section factors influencing the graduates' employment prospects in the context of economic capital are reviewed using results of national TVET studies in Ethiopia.

#### **Essential factors influencing employment prospects in the formal sector**

Studies (Biazen & Amha, 2009; Dibir & Dibir, 2014) designate that lack of employment opportunities is a key factor causing unemployment in the formal sector for Ethiopian TVET graduates. Another study (Kellow, Ayele & Yusuf, 2010) counter-argues the low job creation in Ethiopia to be a factor in unemployment, disputing that the demand for skilled TVET graduates in the country is high whereas the supply is low. The study further designates that the reasons for the low supply of TVET graduates is caused by the ineffectiveness of the TVET programs, i.e. outdated curricula and teaching materials, inexperienced teaching staff and weak linkages with the industry (Kellow, Ayele & Yusuf, 2010). Hence, it is important to consider both labour market demand and effectiveness of TVET programs to locate the source of unemployment for TVET graduates in Ethiopia. In terms of Bourdieu's (1986) framework conversion of capitals, evaluating the demand for skilled employees in the formal sector would enable to determine the degree of opportunities for graduates to convert their employability skills into economic capital and become employed. Furthermore, research (UNDP, 2018) showed that on national level the current job search process in Ethiopia is too expensive for employees due to the high transportation costs. As most vacancies are placed in the city centres and job-seekers are mostly located in the surrounding areas. The study (UNDP, 2018) further emphasized that no minimum wages are set for industrial occupations which again, hinders the employment prospects of employees. Another hindering factor for employment on national level in Ethiopia is the lack of well-functioning labour market where employees are unable to allocate the available jobs through efficient job application processes (UNDP, 2018).

#### **Essential factors influencing self-employment prospects**

Besides the necessary employability skills for TVET graduates to become self-employed, financial capital is a crucial resource for graduates to proceed (Palmer, 2009). In the context of Ethiopia, Belete (2011) found that TVET programs insufficiently provide supporting mechanisms and services for graduates to access financial start-

up capital. Taking this into account, in the practical context research showed (Wiedmaier-Pfiste et. al, 2008) that the financial services by the government for the low-income population, poor farmers, and Micro, Small and Medium Enterprises (MSMEs) are still characterized by limited outreach and weak institutional governance. Consequently, Dibie & Dibie (2014) state that the restriction on start-up capital for TVET graduates in Ethiopia is a demotivating factor for initiating entrepreneurship. Thus, regarding the conversion of capitals (Bourdieu, 1986), the constraint on financial capital makes it challenging for TVET graduates to become entrepreneurs and convert the cultural capital obtained at TVET programs into monetary income through self-employment.

### 3.5.2.2 Social capital

As stated earlier, Bourdieu (1986) explains social capital as network activities that can be realized through membership in social networks. For TVET graduates, social capital can be utilised as a bridge for employment, linking graduates with the labour market (Banner & Orda, 2007). In other words, according to Bourdieu's (1986) conversion of capitals, social capital can lead to economic income.

#### **Essential factors influencing employment prospects in the formal sector**

To enhance the job opportunities for TVET graduates, TVET programs are assigned to operate with enterprises to provide graduates with social networks for employment (Banner & Orda, 2007). However, partnerships between TVETs and enterprises in Ethiopia is limited and needs improvement to share employment responsibilities for the TVET graduates (Hagos Baraki & van Kemenade, 2013; George & Chaze, 2009).

The provision of career services by TVET programs was considered as another factor to increase employment among graduates (Siriwardene, 2009). Through career services, TVET programs can inform graduates about labour market opportunities regarding where and how jobs can be found (Siriwardene, 2009). Research (Okorafor & Okorafor, 2011) showed that TVET programs in Ethiopia do not put strong emphasis on career services that show students the career paths of the chosen industry. Thus, following Bourdieu's (1986) conversion of capitals, one can argue that this is another limitation of social networks for graduates to convert employability skills into economic capital.

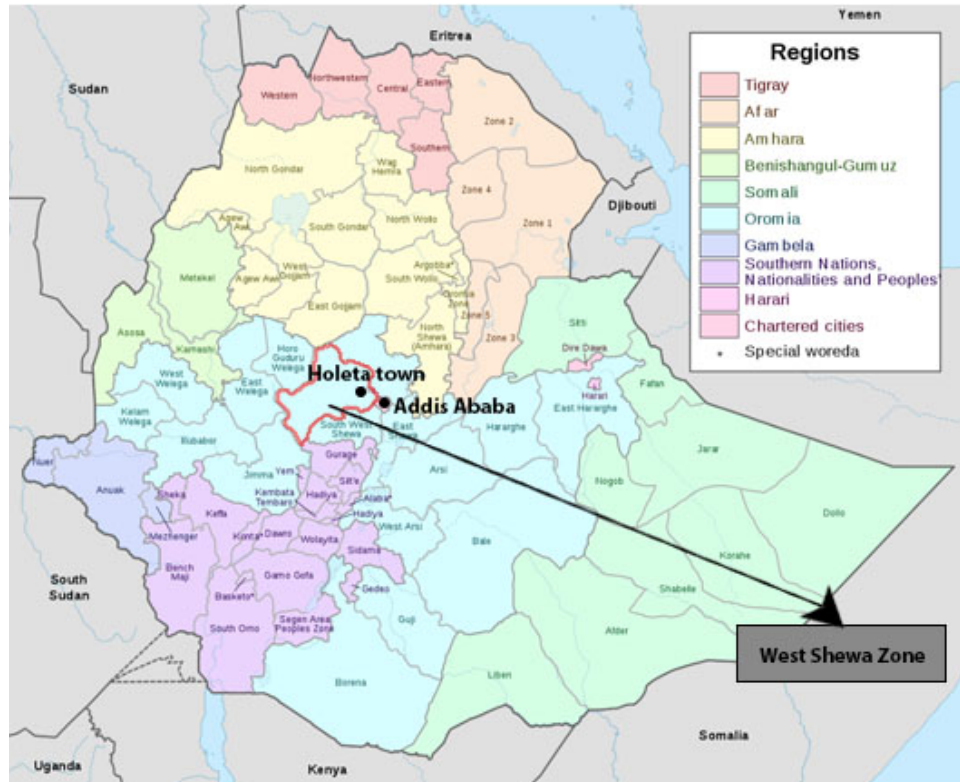
To procure an overview on the effectiveness of RHTPs regarding the graduates' employability and employment outcomes, the up to now presented skills and factors were considered for the empirical research. The next section provides the methods and procedures used for this research to obtain the required information.

## 4. Methodology

### 4.1 Research context

The research was conducted in Ethiopia in the Oromia region focusing on the West Shewa Zone, which is one of the 12 zones found in the region (Figure 3). The Holeta TVET College was used as a case study located in the Walmara district (part of West Shewa Zone) in Holeta town.

Figure 3. Map of West Shewa Zone, Holeta town (Source: UNOCHA, 2018)



The research site of the Oromia region was selected due to two main reasons. First, the strategy of the government was to create market-demand TVET programs training skilled labour for the industrialization of the horticultural sector (MoE, 2015). The government is targeting four regions under which the Oromia region is one (Alemu & Berhanu, 2018). Such research is beneficial for the horticulture marketing in Oromia to modernize the sector by supporting enterprises with properly trained labour force (Gebreyesus & Iizuka, 2012).

Second, to make the research relevant for as many RHTPs who might share the same or similar program factors as Holeta TVET college (based on the regional context), the distribution of TVET institutions and the number of enrolments of TVET students per region in Ethiopia were considered. Research (Edukans, 2012) showed that most of the TVET institutions and TVET students are concentrated in the Oromia region of the country. The region consisted of 196 TVET institutions and about 145,453 students in 2011. In the following section 4.2, the relevance of this research design selection is comprehensively explained.

### 4.2 Research design

The research followed qualitative methods based on empirical data. The presented literature introduced comprehensive insights on the employability and employment outcomes of TVET graduates in general and at national level in Ethiopia. Only two academic studies (Dadi, 2014; Fukunishi & Machikita, 2017) have originated limited sides regarding the employability and employment prospects of TVET graduates on

regional level in Ethiopia. Therefore, this research espouses an inductive theory development following the 'theoretical refinement' approach of theory development (Snow, Morrill & Anderson, 2003). The theoretical refinement approach does not involve constructing an entirely new theory, but it focusses on the modification and extension of pre-existing theory by analysing new empirical data (Snow, Morrill & Anderson, 2003).

The empirical data was collected by approaching four distinct target groups using in-depth interviews. The first target were the horticulture graduates from Holeta TVET college (20 participants) who graduated between the years of 2014-2016. The second target were associates from Holeta TVET college (13 participants). The third target were six relevant Federal Ministries (11 participants all senior officials). The fourth target were horticulture FDI enterprises (10 participants). The graduates and associates from Holeta TVET college provided information about the relevance of the employability skills and factors which influence the effectiveness of RHTPs in training employability skills and providing employment services. The Federal Ministries disclosed information about the curricula of regional TVETs and the labour market demand of horticulture TVET graduates in Ethiopia. The FDIs provided information about the requirements of the horticulture employability skills and the demand of skilled human resources in the horticulture industry.

In total, 54 in-depth interviews were conducted. The methodology of using in-depth interviews for this research was appropriate due to two main aspects: narratives and subjectivity (Wengraf, 2001). It is inconceivable to achieve narratives and subjectivity through quantitative research methods. Therefore, the in-depth interviews enabled to identify the narratives, which included the story of the respondent based on his or her individual statements. Further, the in-depth interviews allowed to specify the subjectivity, which refers to the identity and background characteristics of the respondent that influence his or her answers allowing to better interpret the respondent's particular story (Wengraf, 2001). The empirical data was analysed using the Constant Comparative Method (CCM) introduced by Boeije (2002), which was relevant for the aim of answering the research question. The research question focused on comparing the effectiveness of TVET programs on national level with a single case study design (Yin, 2011), evaluating the effectiveness of Holeta TVET (regional) college focussing on the horticultural division. The research strategy of comparison between national and regional results, aimed to map factors of focus relevant for the effectiveness of RHTPs in training employability skills and providing employment services.

As previously mentioned, two studies (Dadi, 2014; Fukunishi & Machikita, 2017) provided limited insights on a set of factors (i.e., superiority of teachers, characteristics and quality of training) indicating in which aspects regional TVETs are heterogeneous. Thus, it can be theorized that the operational environment of TVETs per region differ hence, policies from national studies might not apply to single cases. Therefore, a closer look at single case study design was important to devise comprehended lessons for the effectiveness of RHTPs (Kennedy, 1979). The conditions were that a set of factors have been named in which regional TVETs in Ethiopia are heterogeneous (Dadi, 2014; Fukunishi & Machikita, 2017) and Holeta TVET college located in the Oromia region, is a critical single case meeting all the conditions for testing the theory (Yin, 2011). Furthermore, Holeta's curriculum has been established in collaboration with education experts from abroad, which makes the single case unique and can also serve as a sample for donor organizations to efficiently address educational TVET programs considering the regional differences in the future (Yin, 2011). Moreover, location wise, Holeta TVET college is a relevant case study. The college is located near Ethiopia's capital city Addis Ababa, which due to its location is attractive for many potential students and such college has a social responsibility to provide education and training capacitated to train students for employment effectively (Yin, 2011). Region wise, most TVET colleges in Ethiopia are located in the Oromia region (Edukans, 2012) and the research relied on as many factors as possible to determine the ways in

which regional TVETs are analogous (Kennedy, 1979). Though this research aimed to define the range of generalization precisely, other horticultural TVET programs from the Oromia region, where appropriate, will study an array of available examples and choose the examples which most closely represent their situation. Thus, the outpaced factors can further be relevant for the effectiveness of other RHTPs in the region sharing similar connotation with Holeta. In this regard, the specific case study will prove more value to program decision makers than group studies because group comparisons may not generalize to individual cases (Kennedy, 1979).

### 4.3 Research population

For the data collection of this research four target groups were approached. The relevance and characteristics of each target is presented below.

**TVET graduates** (Appendix A): the primary target for this research were the graduates from Holeta TVET college who were engaged at work in agricultural or non-agricultural occupations. In total, twenty respondents were approached (ten male, ten female). Table 1 reveals the occupations of the twenty respondents along with the respondents' gender and age. All of the respondents were located and employed in the Oromia region in Ethiopia, with low-socioeconomic status, and had an insufficient score in grade ten to join the preparatory education. All respondents were between the age of 20-28 years old and had graduated between the years of 2014-2016. The respondents have accomplished a formal TVET level IV (within the expected timeframe) and have followed the horticulture program at Holeta TVET College. The graduates were expected to have the necessary information about the effectiveness of the TVET program in training human resources competent for employment. This included information about the effectiveness of the employability skills and employment services provided by Holeta TVET college and the core employability skills demanded by the industry. It was believed that the graduates would have more experience and understanding about the TVET program and it was expected that they would have more information about the processes for (self-)employment rather than those who are about to graduate and face the labour market.

Table 1: Employment occupations – TVET Graduates

Employment Status	Work Place	Occupation		Gender			Age			
				Male	Female	Total	20-22	23-25	26-28	Total
Agricultural Occupations	FDI Horticultural Enterprise	Supervisor	Count	3	3	6	1	3	2	6
			% of Total	15,0%	15,0%	30,0%	5,0%	15,0%	10,0%	30,0%
		Coordinator	Count	1	6	7	5	2	0	7
			% of Total	5,0%	30,0%	35,0%	25,0%	10,0%	0,0%	35,0%
	Domestic Horticultural Enterprise	Technical Assistant	Count	1	0	1	0	0	1	1
			% of Total	5,0%	0,0%	5,0%	0,0%	0,0%	5,0%	5,0%
Governmental Institution	Development Agent (DA)	Count	2	1	3	1	2	0	3	
		% of Total	10,0%	5,0%	15,0%	5,0%	10,0%	0,0%	15,0%	
Total			Count	7	10	17	7	7	3	17
			% of Total	35,0%	50,0%	85,0%	35,0%	35,0%	15,0%	85,0%
Non-Agricultural Occupations	Governmental Institution	Community Manager	Count	1	0	1	0	0	1	1
			% of Total	5,0%	0,0%	5,0%	0,0%	0,0%	5,0%	5,0%
	Bar	Bartender	Count	1	0	1	0	1	0	1
			% of Total	5,0%	0,0%	5,0%	0,0%	5,0%	0,0%	5,0%
	Manufacturing	Construction Worker	Count	1	0	1	1	0	0	1
			% of Total	5,0%	0,0%	5,0%	5,0%	0,0%	0,0%	5,0%
Total			Count	3	0	3	1	1	1	3
			% of Total	15,0%	0,0%	15,0%	5,0%	5,0%	5,0%	15,0%
Total			Count	10	10	20	8	8	4	20
			% of Total	50,0%	50,0%	100,0%	40,0%	40,0%	20,0%	100,0%

Out of the 20 graduates 17 were engaged in horticultural occupations (seven male and ten female, most in the age group between twenty to twenty five years old). From the 17 graduates, 13 were holding occupations as supervisors (three male and three female), and coordinators (one male and six female) in an FDI horticultural enterprise located in the Oromia region. From the remain, 3 were employed as DA's (two male and one female) working for a governmental institution, and 1 male graduate was holding a position as a technical assistant in a domestic horticultural enterprise. Only 3 graduates (three male, in the age group between twenty to twenty eight) were engaging in non-agricultural occupations working as a community manager, bartender and a construction worker.

**Holeta TVET college associates** (Appendix B): thirteen respondents were approached out of which twelve were male and one was female. Two respondents were from the management team of Holeta TVET college and the remaining eleven were vocational teachers. However, the two management respondents also had a teaching position at the college. Overall, the teachers had at least seven years work experience in the TVET educational sector. The teachers possessed either a bachelor's (B teachers) or a master's degree (A teachers). The associates were expected to have knowledge about the effectiveness of the TVET program in training graduates competent for (self-)employment based on the provided courses and practises.

**Federal Government** (Appendix C): six governmental bodies were approached, namely the Federal Ministry of Labour and Social Affairs (MoLSA), the Federal Ministry of Agriculture, TVET department (MoA-TVET), the Federal Ministry of Education, TVET department (MoE-TVET), the Federal Ministry of Planning (MoP), the Ethiopian Investment Commission (EIC) and the Ethiopian Horticulture and Agriculture Investment Authority (EHAIA). All of the Federal Miniseries were located in the capital city of Ethiopia, Addis Ababa. In total eleven respondents (all male) were approached out of which two associates from each Federal Government were addressed, except for EHAIA only one respondent was involved. The professional occupation of the respondents per Ministry Department is not disclosed due to ethical reasons and to avoid traceability of the respondents. The government bodies were anticipated to provide information about regional TVET programs and the labour market demand of horticultural TVET graduates.

**Private horticulture enterprises** (Appendix D): ten FDI horticultural companies located in the Oromia region were interviewed. The companies were operating approximately eight years in Ethiopia possessing 500 to 2500 employees out of which 80% were female. The interviewed respondents were the General Managers of the companies. The enterprises were approached to disclose information about the demand of skilled human resources in the horticulture sector and the required employability skills for horticultural occupations.

#### 4.4 Data collection methods

**Sampling method:** Hennink, Hutter & Bailey (2010) suggest that using different sampling methods for the target recruitment compensates possible shortcomings. Thus, for this research the graduates were recruited by using two different methods, a gatekeeper, and formal networks and services (Hennink, Hutter & Bailey, 2010). The gatekeeper assisted in the recruitment of graduates, who had a recognized role in the target population and influenced and encouraged graduates to participate in the research process. However, there is a possibility that the selected graduates may be respondents the gatekeeper preferred to be included in the research. To avoid such speculation, alternative recruitment strategies were suggested by the researcher. For instance, the gatekeeper selected the company where the graduates were employed, but the researcher had the autonomy to select the graduates within the company. The second method, use of formal networks and services included visiting locations where the graduates gathered. The graduates were taking additional courses given on the weekends at Holeta TVET college on a regular schedule, which helped to recruit supplemental respondents.

The Holeta associates were recruited by first being informed by the college Vice Dean about the research's presence at the college. As follow, the researcher selected the respondents based on their occupation relevant for the research objectives. The governmental officials were recruited with personal approach by the researcher, as due to the lack of communication channels in Ethiopia it was challenging to reach out to governmental officials in advance. Therefore, the researcher visited the Ministries pitching the objective of the research to arrange a meeting with relevant senior officials for proceeding an interview. The horticulture enterprises were recruited by accessing the Ethiopian Horticulture Producer Exporters Association (EHPEA) in Addis Ababa, which is an agricultural association working with over 120 horticultural companies in Ethiopia. EHPEA provided a list of companies (FDI and domestic), out of which only FDIs located in the Oromia region were willing to participate due to the manager's advanced English.

**Recruitment of respondents:** the decision on the selection of relevant respondents within the four target groups was based on the purposive targeting method in which the researcher relies on his or her judgment (Tongco, 2007). During the selection of the respondents, the purpose of the interviews was observed by looking at whether the primary objective of the interview matched the respondent. Before selecting a respondent, it was imperative that the respondent had experiences with and opinions about TVET educations.

**Interview guide:** the interview guide was developed according to relevant theoretical concepts about the objective of the research. As this is an exploratory research, the in-depth interview approach was applied. The approach was employed to discover the respondent's meaning he or she attaches to experiences, the respondents' beliefs, and perceptions related to both employability and employment outcomes (Wengraf, 2001). However, this was achieved through placing emphasis on the respondents' narratives and subjectivity using a semi-structured interview guide where the interviews were conducted in the form of a conversation (Wengraf, 2001). Meaning, during the in-depth interviews the respondents were motivated to share their perspectives by using probing only after asking open questions. Further, the interviewer and the respondent were reacting to each other's perceived identity and personality which influenced the process of how the issues were discussed. This indicates that in-depth interviews may be described as a conversation with a purpose particularly focusing on knowledge-producing conversation (Hennink, Hutter & Bailey, 2010).

A semi-structured interview guide was applied to all four target groups. Each target was approached for a face-to-face interview except for the private sector, where the interviews were conducted over the phone. The approximate length of the interviews was between 45 minutes, and 1 hour and 15 minutes. The interview guides consisted of 25 to 33 questions. Each interview was conducted in English, except the interviews with the graduates who only spoke the Amharic or Oromia language for which a field assistant was used as a translator. The translator was a teacher from Holeta TVET college and shared familiarity with the research context and had a working experience of seven years in the TVET education system. Although for the graduates' interviews a translator was used and the conversation did not follow directly between the researcher and the respondents (as it is required for in-depth interviews), the researcher carefully observed the context in which the respondents and translator were communicating thereby, targeting possible gaps for further questions. For instance, the graduates were asked whether a specific skill was trained at the college, where almost every graduate had a discussion with the translator, before confirming. The discussion was based on the content of the question (not the clarity of the question), as the researcher addressed the translator considering the observed discussions with the graduates about the particular question. Further, modifications were made in the interview questions based on feedback provided by a Dutch freelance researcher in Ethiopia specialized in educational research possessing over thirteen years of experience in the field. In order to check the structure and content validities, the interview guide was reviewed by this research expert. Observed defects were corrected for better



reliability of the instrument and validity of the data. Any obscure words and questions were either rephrased or removed.

**Conducting interviews:** the invitation process of the graduates took place on the day of conducting the interviews, due to lack of contact information. The Holeta associates were approached at the college offices where each respondent was addressed on the day of the research. The government officials were approached personally at the ministry where again no previous invitations were sent out for the same reason. The horticulture enterprises were contacted over the phone with no previous invitation as well, due to time and budget limitations. Regarding time limitation, it was assumed that if using invitations, the positive responses for participating in an interview might have been low and respondents might not respond as quickly. Considering the budget limitations, it was challenging to travel by public transport to visit the companies personally, as most were located outside the neighbouring area of Addis Ababa.

At the start of each interview, the purpose of the research and usage of collected data was addressed. Further, the respondents were informed about the confidentiality and anonymity of the data, the approximate length of the interview and permission was asked from the respondents to record the interviews on an audio device. The interview guide was structured by following four types of question categories namely; general questions, opening questions, key questions, and closing questions (Hennink, Hutter & Bailey, 2010). The general questions were about the background of the respondent. The opening questions were broadly related to the key topics of the interview guide to comfort the respondent before moving on to the key questions. The central part of the interview guide was founded on the key questions designed to collect the core information related to the research question. The closing questions, assisted to slowly close the interview and create a distance before leaving the respondent (Hennink, Hutter & Bailey, 2010).

Four techniques were applied during the interviews to stimulate respondents to provide comprehensive data (Baarda, De Goede & Teunissen, 2013). Firstly, it was crucial to gain the respondent's trust. To do so, the researcher placed herself in the situation of the respondent by reducing discussions, differences of opinion, taking a neutral position, and no personal prejudices. Secondly, respondents find it exciting to be interviewed and often unsure whether they can provide the right answers. To remove such tension, the respondents were informed that it is their story to tell and no scientific data was expected from them. Thirdly, the Listening, Questioning and Summarizing (LQS) technique was applied (Baarda, De Goede & Teunissen, 2013). Regarding listening no personal opinions were given, by asking questions interest was shown which paralytically led to details and anecdotes, and a quick summary was taking place before moving on to the next question to check the respondents' answers. The summary allowed the respondents to reflect on and correct the researcher's image if necessary. Fourthly, language was vital. As such, respondents were left to talk in their own style and the questions were adjusted to the experiential world of the respondents to stimulate detailed information (Baarda, De Goede & Teunissen, 2013).

**Processing data:** the interviews were transcribed by using the iTunes application, while the transcribed interviews were coded by operating with the NVivo software program. The coding process was executed by using NVivo's theoretical and methodological memo tools which were linked to fragments of the interviews. The theoretical memos assisted in linking codes with the theory. For every code a memo was created to define the meaning of the code in the light of the literature. Defining codes is vital to distinguish them from one another, as the difference between codes can be unclear and/or similar. The methodological memos were attached to the process of data collection. Certain situations during the interviews were noted, such as a respondent hardly understanding a question, or refusing to answer a question and why would that be the case.

**Ethical considerations:** ethical considerations are important elements in the data collection process (Hennink, Hutter & Bailey, 2010). Hence, the researcher assured the data provided by the respondents was used only for academic purposes and confidentiality was kept. The comments the respondents provided were respected and they were cited without modifications.

#### 4.5 Data analysis

The analytic cycle helped to structure and analyse the empirical data. This was done through four steps, namely; description, comparison, categorisation and conceptualisation, and theory development (Hennink, Hutter & Bailey, 2010).

**Description:** The first task in the analytical cycle was to develop a detailed description of the issues in the data gathered from the interviews. The issues were identified by comparing interviews within the same target group, revealing questions such as “is respondent A talking about the same as respondent B, what do both interviews reveal about a certain concept, and what are the similarities and differences between respondent A, B and C”. It was also vital to compare interviews from different target groups to reveal what does group one say about a particular theme and what does group two has to say about the same theme or what themes appear in group one but not in group two and why do both groups see things differently (Boeije, 2002). The description of issues allowed to develop an explanation of the codes by using the NVivo software programme. This was done in a systematic manner following the depth, breath, context and nuance of each issue to build up a detailed description (Hennink, Hutter & Bailey, 2010) about the employability skills and employment services of the economic, social and cultural capital.

**Comparison:** Comparison was the second step in the analytical cycle. It was based on the CCM method using the three steps (out of five) introduced by Boeije (2002). The first step was ‘comparison within a single interview.’ The second step was ‘comparison between interviews within the same target.’ The third step was the ‘comparison of interviews from different groups’, applying data triangulation in the data analysis process (Boeije, 2002).

**Categorisation and Conceptualisation:** The third step of the analytical cycle was categorisation and conceptualisation. Categorizing focused on identifying codes with similar characteristics and merging them in one category. Conceptualization focused on studying the relationships between the developed categories to perceive the data as a whole and develop a conceptual understanding of the data. During both processes it was also looked for codes outside the conceptual model to detect possible inductive codes. Both categorizing and conceptualization moved the analysis process to a higher level of abstraction where theory development could be realized (Hennink, Hutter & Bailey, 2010).

Regarding categorising data, groups of codes were developed mainly into two categories; employability and employment outcomes. Employability outcomes addressed skills and factors for TVET programs to be successful in training competent graduates. Whereas, employment outcomes were divided into two sub-categories; employment in the formal sector and self-employment. Both categories (employability and employment outcomes) contain factors based on the three capitals; economic, social and cultural capital. Following this categorizing strategy introduced by Hennink, Hutter & Bailey (2010) the categorization remained well rooted in the data. It also operated in line with the research question which in synergy with the CCM method (Boeije, 2002) mapped out the TVET factors on regional level which were different or similar from those of national level.

Considering conceptualising data, the process moved the analysis to a more abstract level by looking at how the codes of the data were linked together into a broader conceptual framework. To conceptualise the data of the two code categories (employability and employment outcomes), three strategies were used. For the employability category, the conceptualizing strategy of 'social domains' was employed (Hennink, Hutter & Bailey, 2010). The strategy helped to categorize two domains; a number of core employability skills and teaching methods/factors that influence the effectiveness and the quality of the skills. For the employment category, the conceptualizing strategy of 'process or pathway' introduced by Hennink, Hutter & Bailey (2010) was used. The strategy enabled to identify and highlight the process TVET graduates encounter to become (self-)employed. The third conceptualizing strategy was 'the music not the dance' where attention was given to the background of the context (Hennink, Hutter & Bailey, 2010). The strategy helped to understand how the factors of economic, social and cultural capital divided into the two categories (employability and employment outcomes) influence the pivotal issues in the data.

**Theory development:** The fourth and final step in the analytic cycle involved bringing all components of the analysis together to develop an extension of a pre-existing theory. This research used the approach of 'theoretical refinement' to develop a theory that involved analysing a pre-existing theory (Snow, Morrill & Anderson, 2003). The 'theoretical refinement' approach of theory development does not involve constructing an entirely new theory, but it focusses on the modification of pre-existing theory by analysing new empirical data (Snow, Morrill & Anderson, 2003). In the case of this research, little is known about the differences between regional TVETs in Ethiopia regarding the essential factors that play a role in training graduates competent for employment effectively (Dadi, 2014). To extend this interval it was looked into the effectiveness of Ethiopian TVET programs on national level and compared the deductive findings with empirical data concentrated on the effectiveness of a single case study, Holeta TVET (regional) college. The aim was to highlight essential factors to fill the knowledge gap of how RHTPs in the Oromia region can be more effective in training competent employability skills and providing necessary employment services. Using such an approach was crucial, as national results might not generalize to individual cases (Kennedy, 1979). Through this approach the empirical data highlighted new theoretical concepts on regional level that extended the pre-existing theory regarding the differences between regional TVETs in Ethiopia.

## 5. Results

### 5.1 TVET institutions and key actors

The Federal Ministry of Education – (TVET department), implied that for all eleven Ethiopian states there is a federal TVET agency. Each agency has bureaus that execute the strategy at regional level for the regional TVET institutions. Besides, there are also federal TVET institutions supervised on federal level under other ministries such as the Ministry of Agriculture and Natural Resources. The objective of regional and federal TVETs is to supply competent workforce and transfer advanced technology for the industry. Federal TVETs are directly financed by Federal Ministries while Regional TVET institutions receive financial support from the Regional Government where the college is located. Moreover, regional TVETs often cooperate with Non-Governmental Organizations (NGOs) which financially support development projects to enhance the TVET programs.

### 5.2 Employability outcomes

In this section a set of employability skills important for employment and factors impacting the effectiveness of the skills are presented as important components of cultural capital.

#### 5.2.1 Cultural Capital

The presented skills in this section are necessary for employment in the horticulture sector in Ethiopia in the Oromia region. Furthermore, factors impacting the effectiveness of the skills are also presented.

##### 5.2.1.1 Essential employability skills for (self-)employment

**Mathematics:** All graduates and teachers stated that Holeta TVET college did not train mathematic skills.

Teachers implied that this is because the competence is not included in the OS and because of the students' poor educational background, which makes it challenging to teach mathematics: *"The TVET strategy is set by the government as a good manner but when it comes to knowledge our students have low education. That makes us poor quality of teaching and learning education. Concerning knowledge, the students do not understand you, because of their knowledge background. The instructors have more than ten years of experience, but we see a deep challenge in teaching students. So a competence such as mathematics would be difficult to imply"* (respondent 2, male, Teacher). Enterprises implied that mathematics is a crucial skill required for employment and have experienced lack of such proficiency among workers: *"For example, if you are working with count rooms it is very easy; there are five of that count rooms. Normally if you work with that every day you have to know that 5 times 28 is 140 but they do not have that vision. The mathematics in Ethiopia is a disaster"* (FDI Company 2, male, General Manager). Enterprises distinguished two complementary competencies regarding mathematic skills which were not considered by national TVET studies. Enterprises implied that basic mental arithmetic and the percentage calculation are required for employment. The percentage calculation is required for the chemicals and fertilizing usage, and for loading a truck.

**Teamwork:** According to all graduates and teachers, teamwork skills were trained at Holeta TVET college in the form of group assignments. Graduates further implied that the competence can be enhanced including more practical assignments. As teamwork is a beneficial competence for performing their occupations successfully as supervisors and coordinators assisting them to easily form and manage groups, correct individuals, illustrate demonstrations and overcome group problems.

**Communication and English language:** All graduates and teachers stated that communication skills were trained at Holeta TVET college, where students could practice how to share and understand information. Graduates further implied that more emphasis is needed on communication skills as the competence is vital for their work performance at FDI enterprises. All graduates and teachers stated that English language was not trained at Holeta TVET college. Teachers implied that this is due to the fact that the English language is not

incorporated in the OS. Graduates stated that both communication and English are vital for employment as they work with internationals, it helps them to supervise groups on the work floor and communicate with international co-workers: *"Communication is important because when I applied for this job the first thing they asked me was about communication skills and if I spoke English. They ask you questions about situations; if a colleague is angry how do you react, what do you do and also on your work performance they evaluate you on communication"* (Graduate 20, male, 26 years old).

Considering the quality of the provision of soft skills, teachers stressed a complementary factor which was not mentioned in national TVET studies. Teachers implied that they had not received training or workshops on how to transfer knowledge on soft skills: *"There is a competency such as teamwork and communication, but we have a gap in these competencies. Just when we teach students about teamwork, (...) once I was employed as a teacher I was reading the material, and then I teach them. Practically I have never learned it in the class, I did not get any training like a workshop, so I cannot make or realize a team"* (Respondent 1, male, Teacher).

Regarding communication skills and knowledge of English language, all FDIs stated that both competencies are strongly required for employment. Companies stressed that employees possess limited or basic knowledge of English, which makes the communication process between employers and employees challenging. To bridge this gap, enterprises provide English classes for their workers themselves.

**How to manage changes in the working environment:** Graduates implied that competencies such as being assertive (confident to speak in front of a group), determinate (punctuality and accomplishing tasks on time) and resilient, were not trained at Holeta TVET college, yet are important for employment. Regarding being resilient, according to graduates TVET programs should provide students with information about how to manage and recover from severe conditions: *"To adapt the environment can be difficult. I had a hard time adapting the temperature of the greenhouses. I advise the college to prepare and inform graduates about such challenges on the work floor"* (Graduate 5, female, 25 years old). Enterprises specified that it is important for workers to be assertive and determinate (be able to recognize priorities). Regarding assertiveness, enterprises stated that employees fear to speak in front of a group or announce problems, instead they would rather work with a broken tool than announce that there is a need for a new tool.

#### 5.2.1.2 Essential employability skills for self-employment

**Entrepreneurial training:** All graduates and teachers indicated that entrepreneurship training was trained at Holeta TVET college. According to graduates the competence consisted of assignments on developing a business plan, how to manage and run a business, and information about microfinance. However, graduates also implied that although the competence was comprehensively taught at the college it still remained unpractical due to lack of financial capital by the graduates to start their own enterprises.

#### 5.2.1.3 Essential factors influencing the effectiveness of employability skills

In this section, the impact of factors on the effectiveness of the employability skills trained at Holeta TVET college are presented. However, various employability skills are also included which emerged along with the factors.

**Cooperative training:** All graduates stressed that cooperative training was provided at Holeta TVET college and is an effective strategy for learning practical working activities at companies. All graduates and teachers stated that the college had provided them with only ten days of cooperative training, visiting four companies in total. According to teachers and graduates, students do not participate in practical working activities during the cooperative training: *"Companies do not want to allow any damage, so they let students sometimes to clean up the working area. Students sometimes participate but not in critical practices as students have no experience"* (Respondent 2, male, Teacher). Table 2 illustrates aspects provided by graduates about the effectiveness of the cooperative training.

Table 2: Aspects of cooperative training – Graduates

Aspects regarding the effectiveness of the Cooperative Training (CT)	Complementary factors not mentioned in national TVET studies	Description
Holeta TVET college fails to reach the stipulated 70% of CT	Lines up with prior literature	The college provides ten days of cooperative training visiting four companies in total: - seven days visiting one company - three days visiting a different company per day
The three days of CT provided by Holeta TVET college	Complementary factor	Not effective: companies are rushing through their program, excluding practical activities.
Some companies give lectures during the CT	Complementary factor	Not effective: should be removed and companies should deliver demonstrations of practical working activities, as the college already provides lectures.
Desired duration of CT by the graduates	Lines up with prior literature	CT should be at least three months and should consist out of visiting several companies to enhance the knowledge of practical working activities.
Linkages between the college and enterprises for CT	Lines up with prior literature	The college should expand its networks with companies outside of the college region who operate with unique horticultural systems to enhance the practical working activities.
Students' participation in practical working activities during the CT	Complementary factor	Students only observe during the CT and mostly are allowed to participate in simpler activities e.g., tidying up the working environment. According to graduates this is caused by: - The college visits companies with a large group of students; enterprises do not have the space to address students individually. - Companies are protective over their materials and request students not to touch it.

Table 3 provides more details about the effectiveness of cooperative training and its contribution to employment based on the perspectives of different stakeholders.

Table 3: Aspects of cooperative training – Stakeholders

Cooperative training (CT)	Horticultural formal sector	MoE-TVET	Vocational Teachers
Beneficial for employment	Enterprises implied that CT is a strategy leading to employment prospects, due to the student's familiarity with how the company operates.	TVET programs are designed to offer 70% of CT, whereas 30% should be given at the college level. CT is beneficial for employment as students master practical competencies at the industry.	Holeta TVET college fails to provide the stipulated 70% of CT which does not ultimately contribute to the graduates' employability skills.
Cooperation between TVET colleges and enterprises	N/A	CT is not happening in many colleges as either the industry is not nearby or the industry is not willing to cooperate.	Holeta TVET college does not reach the stipulated 70% of CT due to the unwillingness of companies to participate and budget limitations. The college is unable to pay companies for extended periods of CT.

**Technologies and training materials:** All teachers stressed that the college has insufficient laboratory training materials, due to budget limitations: *“We do not have any machinery here as you can see. The machinery is in the industries”* (Respondent 2, male, Teacher). According to teachers, due to the lack of training materials, it is inconceivable to deliver effective practical experiences with training materials. Teachers emphasized that poor quality of practical experiences negatively impacts students’ employment prospects, resulting in inefficient employability skills, making them less attractive in the labour market.

According to graduates, the practical training experiences with training materials at Holeta TVET college were less effective compared to those at the industries during the cooperative training, as the technology and training materials at the college were more rudimentary and less advanced. Graduates implied that at the companies they work at, they operate with machinery they have not worked with before, not even during the cooperative training. Graduates emphasized that the companies had provided them with one-month on-the-job training and could successfully adopt on how to manage the machinery: *“The machinery we are using here at the company, I did not see it during the cooperative training nor at the college. I did not find it challenging to adapt (...) even I was never trained with it. I got one-month on-the-job training, and I have learned how the machines work”* (Graduate 15, male, 24 years old). Table 4 illustrates a comparison on the quality of trainings with technologies at Holeta TVET college and the cooperative training at companies, by the graduates. However, the practices presented in Table 4 were not previously considered in national TVET studies, hence, are complementary competencies for the horticultural sector related to skills with machineries vital for employment.

Table 4: Comparison of technology trainings; Holeta TVET college and enterprises – Graduates

Technologies and training materials	Description
Practical training experiences with irrigation systems	The irrigation system at Holeta TVET college is manual while at the companies it is mechanized. Working with mechanized systems, graduates learn how to calculate the water for watering the crops.
Practical training experiences with compost preparation	At Holeta TVET college the compost cannot be used for the crops. At the companies the process is provided in detail using advanced technology.
Practical training experiences with fertilizing, grafting and machines for harvesting	Holeta TVET college is not equipped with such technologies. Employability skills regarding these machines could be gained during the cooperative training at companies.

**Outlining the core competency skills demanded by industries:** Teachers indicated that Holeta TVET college does not approach companies to map the demanded employability skills by the industry as there is no connecting line between the two parties. The strategy for establishing a TVET curriculum is processed by following the OS developed by the industry in collaboration with the Federal Government. Based on the OS, TVET teachers develop the curriculum for TVET students. Teachers indicated that there is a skills mismatch between the employability skills provided by the horticultural program and the skills demanded by the horticultural industry. According to teachers, this is due to the fact that industries are not involved in the process when establishing the OS: *“When the industries came for the workshop we created at the college, we told them we deliver training according to the OS they provided for us; they did not know what OS means”* (Respondent 8, male, Teacher). Teachers indicated that it is unclear whom the Federal Government is involving when establishing the OS and that awareness for all industries is not created and that there is a problem with the implementation. However, such aspect of the OS was not discussed in studies on national level. Further, teachers indicated another complementary factor which was not discussed in national TVET studies, that the curriculums of RHTPs include too specific occupations and are not uninformed with other RHTPs, which makes it challenging for graduates to become employed. For instance, teachers stressed that when regional TVET programs are designed, there is an economic corridor. As implied by teachers, this means that RHTPs focus on specific skills which are dominant by

the developed industry sectors of the region where the college is located, thus the curricula do not have a holistic approach. According to teachers, such specific curricula are not practical for the employment of students. As students come from far away to apply for a TEVT education, and after graduation, once they return to their home region, students possess no skills demanded by the developed industry sectors in their region: *"When we get students from the western part of the country where coffee is the main industry, once those students return to their home region they have difficulties in finding jobs. As they know nothing about coffee production and our college ignores such skills because the coffee industry is not developed in this region. Instead, we focus for instance on honey production. The best approach is if the curriculum is holistic, but the curriculum at this college is too specific"* (Respondent 8, male, Teacher).

Moreover, MoA-TVET elaborated further on the complementary factor mentioned by vocational teachers that regional TVETs do not have a holistic approach which results in skills mismatch among regional TVET programs. According to MoA-TVET, the establishment of an OS is the mandate of Federal Government in close collaboration with industries and is meant for both federal and regional TVET colleges which serve as a guideline for TVETs to develop their curriculum further. MoA-TVET emphasized that in the case of federal colleges still de TVET curricula are designed based on the interest of the Ministry of Agriculture and Ministry of Natural Resources, so they are directly accounted to Federal Ministries. For example, on a federal level of TVET colleges, there are eight occupations, and these occupations are holistic. As specified by MoA-TVET, holistic approach means that, e.g., under the occupation of animal production there are 13 professions (beef production, sheep production, etc.) so the approach is general. While, as stated by MoA-TVET, regional colleges create links with NGOs and design their curricula based on the interest of specific communities, such as the private sector. MoA-TVET stressed that the federal colleges are mainly designed to fulfil the interest of the federal government, which is directly working in regional levels, supporting the rural communities who need holistic approaches, not the specific ones. MoA-TVET indicated that in the area where students graduate from regional TVETs with specific occupations, the industry might only need one expert with a specific occupation in animal production, not thirteen graduates. The demand to employ thirteen experts in animal production is not present.

**Skills mismatch/skills that should be more comprehensive at Holeta TVET college:** Regarding the skills mismatch, graduates implied that there are differences in how comprehensive certain competencies were trained at Holeta TVET college and how they are executed at the companies they work for. Table 5 presents details provided by graduates about skills that need a more comprehensive approach.

Table 5: Employability skills trained at Holeta TVET college; comprehensive approach needed – Graduates

Skills not comprehensive enough	Description
Propagation skills	The propagation skills at Holeta TVET college were useful but basic. No knowledge was provided about the different time intervals and temperature when propagating. At the college, planting occurs on the ground, while at companies it is executed in containers.
Chemical application	The skills on chemical application at Holeta TVET college were useful but elementary as it included only spraying activities. The calculation of chemicals concentration with water per hectare, and the variety of chemicals that can be used per type of plant were not included in the practices at the college.
Fertilizing, Grafting and Harvesting	The competencies were not comprehensive at Holeta TVET college due to lack of machinery.
Type of plants	The competence is less extensive at Holeta TVET college. It did not include knowledge about plants such as pelargonium and protea.

**Skills mismatch/skills not trained at Holeta TVET college:** According to graduates, few core employability skills regarding horticultural occupations were not trained at Holeta TVET college. Table 6 illustrates the employability skills.



Table 6: Employability skills not trained at Holeta TVET college essential for employment – Graduates

Skills essential for employment not trained at the college	Description
Export skills	How to manage the products to loading a truck.
Hygiene procedures	Hygiene procedures for cultivating cereal crop.
Compression of plants	Is related to the air cartridges of the plants for dust collection where graduates had to learn whether a plant needs a high or low compression.

**Skills mismatch/skills required by the horticulture industry for employment:** Regarding the superior employability skills once recruiting new employees, enterprises indicated that employees in Ethiopia hardly possess practical knowledge and there is a shortage of skilled workforce: *“When it comes to practical skills people don’t have it here that is why I brought people from Kenya”* (FDI Company 4, man, General Manager). Further enterprises indicated that basic knowledge of general understanding (what is horizontal or vertical, understand degrees and kilometres) is another skill employees lack: *“If you ask people how many kilometres is Debre Zeyt from Addis Ababa they say 20 birr, because that is what they pay for the taxi, but they do not understand the kilometres”* (FDI Company 10, male, General Manager). Table 7 illustrates the employability skills required for employment by the horticultural formal sector.

Table 7: Employability skills required for employment – Enterprises

Chemical application (familiarity with different types of pesticides and how to work with spraying)	How to use magnifying glasses (to check leaves for diseases and the humidity of the soil)	Food production protocols (implementing coin protocols of different food)	Harvesting methods (fruits has to be picked and paprika has to be cut)	Fertigation skills (the injection of chemicals into an irrigation system)
How to work with irrigation and greenhouse equipment	Tractor license	Managing safety equipment	Basic knowledge of general understanding	Knowledge of different crops

\*Justification: The employability skills presented in the results section, have been summarized in Table 10, Appendix E.

**Quality of vocational teachers:** The educational qualification and ethical and technical competence to teach of Holeta’s TVET college vocational teachers is presented in Table 8.

Table 8: Qualification of Holeta’s TVET college vocational teachers

Gender		Educational qualification		Ethical and technical competence to teach	
Male	Female	C teachers: possessing a TVET level IV certificate (teaching at TVET level I and II)	B teachers: possessing a Bachelor degree and/or A teachers: possessing a Master degree (teaching at level III and IV)	Have working experience of minimum 5 years	Possess a COC certificate (permission to teach at each TVET level)
12	1	N/A	All 13 teachers	All 13 teachers	All 13 teachers

According to all students and teachers, the college possesses qualified vocational teachers. Teachers implied that this is due to the collaborative agreements with NGOs who support short upgrading courses or subsidize master's educations for the teachers. Teachers further emphasized that the COC is about how to manage the class and how to transfer practical skills and knowledge to students. However, teachers elaborated on a complementary factor considering the COC which was not considered in national TVET studies implying that the COC assessments are not helpful as they are not adequately implemented in practice. Teachers stated that when taking a COC examination, it depends on the examiner whether the teacher would pass, rather than the knowledge the teacher possesses: *"COC as a strategy is good, but when it comes to reality, there are problems. When we take a COC examination mostly it depends on the examiner, if he likes you, you shall pass"* (Respondent 1, male, Teacher). Regarding the COC, teachers indicated that there is a problem with how the COC examiners are selected. The college is not authorized to select the examiners, the selection is executed by another organization.

**In-service-training for vocational teachers:** According to teachers, in-service-training is not provided by Holeta TVET college due to budget limitations from the regional government. Teachers emphasized that in-service-training, when implemented, can serve as a strategy for capacity building, thus gaining contemporary practical training methods that require training from industries to transfer employability skills to students. Teachers further stressed that such a facility could be beneficial and serve as a coping mechanism of production methods: *"If I do not know how to process crops and if I get the chance to visit an agricultural centre then I can copy the technique of crops production"* (Respondent 2, male, Teacher).

**The number of vocational teachers per college:** Teachers indicated that according to the TVET strategy only 30 students are allowed to be enrolled in one class. However, the classes at Holeta TVET college go up to 90 or over 100 students. Further, teachers implied that the shortage of human resources at the college makes it challenging to train employability skills effectively, as there is no time to cover all the necessary units of competence during the classes: *"Most of the time there is a lack of human resources, from one class we are rushing to the next because there is a shortage of time"* (Respondent 9, male, Teacher). According to teachers, the college is not authorized to hire new teachers. This is the responsibility of the Region Bureau, which is unwilling to hire new teachers as a result of the political tension in the country. The government is not paying attention to the regions' needs.

**English language as a teaching method:** Holeta TVET college features foreign teachers who do not speak the local language, but English. According to graduates, it is difficult to understand the knowledge provided by foreign teachers due to their pronunciation of English, where this factor was not discussed by previous literature. However, graduates had no difficulties in understanding local teachers as they have a clear English pronunciation and could switch to the local language to explain more delicate practices. Concerning the ethical and technical competence to teach, local and foreign teachers stated that they experience great difficulty in teaching students in English due to the students' lack of English language. Therefore, local teachers are mandated to explain theory and practices in the local language: *"Some students are competent, but most do not understand you. That is why we use the local language, once we explain it in English then we explain it in Oromo and in Amharic"* (Respondent 8, male, Teacher). However, local teachers implied that the reason for hiring foreign teachers is due to the collaborative development agreements with foreign governments. For the college to maintain the collaboration, conditions are attached to hire teachers from the donors' countries. Local teachers further implied that the college does benefit from the knowledge and techniques foreign teachers transferred to local teachers.

### 5.3 Employment outcomes

The following factors are obtained as essential factors impacting the employment outcomes in the formal sector and self-employment of TVET graduates.

#### 5.3.1 Economic capital

In this section economic factors which impact the employment prospects of TVET graduates are presented.

##### 5.3.1.1 Essential factors influencing employment prospects in the formal sector

**Labour demand in the horticulture sector:** considering the economic context, all teachers and graduates have experienced lack of employment opportunities in the horticulture sector in Ethiopia: *"There are no job opportunities (...), from the students who graduate, not more than 25% become employed, over 75% are still at home"* (Graduate 13, male, 26 years old). Teachers indicated that after graduates complete the TVET education, the industry cannot absorb the amount of labour supply. Hence, there is a need for companies' extension to promote more job prospects. However, enterprises implied that they are in the process of promoting employment opportunities for skilled labour. Moreover, five Federal Ministries (MoLSA, MoA-TVET, MoP, EHAIA, and EIC) also indicated that the horticulture sector is expanding in Ethiopia and is in the process of transformation from traditional to industrial agricultural skills, demanding skilled employees.

**Demand of TVET graduates in the Ethiopian horticulture sector:** enterprises stated that they have the capacity to extend their business for which they need skilled workers but find it challenging to locate employees with the adequate employability skills in the country: *"We want to expand, and we can invest USD 58 million in Ethiopia, it means we need people with knowledge and skills (...), but there is not enough skilled labour in this country. We are looking for people with good practical knowledge, but it is hard to find such employees"* (FDI Company 10, male, General Manager). Enterprises implied that due to the difficulties to locate skilled workers, the educational background of employees is not significant for employment and companies choose to recruit undereducated people from the surrounding area. Such employees are mainly individuals who have not completed grade ten: *"To be honest most of the employees have not even completed 10<sup>th</sup> grade in school, so the educational background does not matter to us."* (FDI Company 3, male, General Manager). Enterprises further stated that they prefer to train production workers and supervisors themselves by providing employees with approximately one-month on-the-job training. This way employees can scale-up in their occupation through further training provided at the company: *"We prefer to teach employees ourselves with on-the-job training. Our system is that they start as trainees and can upgrade their skills further in the company, that is the system we are working with now"* (FDI Company 2, male, General Manager). According to enterprises, on-the-job training is a practical approach which trains employees in such a way that employees learn about the production processes of the company and ensures that the work continues as expected.

**Job application processes:** Graduates and MoLSA revealed information on the employment challenges in the formal sector. For instance, graduates and MoLSA implied that financially it is costly for job seekers to travel to all places where the vacancies are posted in the county: *"One problem is the transportation costs. It is hard to know in advance which city to go to that might have a suitable vacancy for you. Therefore, you need to select blindly and hope you go to the right ones because financially you cannot afford to travel to many of them"* (Graduate 11, male, 26 years old). Further MoLSA indicated that the demand for horticultural labour in Ethiopia is high, but the market is fragmented: *"I cannot say there is no demand, the demand is there but is very fragmented. Our ministry (...) need to make our employment services more modern, more responsive and more accessible, for the youth and the potential employer"* (Respondent, male, MoLSA). Table 9 further illustrates details about the job application processes based on the perspectives of both stakeholders. One factor, namely the long bureaucracy processes for employment presented in Table 8, was not considered in national TVET studies, hence, the factor is complementary.

Table 9: Job application processes – Graduates and MoLSA

Job application processes	Stakeholders	Description
Bargaining position	Graduates	Graduates have no bargaining position in the labour market despite their employability skills. Most jobs are offered with low payment. Graduates implied that they have a lack of labour market knowledge, putting them in a bad negotiation position.
	MoLSA	The government does not interfere with wages (e.g. no minimum wage). It is left to free market bargaining, as it is a market-oriented system. This is discrimination in payment as there are no standards set by the government for graduates to negotiate for wages.
Long bureaucracy processes for employment	Graduates	There are long bureaucratic processes for employment after graduation.
	MoLSA	When operating with national employment projects, it is unclear to what extent the government has the liberty to select the type of labour. This creates long waiting periods in the labour market where graduates are waiting for two to three years for job opportunities to appear.
Job application processes are too expensive	Graduates	Financially it is costly for graduates to maintain with the current application system. Vacancies are placed on build boards in different areas/city centers. It is expensive for graduates to travel to many of them as graduates are located in the surrounding areas.
	MoLSA	The labour market in Ethiopia is geographically fragmented and if graduates look for jobs in one city but the opportunity is elsewhere, financially they cannot approach all areas where the vacancies are placed.
Fragmented labour market with a traditional job application process	MoLSA	Ethiopia has an inefficient application process, there is a lack of information between the graduates and where the job opportunities exist in the agricultural sector. It is challenging to advise graduates where to look for a job as it is unknown where the jobs are to be found. The job application process is more or less of a traditional nature, and it is not effective. There are individual private and public offices who register graduates and try to bring them together with companies, but such application process takes too much time. If consider the figure of job seekers coming to the labour market and the exact number of registered job seekers in public or private job centre offices it is very significant, only few are registered. The demand for labour in Ethiopia is high, but it is fragmented with a traditional way of job applications and search processes.

### 5.3.1.2 Essential factors influencing self-employment prospects

**Start-up capital:** Considering self-employment related to economic capital, according to all TVET graduates and vocational teachers, services on start-up capital are not provided by Holeta TVET college. Further, all graduates, teachers, and MoE-TVET stated that particularly the lack of start-up capital makes it impossible for TVET graduates to use their entrepreneurial skills to start their own business, which makes the competence unpractical. According to all three targets, access to start-up capital for TVET graduates is challenging caused by the ineffectiveness of the governmental structure. All graduates and MoE-TVET implied that the ineffectiveness of the governmental structure refers to the policy of graduates having to save 20% of the total desired loan before receiving the remained loan of 80% by the government. Both targets also implied that due to the graduates' low economic status it is challenging to save the 20% of finance: *"When you ask the government for a loan you need first to possess 20% of the total finance that you need to start your business. At that time, we were students fresh graduated with no money, and our family does not have the finance to support us either. Therefore, our opportunities are minimal"* (Graduate 20, male, 26 years old). Graduates who did succeed to save 20%, implied that, passing the processes for obtaining the 80% loan is challenging: *"The processes I could not pass was due to the ineffectiveness of the governmental structure, where each governmental office would refer me to another one, and no one could help me nor answer my questions."* (Graduate 15, male, 24 years old).

Moreover, MoE-TVET stressed that even after saving 20%, graduates need to have a collateral, a property that could be used as a reference to receive the 80% loan by the government. If the parents are poor the graduate cannot proceed.

Regarding the collateral problem, MoE-TVET implied that the government has come up with the idea of a revolving fund, as the money has to circulate. Once graduates receive the money from the government they do not need to bring a collateral and can start the business by returning the money within two years' time. Although this opportunity is provided, according to MoE-TVET, the intended revolving fund for the graduates is not utilised by the government as the law is not implemented for the people at the ground level. As a result, all graduates stated that instead of starting their own enterprise they find working for wages a more convenient approach to earn income: *"As I was provided with a job at this company, I accepted it. It is better for my future, it is a safe way to earn money because there is no challenge and here I know that I have an income. I denied going through the government for financial capital to start my own business because it is always a long and complicated process to get resources from them. It is challenging to become self-employed, it is not a simple thing to get done in Ethiopia"* (Graduate 6, female, 21 years old). MoE-TVET further implied that land lease is another issue regarding resource capital in Ethiopia. Land lease is a complementary factor as it was not found in national TVET studies to be a hindering factor for self-employment in Ethiopia among TVET graduates. According to MoE-TVET, there are local issues in Ethiopia once the government provides a TVET graduate with land for self-employment. Local farmers complain that they have been waiting for land longer than the TVET graduate. If a graduate has received land, after five years he or she has to graduate to the medium or small enterprise and leave the land for the next generation. However, graduates refuse to do so and some have been utilizing it for more than ten years saying they are still at the micro level and should be treated as one. MoE-TVET implied that this is because of the ineffectiveness of the governmental structure where the government is not successful in upholding the law.

### 5.3.2 Social capital

This section presents social factors which impact the graduates' employment prospects in the formal sector.

#### 5.3.2.1 Essential factors influencing employment prospects in the formal sector

**Establishing networks with enterprises:** Teachers and graduates, indicated that Holeta TVET college has limited networks with enterprises to provide graduates with linkages for job opportunities after graduation. Teachers indicated that according to the strategy the government had assigned the responsibility for colleges to create such networks, but due to budget limitations, it is challenging to establish such linkages: *"There is no budget, can the college then go 500km around Ethiopia to create linkages with companies, no of course not, it is impossible. From the government there is no budget for this, but they assign the responsibility to the college to do such things"* (Respondent 8, male, Teacher). On another note, graduates stressed that there are many horticultural companies managed by uneducated employees who have not completed grade ten and possess no employability skills. Such employees are trained by companies with on-the-job training how to operate with technologies and working materials. Alumnae implied that the college should prevent such a flow of employment and establish networks with companies to assign TVET graduates as skilled workers.

**Career advice services:** All graduates and teachers stated that Holeta TVET college did not provide classes about career advices regarding where to look for job prospects.

## 6. Discussion

This research aimed to examine the differences between results of national TVET studies and RHTPs in the Oromia region focussing on the effectiveness of employability and employment outcomes for TVET graduates. Both factors employability and employment outcomes, have determinants that can be distributed over economic, social and cultural capital. In this section, the most relevant determinants of both factors that either differ with results of national TVET studies or are considered highly relevant for the effectiveness of RHTPs are discussed to answer the research question: *How do factors regarding economic, social and cultural capital impact the effectiveness of regional horticulture TVET programs in employability and employment outcomes of Ethiopian horticulture TVET graduates in comparison with national TVET studies?* Furthermore, the section addresses the necessary policy implications, limitations of the research and recommendations for further research.

### 6.1 Theoretical implications

In this section, important factors based on the employability and employment outcomes influencing the effectiveness of RHTPs in the Oromia region are discussed by comparing regional results with results of national TVET studies in the Ethiopian context.

#### 6.1.1 Employability outcomes

Considering the cultural capital, there is a skills mismatch (Appendix E) among the employability skills trained at RHTPs in the Oromia region and those demanded by the horticulture industry. However, this result corresponds with findings on a national level (Fessehaye, 2006; Ali, Firissa & Legesse, 2017; Geressu, 2017). Hence, no differences were found between national and regional results regarding the skills mismatch. Various soft skills (communication, basic English language) and hard skills (related to horticultural occupations) required by enterprises for employment were either not trained at RHTPs or insufficient. The skills mismatch is a hindering factor for the effectiveness of RHTPs in the Oromia region, causing a failure to deliver graduates competent enough for employment. Indeed, many employers complain that their workers lack both soft and hard skills. The lack of such skills makes graduates less attractive in the labour market and makes it more challenging to benefit from the potential jobs appearing through industrialization and convert their cultural capital into economic capital through employment. Training TVET graduates that do not meet the required employment qualifications, challenges the government's actions to improve human development further and can also challenge the aim for economic transformation through labour intensive industrialization.

Positively, the cooperative training proved to be an appropriate method for students to learn advanced skills related to different machineries and production protocols which RHTPs do not possess due to budget limitations. Hence, cooperative training is an effective method for teaching technological training experiences. Due to budget limitations, individual RHTPs are unable to maintain with the transformation from conventional agriculture towards industrialization as machines are rapidly changing. However, on-the-job training also appeared to be a successful method for graduates to adapt to new technologies and gain comprehensive cultural capital of practical experiences.

The evident skills mismatch particularly on the employability skills related to horticultural occupations at RHTPs in the Oromia region has two main causes. One factor is that the federal government is not creating awareness of this problem among horticultural enterprises in the Oromia region once establishing the OS. The second factor is that RHTPs are not uniformed and focus on too specific competencies mainly demanded by the developed industries of the region where the college is located. Meaning, RHTPs do not have a holistic approach, training employability skills in various horticultural occupations, but only focus on occupations which are related to the well-developed industries in their region. Disregarding a holistic approach of

employability skills related to different horticultural occupations, reduces the employment prospects of TVET graduates. In case graduates return to their home region after graduation, most of the jobs offered might be related to occupations in which they have not been trained. However, both factors are different theoretical concepts from the empirical results on regional level, compared to pre-existing theories from national studies (Likisa, 2018; Dibie & Dibie, 2014; Edukans, 2012; Killian, Tendayi & Augustine, 2009), which mainly focused on the collaboration between TVETs and the industry for mapping the core competencies, as a factor to decrease the skills mismatch of the cultural capital trained at TVET programs.

Besides the skills mismatch, other factors also proved to impact the effectiveness of the employability skills as part of cultural capital trained at RHTPs in the Oromia region. As previously mentioned, cooperative training is a beneficial factor for the effectiveness of RHTPs to train students' employability skills. Three factors hinder the effectiveness of the cooperative training provided at RHTPs such as, the three days of cooperative training, the provided lectures during the training, and the lack of participation of students in practical activities. The three factors appeared from the empirical results as different theoretical concepts on regional level, compared to pre-existing theories from national studies (Alemu, Cook & Gubo, 2015; Geda, 2016), mainly focusing on the provision of the required amount of cooperative training. First, the model of three days of cooperative training is unpractical due to the incomprehensive programs offered by companies. Second, some enterprises provided inefficient lectures during the training, excluding practical working activities. Third, TVET students did not participate in practical working activities during the training because colleges visit companies with a large group of students and enterprises are being protective over their material. While students learned more comprehensive skills at companies, the cooperative training provided at RHTPs in the Oromia region needs improvement in all three aspects to improve the effectiveness on the graduates' employability skills.

Moreover, four factors regarding the vocational teachers proved to impact the effectiveness of the employability skills as part of cultural capital trained at RHTPs in the Oromia region. First, RHTPs in the Oromia region experience a shortage of teachers, which results in crowded classes where teachers have no time to cover all the necessary units of competence, which in turn hinders the graduates' value in the labour market. The shortage of vocational teachers in Oromia is caused by the unwillingness of the Region Bureau to hire new teachers as a result of the political tension in the country. National level studies (Hartl, 2009; Killian, Tendayi & Augustine, 2009; Hunde & Tacconi, 2017; Killian, Tendayi & Augustine, 2009) indicated that the shortage of vocational teachers is caused by the lack of skilled teachers in the country and/or budget limitations by the TVET colleges. Accordingly, the reason for the lack of teachers at RHTPs in Oromia differ from that of national results. Hence, in regions where the political unrest as a hindering factor influences the shortage of teachers, the factor has far more implications and consequences beyond the college. The remain three factors related to vocational teachers appeared from the empirical results as different theoretical concepts on regional level compared to pre-existing theories from national studies (Hartl, 2009; Killian, Tendayi & Augustine, 2009; Hunde & Tacconi, 2017; Killian, Tendayi & Augustine, 2009), mainly focussing on the quality of teachers. The second factor is that vocational teachers have not undergone training methods on how to transfer soft skills to students. The lack of such teaching method diminishes the competence of graduates in the labour market. Particularly because soft skills are significant for the performance of the horticultural occupation's graduates possess as coordinators and supervisors helping them to manage groups and guide individuals. The third factor is that the COC assessments for vocational teachers are ineffective as the strategy is not adequately implemented in practice and there are problems with the selection of the COC examiners. Unsuccessful COC assessments hinders the effectiveness of knowledge transfer to TVET graduates such as in the case of soft skills, which makes graduates less attractive in the labour market.

The forth factor is that students lack knowledge of English language and have difficulties understanding lectures from foreign vocational teachers lecturing at RHTPs in the Oromia region. Although, foreign teachers transferred valuable knowledge and teaching techniques to local teachers which is beneficial for the effectiveness of RHTPs, the language barrier between students and foreign teachers downsizes the quality of knowledge transfer. This significantly negatively impacts the graduates' employment prospects, caused by their limited and ineffective employability skills.

#### 6.1.2 Employment outcomes

National TVET studies (Biazen and Amha, 2009; Dibie & Dibie, 2014) emphasized that lack of employment opportunities in the formal sector is a causing factor for the unemployment of TVET graduates in Ethiopia. Empirical data showed that TVET graduates in the Oromia region also have experienced lack of employment opportunities in the horticulture sector. In addition, government ministries and the formal sector implied that there is an extensive labour market demand for skilled employees in the horticulture sector in Oromia due to the industrialization plan of the government, but enterprises have experienced a shortage of and challenges to locate skilled workers. The challenges employers experienced to locate skilled employees in the Oromia region, corresponds with results from a national study (UNDP, 2018), implying that Ethiopia lacks a well-functioning labour market system. Hence, the labour market in the Oromia region is subjected to high information asymmetry where employers lack information about the TVET graduates including their skills and locations, and TVET graduates face shortages of information about the available jobs and their requirements. Thus, it can be argued that the impression of low labour market demand for skilled employees drawn on national studies (Biazen and Amha, 2009; Dibie & Dibie, 2014) contradicts and does not apply to the case of Oromia region regarding the horticulture sector. Rather the notion of low job prospects experienced by horticulture TVET graduates and the lack of skills employees identified by the private sector in the Oromia region, is caused by the inefficient labour market system.

Based on this, empirical data further showed that the inefficient labour market system, triggers employers in the Oromia region not to condition the educational background of workers as a factor for employment. Additionally, employers prefer to train their own staff about their companies' production processes and enable workers to scale-up in their occupations through further training. Wherefore, employers hire undereducated workers from the surrounding areas near the farm, for which unemployment in the Oromia region remains the same, conveying the impression of low labour market demand in the horticulture sector. Therefore, for a successful industrialization it is imperative to have a well-functioning labour market with efficient information systems and employment services. Hence, in the Oromia region expansion of access to employment services is necessary. As empirical data showed, public employment services are not efficient and private ones are not well developed. Horticulture TVET graduates in the Oromia region register at individual private and public offices who link them with companies for employment, but the application process is ineffective as it is of traditional nature and takes too much time to obtain a job.

Moreover, regarding social capital and employment services in the formal sector, there is a lack of social networks between enterprises and RHTPs in the Oromia region. RHTPs also do not provide career advice services to inform graduates about job prospects. TVET studies (Hagos Baraki & van Kemenade, 2013; Okorafor & Okorafor, 2011) on a national level also support this finding. It is necessary for RHTPs to interfere with challenges regarding information systems and employment services to help graduates allocate the available jobs where the graduates' skills and knowledge will be rewarded appropriately by pointing graduates to more productive sectors and enterprises. Having efficient information systems and employment services, will not only increase productivity and encourage employment, it will also have an indirect benefit to stimulate employers to offer new jobs and workers to invest in their human capital through training and education.



The job search process is another issue for TVET graduates in the Oromia region to become employed, as it is particularly expensive. Vacancy boards, which are common ways of looking for jobs, are located in city centres, while most of the TVET graduates live far from the city and cannot afford the transportation costs to travel to many of them. A TVET study (UNDP, 2018) on a national level in Ethiopia also supports this finding. Another issue for employment was the fact that Ethiopia has no minimum wage regulations. Wages are left for free market bargaining, as it is a market-oriented system and low payments demotivate graduates to accept potential job opportunities. This also corresponds with results from a TVET study (UNDP, 2018) on a national level. However, one can argue that the living standards of TVET graduates regarding income may not improve as much. Despite the focus on economic growth in Ethiopia through industrialization (MoE, 2015; Alemu & Berhanu, 2018). Before setting minimum wages, it is important to keep industries competitive internationally, for which the horticultural productivity level has to be high. As it is more likely that higher wages will make the industry less competitive, caused by higher costs. Productivity is mainly increased through technological innovation, however, educated workforce is a precondition for successful industrialization that enhances human development. Skill and education are essential to make the industrialization process more successful and assure that employees are competent to benefit from the potential jobs. Hence, it is necessary that the skills trained at RHTPs meet the employability requirements of enterprises. This will make the labour market more competitive and responsive to productivity.

Furthermore, considering economic capital, on regional level empirical data showed a different theoretical concept compared to pre-existing theories from TVET studies on national level (UNDP, 2018). The long bureaucracy processes for employment was seen as another problem for TVET graduates to become employed which is related to a long unemployment period after graduation. This is caused by the fact that when national projects prosper employment, it is mostly unclear to what extend the government is authorized to select the labourers, which is causing long waiting periods until job opportunities appear. Hence, it is necessary for the GoE to become more efficient in the employment prospect of national projects and to engage with RHTPs in the Oromia region to involve TVET graduates as potential skilled workers.

Regarding self-employment, in the context of economic capital land lease appeared from the empirical results as a different factor on regional level compared to pre-existing theories from national studies (Wiedmaier-Pfiste et. al, 2008; Dбие & Dбие, 2014), mainly focussing on financial capital. Land lease is triggering local issues caused by the improper timing of land lease by the government where local farmers wait longer periods for land than the TVET graduates. Thus, the GoE is ineffective in upholding the law regarding land lease which is a hindering factor for TVET graduates to employ their cultural capital and convert it into monetary income through entrepreneurship.

Most differences found between RHTPs and TVET studies on a national level considering the cultural capital related to employability outcomes was resulted in factors triggering the skills mismatch, in some aspects of the knowledge transfer from vocational teachers to students and several factors considering the cooperative training. Regarding the employability outcomes in the formal sector in the context of economic capital most differences were found in the long bureaucracy processes for employment and the employment services which eventually resemble in lack of employment opportunities. No differences were found regarding the employment outcomes in the formal sector in the context of social capital. Last but not least, regarding economic capital and self-employment, land lease is a hindering factor in the Oromia region for entrepreneurship among TVET graduates causing local issues.

As we can see throughout the discussion, there is still a lot of room for improvement among RHTPs in the Oromia region. Therefore, in the following chapter policy implications are given on a regional level as well as policy level recognizing the role of TVET institutions, government agencies and the formal sector.

## 6.2 Policy implications

This section presents a set of policy implications for competitive RHTPs as an instrument for sustainable human development. The proposed policy implications are as follows:

### Employability outcomes: Skills mismatch

- To make RHTPs more effective, re-establishment of the horticultural OS is needed to include a number of soft and hard skills (Appendix E) required by the formal sector for employment.

### Factors influencing the effectiveness of employability skills

- Approaches for the employability skills mismatch
  - The skills mismatch can be approached by re-establishing the horticultural OS and including the necessary employability skills for employment. This can be addressed through market assessments. However, it does not seem practical for the government to conduct market assessments on an annual basis before they take students to determine which area of specialization those students should be trained in. As the need in the market does not change from year to year. Thus, one has to look at the long-term to see changes in the market demand and determine the demanded employability skills.
  - Another approach to address the skills mismatch is to uniform RHTPs and to make them operate with a holistic curriculum, addressing skills of various horticultural occupations. This will enhance the employability prospects of TVET graduates and meet the horticulture labour market demand in Ethiopia which streams for a workforce with general skills and knowledge.
- Cooperative training
  - The three days of cooperative training and the provided lectures by companies need improvement, as both models fail to provide comprehensive practical trainings for students.
  - Extension of cooperative training: the desired provision of cooperative training by the graduates was at least three months visiting several companies.
  - It is necessary to improve the participation of students during the cooperative training. It can be addressed by visiting companies in smaller groups. However, more teachers at the college might be needed to support this activity.
- Vocational Teachers
  - To enhance the practical training methods of RHTPs programs more teachers are needed to reduce the crowded classes and create room for teachers to cover all the necessary practical competencies during the lectures. To raise the number of vocational teachers it is crucial for the regional government together with RHTPs to reform the Regional Bureau into a learning organization to consider the educational institutions' needs.
  - More emphasis could be given on training methods for teachers on soft skills, as such guidance is not provided by RHTPs.
  - To enhance the teaching methods of vocational teachers, improvement is needed in the COC assessments. As teachers with competent teaching methods are more qualified to prepare graduates for employment. RHTPs need authorization for choosing their COC examiners.
  - For RHTPs to enhance their knowledge transfer to students, the teaching classes of foreign teachers could involve translators. Thereby, making it easier for TVET students to follow-up on the classes provided in English by foreign teachers. RHTPs can also test the level of English language of TVET students before admitting them to the program.

## Employment outcomes

- Employment in the formal sector

Four aspects appeared to impact the employment prospects of horticulture TVET graduates in the formal sector. Hence, collaboration between RHTPs, the federal and regional government and the formal sector is needed to address the following employment issues:

- The information systems and employment services between job seekers and job providers is ineffective. The lack of communication between graduates and employers can be modified by creating a website for TVET graduates (from various sectors) where employers can look up for skilled workers who have previously registered on the website. However, as most TVET graduates do not possess a computer, they can create an elementary online profile on the website by using the ICT classrooms of RHTPs under the supervision of a vocational teacher. The profile could include basic information such as; name, age, contact information, place of residence, TVET sector acquired, year of graduation and a few core competencies. This way, employers can search for employees by using several filters. The filters could include; age, TVET sector, area/radius e.g. within 15km etc. Such a website can be a resurrection for employment, as employers can easily locate TVET graduates.
- The job search process is too expensive for TVET graduates caused by the high transportation costs. The creation of the website can be a possible solution for this challenge.
- There are long bureaucracy processes for employment after graduation. When the government is launching a national project for employment, a system could be implemented where the demanded labour can be selected rapidly. For this to be realized, the federal government can hand on the projects to regional governments who can further communicate with RHTPs for locating TVET students either for cooperative training or TVET graduates for possible job opportunities.
- Set minimum wages for industrial occupations. This will prevent graduates from denying job opportunities due to minimum payments.

- Employment in the formal sector: Improvements within RHTPs

- Enhancement of networks between RHTPs and enterprises is necessary to improve employment flows for TVET graduates and prevent the recruitment of uneducated employees by companies.
- RHTPs need to include career advices for students informing them where and how to apply for job opportunities.

- Self-employment

- Financial capital is a real issue for horticulture TVET graduates to start their business caused by the ineffectiveness of the governmental structure. Improvement is needed regarding the regulations of financial capital for TVET graduates.
- Land lease is another issue for entrepreneurship among TVET graduates. Improvement is needed in the regulations towards land lease which causes local issues triggered by the improper timing of land lease by the government between TVET graduates and local farmers.

## Overall prospect

To make RHTPs more effective, the colleges should merge with enterprises and become a spinoff training educational system embedded with the industry. As TVET programs as individual educational institutions are in no condition to sustain with the latest technology as machines are rapidly changing. Conceivably, companies can be offered a beneficial package by the government where companies can train students in the farm, who will be executing activities under the supervision of vocational teaches, rewarding students with a small fee. As well, once teachers give training to students at enterprises, in-service-training for

teachers takes place corresponding to the capacity building of teachers for gaining contemporary practical training methods thereby accumulating production mechanisms.

### 6.3 Limitations of the research

Firstly, the research has a number of limitations and is restricted regarding geographical and thematic scope. This research only focused on the Oromia region, taking Holeta TVET college as a case study addressing the horticultural division. Regarding the geographical limitation, there are many TVET institutions established in various regions in Ethiopia. Concerning the thematic scope, TVETs are provided in many sectors besides the horticultural division. Hence, to further support the found factors important for RHTPs, additional research could include more TVET colleges from different sectors and regions.

Secondly, qualitative research, while it is aimed to be the product of reason and logical systematic research methods, in its nature provides results which are quite subjected to chance and interpretation. Taking the aspect that most of the interviewed graduates were engaged in horticultural occupation, some of the data can be subjected to chance. Furthermore, for this research the Federal Ministry of Education was addressed regarding the effectiveness of RHTPs which again this approach could have led to results subjected to chance. Hence, for this objective regional government educational offices would be a more appropriate target due to the fact that federal ministries operate on national level and have limited information about the effectiveness of regional colleges. This limitation was caused due to the political tension in Ethiopia at the time. The roads outside of the capital Addis Ababa, were obstructed hence, it was challenging to reach out to government offices located outside of the capital city. Therefore, when conducting a field research, it is crucial to first be well aware of the access to the desired stakeholders. Another limitation is that only FDI enterprises were approached for the skills required for horticultural occupations. Again, excluding domestic companies who in certain aspects might operate differently than FDI enterprises, raises the opportunity that some of the acquired employability skills demanded for employment might also be subjected to chance. Regarding the interpretation, the field assistant which was involved in the translation process with the graduates' interviews was a teacher from Holeta TVET college. There might have been personal interpretations on the graduates' answers by the translator. What is assenting, is that the teacher did not lecture in the horticulture division and had barely contact with the interviewed graduates at that time in the college.

Thirdly, while the presence of numerous constructs and sub constructs in this research stipulates a relatively comprehensive image of appropriate variables for the themes under study, such comprehensiveness reduces analytical purity and increments complexity. Still, within a rather limited time-frame there is constantly a trade-off among comprehensiveness and analytical clarity. This research clearly favoured the first, with a view to deliver rich data on a subject that is still in its inception.

### 6.4 Recommendations for further research

First, to further investigate the differences among regional TVETs, more research should follow in different regions including diverse TVET sectors and various stakeholders. Regarding the stakeholders, it is necessary to approach graduates from different TVET levels, and various occupations. This would decrease the risk for obtaining results which are quite subjected to chance. Further, regional government bureaus for education need to be considered to gather more accurate information related to the effectiveness of regional TVETs. For more comprehensive detail on the employability skills required for employment, it is important to address both, domestic and FDI enterprises. As the operational environment and production mechanisms of both companies might differ in certain aspects. Hence, specific steps could be made to increase the effectiveness rate of regional TVETs further and additional research is needed to falsify recommendations.

Second, it is important to consider translators as field assistants who have some background knowledge of the investigated TVET sector (e.g., horticulture) as this can contribute to accurate translation of specific terms related to employability skills, production protocols, machinery, plants, seeds etc. However, it would be beneficial if the translator is not personally involved with the targets to avoid bias interpretations of the answers.

Third, research should follow-up on the employment system in Ethiopia to close the gap between TVET graduates and enterprises and make employment services more effective. Various stakeholders can be included in this process e.g., federal and regional governments, TVET institutions (or representatives from local government bureaus) and the formal sector.

Forth, more research will be needed to close the gap of the skills mismatch through (1) market assessments, (2) how to uniform RHTPs, and (3) how can RHTPs best operate with a holistic approach addressing skills of various horticultural occupations. This is important as the Ethiopian horticulture labour market is demanding for workers with general knowledge, hence, it would make TVET graduates more attractive in the labour market.

Fifth, as last but not least, is to reform RHTPs into learning mechanisms to become a spinoff association of one or several enterprises. This is because the cultural capital of TVET graduates learned at TVET programs can be effectively replaced with on-the-job training. As well, students learn practical skills best at companies due to the advanced technologies and production systems in the industry. Therefore, the final recommendation is to further research and analyse the most effective approach for RHTPs to merge with enterprises rather than standing as individual educational institutions.

## 7. Conclusion

Several differences were found between RHTPs in the Oromia region and national TVET studies. Regarding the employability outcomes as part of cultural capital, it was found that two factors are causing the skills mismatch among RHTPs. One factor is that the federal government is inefficient in creating awareness among horticultural enterprises in the Oromia once establishing the OS. The second factor is that RHTPs in the Oromia region are not uniformed and do not operate with a holistic approach. Furthermore, three factors hinder the effectiveness of the cooperative training at RHTPs such as, the three days of cooperative training is incomprehensive, the provided lectures during the training are ineffective as they exclude practical activities, and the lack of participation of students in practical activities. Also, four factors significantly impact the quality of knowledge transfer for TVET students at RHTPs. The first factor is the political tension in Ethiopia instigating the Oromia Region Bureau not to provide RHTPs with the adequate number of vocational teachers. The remain three factors are; that vocational teachers lack teaching methods for knowledge transfer of soft skills, COC assessments for teachers are ineffective, and the barrier in English language between TVET students and foreign teachers at RHTPs. All of the factors mentioned above, are important for the effectiveness of the cultural capital trained at RHTPs in the Oromia region, to teach the necessary employability skills for employment effectively. Possessing competent employability skills, will make horticulture TVET graduates more attractive and valuable in the labour market, thereby succeeding easily to convert their cultural capital into economic capital through employment.

Considering the economic context and employment prospects in the formal sector, most differences between national TVET studies and RHTPs were found in the ineffective employment services which resemble in lack of employment opportunities in the Oromia region and the long bureaucracy processes for employment. Furthermore both, the expensive job search process and no minimum wages set for industrial occupations are hindering factors for the graduates' employment prospects in the formal sector in the Oromia region, as well as on national level. RHTPs in the Oromia region together with the formal sector, and the federal and regional government can make civil service hiring procedures more effective, thereby improving labour market performance. Regarding social capital and employment prospects in the formal sector, no differences were found between RHTPs and national TVET studies. However, so as on national level, it is important for RHTPs to include career advice services and expand their social networks with enterprises to recommend graduates as potential skilled workers. Considering the self-employment prospects, land lease (along with financial capital) is a hindering factor in the Oromia region for horticulture TVET graduates to realize entrepreneurship.

An overall perspective that emerged was the notion of merging RHTPs in the Oromia region with the formal sector to promote more competent employability skills, due to the fact that TVET students learn more comprehensive skills through cooperative training and on-the-job training at companies. To realize such alteration, collaboration between various stakeholders (e.g., RHTPs, federal and regional government, formal sector) is essential. Hence, further research is needed to draw on data innovation to implement the national commitments in training skilled workforce for employment.

By and large, the constructed conceptual model is not exclusive for regional studies but it contributes to detect important factors for the effectiveness of RHTPs in the Oromia region, to train employability skills required for employment effectively, and provide the necessary employment services for horticulture TVET graduates. Perceiving the benefits of the found factors, this research provides abundant insights for future research in the broader scope of addressing different regions and TVET sectors.

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## 9. Appendices

### Appendix A. TVET Graduates

#### I. Contact & General Information

Name:	Education achieved before joining Holeta:
Age:	VT sector attended at Holeta:
Gender: Female – Male	Achieved level of VT at Holeta:
Place of origin:	Graduation Year at Holeta:
Phone:	Graduated within (...) years:
Email:	Current occupation:

#### II. Opening questions

- What is it that you liked the most about the education at Holeta?  
*[Probs: the teachers, particular course, the cooperative training]*
- What is the reason you chose for this vocational training at Holeta?
- Did you attend any other vocational training(s) after Holeta? If so, why?

#### III. Key questions

##### Cultural Capital - Employability outcomes

##### Essential employability skills for (self-)employment

1. What are the essential mathematic skills the college provided you with?
2. How frequently do you use mathematic skill in your daily activities at the company? Thus, what mathematic skills and for what purpose/activities do you use the most?
3. Are there particular mathematic skills the college should consider that you find important for performing your daily work?
  
4. What are the essential teamwork skills the college provided you with?
5. How does team work help you preform your activities at the company? Thus, what teamwork skills and for what purpose/activities do you use the most?
6. Are there teamwork skills the college should consider that you find important for performing your daily work?
  
7. What are the essential communication skills the college provided you with?
8. How does communication skills help you preform your activities at the company? For what purpose/activities do you use these skills on the work floor the most?
9. Are there particular communication skills the college should consider that you find important for performing your daily work?
10. Did the college provide you with classes about basic English language?
11. Would you consider English language important for performing your daily activities more efficiently and why?
  
12. What skills did the college provide you with on how to manage changes in the working environment? Thus, skills on how to adapt on the behavioural codes of the company?  
*[Probs: resilient, assertive, determent]*

13. Are there particular skills the college should consider that you find important for adapting the working environment easily?

#### Essential employability skills for self-employment

14. What are the important entrepreneurial skills the college provided you with?
15. Did you face any challenges to employ the entrepreneurial skills in practice and become self-employed?  
*[Probs: financial capital, finding business partners, lack of knowledge]*
16. Are there other entrepreneurial skills the college should consider that you find important for self-employment?

#### Essential factors influencing the effectiveness of employability skills

17. For how long did you do cooperative training at the college?
18. How many companies did you visit during the cooperative training?
19. Would you prefer the cooperative training to be longer or shorter, visit more or less companies?
20. Would you say that some things need to be improved considering the cooperative training? If so, what?
  
21. Were there practical working experiences with training materials that you find more competent during the cooperative training from those trained at the college?  
*[Probs: working experiences with training materials that helped you most to preform your daily duties at the company]*
22. If any, what employability skills should the college enhance to help future graduates perform better in their horticultural occupations?
23. If any, what employability skills should the college implement that you find important for employment?  
*[Probs: skills that were not provided by the college but are essential for employment]*
  
24. What is the most you liked about the teaching style of the vocational teachers?
25. How comprehensive did you find the practical teaching methods of the vocational teachers comparing to the working methods you are using at the company?
26. Are there any practical teaching methods vocational teachers should enhance to make employment for future graduates easier?

#### **Economic Capital - Employment outcomes**

##### Essential factors influencing employment prospects in the formal sector

27. How long did it take you to get this job?
28. Is this the only job you have had after your graduation?  
*[Probs: Did you work in the informal sector?]*
29. If nay, what has been the greatest challenge in getting a job since graduating from the college?  
*[Probs: no job opportunities, low payments, job application process too expensive]*

##### Essential factors influencing self-employment prospects

30. How effective did you find the services on start-up capital the college provided you with to become self-employed?
31. Why did you choose to work for the formal sector and not become self-employed?  
*[Probs: unable to raise the 20% contribution needed to secure a bank loan]*



## Social Capital - Employment outcomes

### Essential factors influencing employment prospects in the formal sector

32. How did you find this job?

*[Probs: friends/family, networks through the college, applied through vacancies]*

33. If the college provided you with career advice services, what components did the course contain to guide you how to become employed in the formal sector?

*[Probs: advises about job-market information, career prospects, employment possibilities]*

### IV. Closing up questions

- What were your expectations once you graduated? Where did you think you would work?
- What is it that you find most interesting about your current job?
- Is there anything else you would like to do in the future?

Thank you for your cooperation!

## Appendix B. Associates from Holeta TVET college

### I. Contact and General Information

Name of Respondent: Phone:  
Occupation: Email:  
Educational Background: Gender: Female – Male  
Employed at Holeta for (...) years:  
Total working experience of (...) years:  
Acquired COCs for teaching at each TVET level:

### II. Opening questions

- What is that you like most about your job at the college?
- TVET is about capacity building, what is the capacity TVET is providing graduates with?

### III. Key questions

#### Cultural Capital - Employability outcomes

##### Essential employability skills for (self-)employment

1. What are the essential mathematic skills the college trains students with?
2. What are the essential teamwork skills the college trains students with?
3. What are the essential communication skills the college trains students with?
4. Does the college provide students with classes on basic English language?
5. What type of skills does the college train students with on how to manage changes in the working environment? Thus, skills on how to adapt on the behavioural codes of a company?  
*[Probs: resilient, assertive, determent]*
6. The skills mentioned until now, would you say they need improvement regarding their comprehensiveness and how they are trained at the college? If so, what does need to be improved?

##### Essential employability skills for self-employment

7. What are the essential entrepreneurial skills the college trains students with?
8. Are you familiar with any challenges graduates might experience to employ the entrepreneurial skills in practice and become self-employed?  
*[Probs: financial capital, finding business partners, lack of knowledge]*
9. Are there other entrepreneurial skills the college should consider that you find important for self-employment?

##### Essential factors influencing the effectiveness of employability skills

10. What is the duration of the cooperative training offered by the college?
11. How many companies do students visit during the cooperative training?
12. Would you say that some aspects need to be improved considering the cooperative training? If so, what?
13. Are there practical working experiences with training materials that you find more competent during the cooperative training from those trained at the college?
14. How does the college collaborate with the horticulture industry to train students with the employability skills demanded by industries?
15. What is the qualification of the vocational teachers at the college?  
*[Probs: educational qualification, working experience, possessing a COC certificate]*

16. If so, how often does the college send teachers to work part-time in the formal sector to keep up with contemporary knowledge and training skills? [*Probs: in-service-training*]
17. Has the college experienced shortage of vocational teachers? If so, does this impact the effectiveness of the knowledge transfer to students?
18. Would you say that teachers need to improve certain teaching methods to train students with more competent skills for employment?

#### **Economic Capital - Employment outcomes**

##### Essential factors influencing employment prospects in the formal sector

19. If any, what has been the greatest challenge for TVET graduates to become employed after graduation?

##### Essential factors influencing self-employment prospects

20. If any, how effective are the service on start-up capital the college provides students with to become self-employed?
21. Do most of the graduates prefer to work for the formal sector rather than become self-employed and why?  
[*Probs: unable to raise the 20% contribution needed to secure a bank loan*]

#### **Social Capital - Employment outcomes**

##### Essential factors influencing employment prospects in the formal sector

22. What is the capacity of the college to provide graduates with social networks for employment after graduation?
23. If the college provides students with career advice services, what components does the course contain?  
[*Probs: advises about job-market information, career prospects, employment possibilities*]

#### **IV. Closing up questions**

- Do teachers work fulltime from Monday till Friday at the college?
- So you have/don't have the weekends off to do interesting activities in Holeta, or most of it is happening in Addis?

Thank you for your cooperation!

## Appendix C. Federal Ministries

### Federal Ministries:

- Federal Ministry of Agriculture TVET (MoA-TVET)
- Federal Ministry of Education TVET (MoE-TVET)
- Federal Ministry of Labour and Social Affairs (MoISA)
- Federal Ministry of Planning (MoP)
- Ethiopian Investment Commission (EIC)
- Ethiopian Horticulture and Agriculture Investment Authority (EHAIA)

### I. Contact & General Information

Name of Respondent: Phone:  
Department: Email:  
Position of Respondent: Gender: Female - Male

### II. Opening questions

Could you tell me about your position at the Ministry? What is that you do?

How are TVETs structured in Ethiopia?

*[Probs: TVET's objective, TVET's target, admission of TVET students, financial protocols, curricula establishment, federal v.s. regional TVETs]*

What is the current approach for enhancing TVET programs in Ethiopia?

Only applicable for:  
MoA-TVET and  
MoE-TVET

### III. Key questions

#### Cultural Capital - Employability outcomes

##### Essential employability skills for (self-)employment

1. How do regional TVET colleges collaborate with the industry to train students with the employability skills demanded by enterprises?

Only applicable for:  
MoA-TVET and  
MoE-TVET

##### Essential factors influencing the effectiveness of employability skills

2. What is the duration of the cooperative training offered by regional TVET colleges?
3. How effective do you find the cooperative training?  
Would you say some aspects need improvement? If so, what?
4. Are there practical working experiences with training materials that you find more competent during the cooperative training from those provided at regional TVETs?
5. What is the qualification of vocational teachers at regional TVET colleges?  
*[Probs: educational qualification, working experience, possession of a COC certificate]*
6. Do regional TVET colleges experience shortage of vocational teachers? If so, why?
7. Would you say vocational teachers need to improve certain teaching methods to train students with more competent skills for employment?

Only applicable for:  
MoA-TVET and  
MoE-TVET

## Economic Capital - Employment outcomes

### Essential factors influencing employment prospects in the formal sector

8. Broadly speaking, what sectors is the government currently focusing on developing or restoring as part of a recovery plan for employment? *[Probs: agriculture, constructions]*
9. Would you say horticulture is currently the main source of employment among youths in Ethiopia? If so, why?
10. Is there a demand for skilled workers in the horticulture sector in Ethiopia? If so, how can one know?
11. Could you name three specific national projects from the horticulture sector being planned to enhance employment?
12. In what district/town will the projects take place?
13. What type of labour will the projects require?
14. Are there other documents, policies or frameworks guiding reconstruction in the labour market demand for skilled workers? If so, what are they?  
*[Probs: contracts/policies on new horticulture projects, collaboration with FDIs]*
15. If any, what has been the greatest challenge for TVET graduates to become employed in the formal sector?

### Essential factors influencing self-employment prospects

16. Would you say TVET graduates are equally interested in working for the formal sector and to become self-employed? *[Probs: unable to raise the 20% contribution needed to secure a bank loan]*
17. What is the procedure for a TVET graduate to obtain a governmental loan?

## Social Capital - Employment outcomes

### Essential factors influencing employment prospects in the formal sector

18. To what extent are regional TVET colleges capacitated to provide graduates with social networks to enhance their employment after graduation?

Only applicable for:  
MoA-TVET and  
MoE-TVET

## IV. Closing up questions

- In general, what are the main activities your department is working on at the moment?
- What are the future plans of this Ministry?
- Have you worked for different ministry departments? Would you say the responsibility was different?

Thank you for your cooperation!

## Appendix D. Horticulture Formal Sector

### I. Contact and General Information

Company name:	Name of Respondent:
Type of company: Domestic – FDI	Occupation:
Company location (region):	Phone:
Business sector:	Email:
Business started in:	Gender: Female – Male
# of Employees:	
% of female workers:	
% of male workers:	

### II. Opening questions

- What is the main product your company produces?
- What are the types of positions at your company?
- Have you notice if female or male producer employees face any difficulties on the work floor?  
If so, what kind of difficulties?
- If any, roughly what percentage of your employees completed a VT program?
- Has the management noticed a difference in the work done by employees who have graduated from a VT program versus those who have not graduated from a VT program?

### III. Key questions

#### Cultural Capital - Employability outcomes

##### Essential employability skills for (self-)employment

1. What kind of employability skills are you looking for when hiring producer employees?
2. Are there specific types of equipment or production methods producer employees are expected to be trained in?
3. What kind of employability skills are you looking for when hiring supervisors and coordinators for the producer employees?
4. Are there specific types of equipment or production methods supervisors and coordinators are expected to be trained in?

#### Economic Capital - Employment outcomes

##### Essential factors influencing employment prospects in the formal sector

5. In what regions are the major markets for horticulture production in Ethiopia?
6. Would you say the demand for horticulture has gone up, down or stayed the same for the past three years in Ethiopia?
7. Is a change in demand expected in the coming years? What other changes do you foresee in the future?
8. What are the plans for the future of your company, would you like to expand the business or downsize it? [*Probe: hire new employees, fire employees, diversifying/adding different products, entering new sector*]
9. If any, could you name some of the challenges your company is facing running this business at the moment? [*Probe: competition/market saturation, employee training, access to limited market for inputs*]

**Social Capital - Employment outcomes**

- 10. How do people get jobs at your company? How do you advertise a job position?
- 11. Does your company offer on-the-job training for employees? If so, what type of skills does it provide?
- 12. If so, why would you provide on-the-job training to unskilled workers rather than hiring TVET graduates?

Past	Present	Future
13. Has your company offered cooperative training to TVET students before?	14. Does your company offer cooperative training to TVET students at the moment?	15. Would you be willing to partner with (more) VT programs to offer cooperative training opportunities for interested youth?
16. How was this cooperation established? Did you initiate contact with the college and how?		17. How would you be willing to establish contact with a VT program? What communication channel would you prefer?

- 18. Did/Does/Will your company cover accommodations, travel, food or equipment expenses?
- 19. Did/Does/Will your company pay a wage to the student? What would be the minimum?
- 20. Did/Does/Will your company provide a safe work environment for the student? How?

**IV. Closing up questions**

- Are you willing to expend in other African countries as well? If so, why?
- Do you find the Ethiopian climate convenient for horticultural production?

Thank you for your cooperation!

## Appendix E. Skills mismatch RHTPs

Table 10: Skills mismatch at RHTPs – horticultural occupations

Hard skills		Soft skills	
More comprehensive approach needed at RHTPs	Not trained at RHTPs	More comprehensive approach needed at RHTPs	Not trained at RHTPs
Irrigation systems	Export skills	Teamwork skills	Mathematic skills
Harvesting methods	Possess a tractor license	Communication skills	Basic English language
Grafting	Greenhouse equipment	N/A	Being resilient, assertive and determinate
Propagation methods	Fertigation processes	N/A	Knowledge of general understanding
Compost preparation	The compression of plants	N/A	N/A
Fertilizing	Managing safety equipment	N/A	N/A
Chemical application	The usage of magnifying glasses	N/A	N/A
Classes considering the type of plants	Hygiene procedures for cultivating cereal crop	N/A	N/A