The Contemporary Trends and Challenges of University-Industry Linkage and Technology Transfer in Unity University, Ethiopia

Dawit Tefera[1], Samson Worku[2], Yonas Tefera[3], and Abraham Tulu[4]

Received: 27 November 2024; Accepted: 02 May 2025

Abstract: The study examined university-industry linkage and technology transfer (U-ILTT) at Unity University, a private higher education institution in Ethiopia. A qualitative case study method was used with staff members of the university and industry experts selected through purposive sampling. A structured interview was used along with document analysis. Narrative and content analysis were used to analyze the collected data. Findings revealed that while the university had internships and public lectures, faculty and students lacked awareness of University-Industry Linkage, and the university did not integrate U-ILTT into its strategic plan. Contemporary trends in U-ILTT, such as commercialization, innovation, and technology transfer, were overlooked. The study recommends the establishment of a separate U-ILTT office, integrating linkage into all plans, creating awareness, meeting industry needs, and preparing a well-defined strategy for productive linkages. Further investigation is recommended for firm conclusions.

***Key Words**:* University-Industry Linkage, Technology Transfer, Private Higher Education

DOI: https://doi.org/10.63990/ejhe.v8i1.12068

[1] PhD Candidate, College of Education and Language Studies, Addis Ababa University, Email: teferadawit114@gmail.com
[2] PhD Candidate, College of Education and Language Studies, Addis Ababa University, Email: bedlusamson@yahoo.com
[3] PhD Candidate, College of Education and Language Studies, Addis Ababa University, Email: yonast2025@gmail.com
[4] Associate Professor, Center for Educational Research, Institute of Social and Economic Research, Addis Ababa University, Email: abraham.tulu@aau.edu.et

1. Background of the Study

University-industry linkage is essential for effective technology transfer, which facilitates the absorption of research outputs by industries. This relationship not only enhances the quality of education by aligning it with industry needs but also provides industries with access to cutting-edge research and innovations. In Ethiopia, where the industrial sector is still developing, establishing a robust UIL can significantly contribute to economic growth and technological advancement (Bareke, 2018)

University-industry linkage (UIL), also known as university-industry collaboration (UIC), is a complex relationship that has been increasingly emphasized as it is one of the main missions of universities. It involves various formats and offers mutual benefits to both entities and society at large (Chedid, 2019). Because it can promote the spread of knowledge, boost research and development, and commercialize products, this linkage is especially significant in the context of economic growth and development (Hamdan, 2011). It is, nevertheless, not without difficulties, such as conflicts between values and objectives. Understanding the UIC drivers, such as the incentive for cooperation, the interaction channel and result, and the advantages of cooperation, is essential to achieving success in this relationship (Chedid, 2019).

Linkages between universities and industry in higher education have several advantages. These include the capacity to produce practitioners suitable for the industry, resolve practical business issues, and improve the caliber and employability of the labor force (Kannan, 2012). Additionally, these linkages boost regional economic development, expand faculty and student experience, and offer financial support (Prigge, 2005). By encouraging the spread of knowledge, stepping up research and development, and commercializing goods, they can support economic growth and development (Hamdan, 2011). These linkages do not, however, come without risks, such as information

suppression and conflicts of interest (Prigge, 2005). For linkage to be successful, these challenges must be overcome (Valentín, 2000).

Higher education's university-industry linkage faces a variety of problems. According to Singh (2019), in order to foster trust and innovation, shared governance, effective IP policies, and scientific knowledge are necessary. Successful partnerships may be hampered by cultural differences, leadership styles, legal concerns, and cycle time issues, as noted by Nimtz (1996). Abebe (2016) emphasizes the significance of leadership commitment, the creation of multidisciplinary research centers, and individual, organizational, and institutional factors. Grady (2000) highlights how economically important these connections are and how a "University for Industry" concept is necessary to address the gaps in technology and education.

Unity University is a private higher education institution that was established in 1991 as Unity Language School by Fisseha Eshetu. It was upgraded to Unity College in 1998 and was awarded a full-fledged university status in 2008. It has held annual multi-disciplinary research conferences since then and published articles in its own journal, the Ethiopian Journal of Business Administration. The university operates in six campuses - three in Addis Ababa: Al-Amoudi Campus at Gerji, Keraniyo Campus at Keraniyo, and Arega Campus at CMC; Adama Campus in Adama; Geferssa Campus at Burayou; and Rukiya Campus in Dessie. Unity University runs seven postgraduate and thirteen undergraduate programs.

The Unity University Policy manual has set general principles of programs with the aim of creating trainees who could contribute to the development of the client organization. To this effect, the university has worked towards establishing a link with the client organizations and empowering them in the development of new courses.

1.1 Statement of the Problem

University-industry linkage involves a number of aspects, including sponsor pressure, ethical concerns, conflict of interest, and the sharing of important scientific information (Harmen and Sherwell, 2002). Previous studies are limited to infrastructure, bad leadership, lack of commitment, and centralized education systems (Abebe, 2016; Tegegn et al., 2024). In addition, significant obstacles to effective collaborations include differences in leadership styles, legal concerns, cycle time considerations, and cultural differences (Nimtz and others, 1996). Likewise, barriers such as disparities in aims and culture, biased attitudes, and communication difficulties undermine incentives for cooperation (Seppo, 2012). Moreover, lack of appropriate working policies, limited collaboration, and weak regulatory authorities that control the proper implementation of U-ILTT are the major challenges (Degaga & Senapathy, 2021; Lwehabura & Stilwell, 2008; & Teressa, 2022). Consequently, the necessity to address these deeply interconnected issues in order to promote effective collaboration could be the formulation of the problem statement for university-industry linkage. Moreover, the third mission of HEIs, the commercialization of innovations and research outputs, has been overlooked by previous researchers and thus under-researched.

The research gaps in the study of university-industry linkages (UIL) at Unity University primarily revolve around the lack of empirical data and comprehensive analysis. Existing literature, such as the work by Mulu (2009), emphasizes that many Ethiopian higher education institutions, including Unity University, have not adequately documented their UIL practices, leading to an incomplete understanding of their effectiveness and impact on technology transfer. This gap is critical as it limits the ability to assess how well these linkages contribute to economic development and innovation within the local context. Furthermore, a study by Gigerr (2006) indicates that institutional barriers, such as poor communication, poor infrastructure, and lack of commitment from both

universities and industries, hinder effective collaboration. Additionally, there is insufficient exploration of the specific mechanisms and outcomes of technology transfer initiatives at Unity University. Research by Ginies and Mazurelle (2010) highlights that while some progress has been made in establishing UILs, many institutions still struggle with inadequate resources, low levels of industry engagement, and ineffective policy implementation. Addressing these gaps is essential for understanding how to strengthen UILs at Unity University and enhance their role in fostering innovation and addressing socio-economic challenges in Ethiopia.

Furthermore, the majority of research on the relationship between universities and industries focuses on University-Industry linkages at public universities in Ethiopia due to the public and private dichotomy in the higher education system of the country (Assefa, 2016; Hailu, 2024; Yilma, 2018 & Tegegne et al., 2024). Therefore, the study on the Contemporary Trends and Challenges of University-Industry Linkage and Technology Transfer in Unity University, Ethiopia, is timely and relevant as it seeks to identify both the current status of UIL in Ethiopia and the potential pathways for enhancing collaboration. By addressing existing challenges and leveraging opportunities for improvement, this research could contribute significantly to advancing technology transfer practices within Ethiopian higher education institutions. This study contributes to minimizing the existing research gaps in U-ILTT in private HEIS.

1.2 Objective of the Study

The primary objective of this research is to examine the current status of industry linkage and technology transfer at Unity University, a private higher education institution. The study's particular goals are:

1. To assess the current practices of U-ILTT at Unity University.

2. To explore the perception of faculty, students, and industry representatives on the effectiveness and benefit of U-ILTT at Unity University.
3. To examine the contribution of U-ILTT in the private higher education institution to local business industries.
4. To identify the challenges and factors that hinder U-ILTT in the private higher education institution.

1.3 Research Questions

The following research questions were forwarded to study the contemporary U-ILTT practice of Unity University.

1. What are the current practices of U-ILTT at Unity University?
2. How do faculty, students, and industry representatives perceive the effectiveness and benefits of university-industry collaboration at Unity University?
3. How does the technology transfer from Unity University contribute to the growth and innovation of local industries in Ethiopia?
4. What are the major challenges that U-ILTT faces at Unity University?

1.4 Significance of the Study

This case study adds to the body of knowledge regarding the current status of university-industry links in the private higher education sector. It also suggests solutions to UIL officers, private higher education institutions, and those who can enhance university-industry linkage.

The findings of the case study could be useful for making informed decisions on U-ILTT. Besides, it could provide insights into the current trends of U-ILTT in private higher education. It could also help UIL officers to align their institution's needs with the industry expectations and enable them to cope with the inevitable practical challenges of UIL.

Moreover, the findings would help to address the existing gaps in the Ethiopian HE practices and provide background information and avenues for further research to U-ILTT officers and researchers who are interested in this area. It may also initiate further research in contemporary U-ILTT issues. It could also be used by Unity University or any other higher education institution as a baseline for revision or improvement of decisions. Furthermore, the researchers believed that the study would shed light on the concept of U-ILTT and minimize the research gaps. Finally, the recommendations of the study could urge immediate action and further research.

1.5 Scope and Limitation of the Study

This study is delimited to Unity University in order to maintain data manageability. The study's limitation is that, as a case study, its findings might not apply to other private higher education institutions in Ethiopia that are comparable to it. Since this study had a submission deadline for its original purpose, time shortage was the main limitation that constrained us from collecting data from other private universities and industries.

1.6. Operational Definition

Contemporary Trends: These are current practices, patterns, and developments in collaboration between Unity University and industries, including the types of partnerships formed, the methods of technology transfer utilized, stakeholder engagement levels, and the evolving policies that shape these interactions within the Ethiopian socio-economic landscape.

Challenges - Factors that significantly affect the effective collaboration among universities, industries, governments, and other stakeholders.

University-industry linkage (UIL): It is a collaborative relationship between universities and industry that involves transferring resources, knowledge, skills, and technologies.

1.7. Acronyms

***BDA**: Bayh-Dole Act*

***ETA**: Education and Training Authority*

***HETRIIL**: Higher Education Training and Research Institutions Industry Linkage*

***LHs:** Lecture Hours*

***MoE:** Ministry of Education*

***MoSHE:** Ministry of Science and Higher Education*

***MTG:** Midroc Technology Group*

***PRCCSL**: President of Research, Publication, Communication, Community Service and Linkage **RPC**: Research and Publication Committee*

***RPCO:** Research, Publication and Community Outreach*

***SCRP**: Senate Standing Committee for Research and Publication*

***SP**: Strategic plan*

***TVET**: Technical, Vocational Education and Training*

***U-ILTT**: University Industry Linkage and Technology Transfer*

2. Review of Related Literature

In this section, a review of related literature on contemporary trends of U-ILTT, its benefits, and challenges was conducted.

2.1. Theoretical Framework of the Study

The theoretical framework for analyzing university-industry linkages (UIL) and technology transfer at Unity University can be anchored in the Triple Helix Model proposed by Etzkowitz and Leydesdorff (2000), which emphasizes the interactions between universities, industries, and government. This model suggests that effective collaboration among these three entities fosters innovation and economic development. In the context of the Ethiopian private universities, this framework can help identify how Unity University can leverage its relationships with local industries and government bodies to enhance technology transfer and align academic research with market needs. Additionally, the work of Mulu (2009) highlights the importance of institutional arrangements that facilitate these collaborations, suggesting that structured partnerships can lead to more significant outcomes in technology commercialization. Conceptually, the study can draw on resource-based theories that emphasize the role of resources and capabilities in fostering successful UILs. As articulated by Datta and Souleh (2019), universities in resource-constrained environments can still establish productive linkages with industry by focusing on their unique strengths, such as specialized knowledge and innovation potential. This perspective underscores the need for Unity University to identify its core competencies and align them with industry needs, thereby enhancing its role in technology transfer. Furthermore, integrating insights from relationship marketing, as discussed by various authors, can provide a lens to understand how trust and communication between universities and industries can be cultivated to support sustainable partnerships.

2.2. The Concepts of University Industry Linkage

Higher education and training, research institutes, and industry linkages are a forum for linkage between higher education and training, research institutes, and industry in accordance with the directions and principles in place (MoSHE, 2021). Likewise, University-Industry cooperation is defined as the whole of the systematic works carried out by combining the current facilities of universities with those of industry to develop scientifically, technologically, and economically (Imamoglu, 2004, as cited in Parlak and Dogan (2022). The above definitions imply that the linkage is mainly between universities (HEIs), Research Institutes, and Industry.

2.3. The Need for University-Industry Linkage

The purpose of university technology transfer is to transfer university research results from the university to businesses, where the results are developed into new products and services that benefit society. It is a commercial activity with benefits that go well beyond the opportunity to make money, and it involves the identification, protection, and marketing of university research outputs in order to transfer university research into business opportunities (Hockaday, 2020).

Bodley-Scott and Oymak (2023), described that alliances often have multiple forms of interactions between universities and industry covering Research & Development linkage; Entrepreneurial activity, for example involvement in supporting student and staff spinouts; Academic and student mobility, for example internships; Continuing professional development, executive education, lifelong learning and workforce development; Community outreach activity, for example to schools; Curriculum co-design and delivery; Co-innovation; Commercialization/technology transfer through creation of intellectual property rights and advancement through corporate philanthropy.

Universities and industry need to collaborate to survive and thrive in the knowledge economy of the 21st century. The many complex societal challenges facing the world mean that no single organization, however large, has all the necessary skills and capabilities to find solutions independently (Bodley-Scott and Oymak, 2023).

Hence, collaborative research and development, technology transfer/commercialization/, education and training, entrepreneurship, and academic and student mobility are among the core purposes of the university industry linkage.

Generally, as Grimm & Eibl (2029) indicated, the existing literature has methodological and topical gaps, and this case study addressed some of these gaps through a qualitative investigation of the case for a deeper understanding of the research gaps.

2.4. The contributions of universities to U-ILTT

Bodley-Scott & Oymak (2023) describe a successful alliance between academia and industry that requires all the components in the complex structures of universities and the corporates to create new dynamics and act together in harmony with sufficient resources in place. What universities can offer to align with and complement industry resources is illustrated below.

Figure 1: University Resources (Source: Bodley-Scott & Oymak, 2023)

Universities and industries are distinct organizations with completely different objectives to attain. The two institutions ask about the benefits they would get from the collaboration when asked to collaborate. Hence, identifying the assets within each institution enables us to understand the mutual benefits that exist due to the linkage, which contributes to strengthening the linkage.

2.5. Technology Transfer

The concept of technology transfer refers to the transfer of knowledge and technology created in academic institutions, universities, and research centers to the industry (Kaymakcalan, 1999:51) as cited in Parlak & Dogan, (2022).

University technology transfer is a commercial activity with benefits that go well beyond the opportunity to make money. It involves the identification, protection, and marketing of university research results in order to transfer these into business opportunities. The purpose of university technology transfer is to transfer university research results from the university out to businesses, where the results are developed into new products and services that benefit society (Hockaday, 2020).

2.6. Contemporary Trends of U-ILTT

The HE trends are changing faster than ever before. Universities used to give priority to teaching and learning as well as research and community engagement as their missions. However, in recent years, another mission is known as the third mission added to the HE ecosystem.

The U.S. Congress passed the Bayh-Dole Act (BDA) in 1980 to commercialize government-funded research (Kenney & Patton, 2009). This was the first act that allowed faculties to claim intellectual property rights to inventions with the aim of using university inventions to the benefit of society. Afterwards, nations adapted the BDA, aiming to commercialize government-funded research outputs and innovations.

The third mission of HE that focuses on commercialization follows a market-driven approach and capitalization of knowledge (Irlina et al., 2024 & Tymoshenko et al., 2021). This act could be considered as academic capitalism that emphasizes the market value of innovations. Accordingly, joint applied research, technology transfer, innovation, incubation, spin-off and startups, research and industry parks, intellectual property management (IPM), and entrepreneurship could be incorporated under commercialization (Markman, 2008 & Wonglimpiyarat, 2014). In line with this, Datta et al. (2015) stated that the commercialization process is characterized by innovation source and

type, market entry competence, protection, development, and deployment.

According to Tweheyo et al. (2022), effective implementation of commercialization needs collaboration, funding, policies, the culture of entrepreneurship, and technology transfer. Besides, it requires integration of commercialization targets into academic staff promotion criteria (Tweheyo et al., 2024).

2.7. University Industry Linkage Barriers

Bodley-Scott & Oymak (2023) describe frequent barriers encountered by university–industry alliances as academic barriers and industry barriers. In line with this, current studies in U-ILTT highlighted that institutional factors, innovation capacity, and the quality of academic profiles of the faculty are the main factors that affect the effectiveness of U-ILTT (Sierra et al., 2017).

The academic barriers include the unavailability of academics, lack of cost-benefit analysis, ill planning, anti-corporate sentiments, and misaligned objectives, lack of UIL experts, disregard for regulatory frameworks, lack of understanding of the third mission or commercialization of IP, as well as giving priority to research publication over U-ILTT. On the other hand, the industry barriers include less flexibility to fit with academic calendar, focusing on immediate benefits, being unable to adapt with academic culture, misaligned objectives, lack of UIL experts, exclusive IP ownership request, inability to understand academic priorities, and a bold stance.

2.8. Mechanisms of Overcoming University-Industry Linkage Barriers

Bodley-Scott & Oymak (2023) state that universities should seek alliances with professionals to collaborate with industries that have prior business experience working with academics. They should ideally have an appetite for solving societal challenges rather than a purely transactional motivation for engagement. Both sides will need to discuss their vision and specific goals or objectives for the alliance based on their organizational strategies and priorities. The authors list the following ten principles for building strong alliances among universities, industries, governments, and other stakeholders.

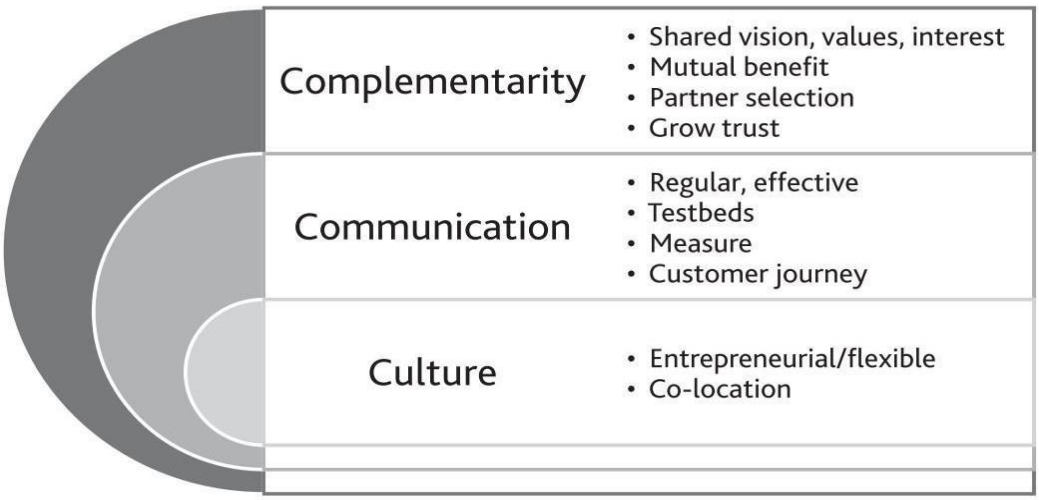

Figure 2: Mechanisms of overcoming university-industry linkage barriers (Source: Bodley-Scott and Oymak, 2023)

As illustrated in Figure 2, all parties involved in U-ILTT should give emphasis to complementarity and communication, and build a culture that stresses mutual benefit to overcome obstacles.

2.9. Models of Linkage Partnership

This involves an openness to being part of wider, even globalized, innovation ecosystems within mission-focused triple, quadruple, or quintuple helix networks to scale and achieve greater 'transformational collaborative advantage'. The concept refers to new models of working together rather than in competition to achieve social innovation and wide societal benefit, impacting whole industry sectors (Bodley-Scott & Oymak, 2023).

A triple helix regime typically begins as university, industry, and government enter into a reciprocal relationship with each other in which each attempts to enhance the performance of the other. Most of such initiatives take place at the regional level, where specific contexts of industrial clusters, academic development, and the presence or lack of governing authority influence the development of the triple helix (Etzkowitz, 2008).

A triple helix of university–industry–government interactions is the key to innovation in increasingly knowledge-based societies. Triple helix intersection of relatively independent institutional spheres generates hybrid organizations such as technology transfer offices in universities, firms, and government research labs, and business and financial support institutions such as angel networks and venture capital for new technology-based firms that are increasingly developing around the world.

Universities, firms, and governments each "take the role of the other" in triple helix interactions even as they maintain their primary roles and distinct identities (Etzkowitz, 2008).

2.10. The Ethiopian University-Industry Linkage: Key Policy Issues and Strategies

According to the Higher Education and Training, Research Institutions and Industrial Linkage Policy and Strategy (MoSHE, 2021), the major policy issues and strategies of the university industry linkage include practical training, research and development, consulting and strengthening industrial extension services, and strengthening innovation development and technology transfer.

3. Research Methodology

3.1 Research Approach

The research approach in this study is a qualitative case study. Qualitative research is an amorphous, multi-dimensional field that aims to generate an in-depth and interpreted understanding of the social world by learning about people's social and material circumstances, experiences, and histories (Morrison, 2014). It encompasses a wide range of research approaches with different philosophical and theoretical foundations and empirical procedures (Kemparaj and Chavan, 2013). Qualitative research involves collecting and analyzing qualitative data, such as words, still or moving images, and artifacts, and it requires researchers to become intensely involved and often remain in the field for lengthy periods (Hanurawan, 2012). The greatest value of qualitative research is its ability to address questions of relevance to knowledge and practice that are difficult to answer using quantitative methods (Sale, Sale, and Thielke, 2018).

3.2 Study Design

According to Creswell (1998), five of the most frequently used qualitative methods are biography, phenomenology, grounded theory,

ethnography, and case study. A case study approach was used because it provides a detailed description of the case and its setting.

3.3 Description of Study Site

Originally founded as a language school in 1991, Unity University provided language instruction in English, Arabic, French, and Italian. Subsequently, the institute began offering diploma programs in office management, secretarial science, personnel administration, accounting, marketing, and business from 1997 to 1999. Since the institute's upgrading to a college in March 1998, Unity College has offered degree programs in several subjects. In September 2008, Unity was elevated to the status of a university and became the first privately owned university in the country. Since then, it has gone by the name Unity University.

Unity University offers postgraduate, undergraduate, and Technical and Vocational Education (TVET), and distance and continuing programs. The doctoral programs include the Master of Business Administration, the Master of Business Administration (specializing in Marketing), the MA in Developmental Economics, and the MA in Business Economics. The undergraduate programs include: Accounting, Economics, Management, Marketing Management, Management Information Systems, Computer Science, Architecture and Urban Planning, Civil Engineering, Mining Engineering, Sociology and Social Anthropology, and Clinical Nursing. Technical and Vocational Education and Training (TVET) programs offered at Unity University are Accounting, Marketing Salesmanship, Information Technology Assistant, Clinical Nursing, and ICT and System Support. The distance and continuing programs are all undergraduate programs that include Accounting, Management, Marketing Management, Economics, and English.

3.4 Research Participants and Sampling

The research participants were staff members of Unity University and the industries involved in the linkage. They were selected through purposive sampling. According to Daniel (2012), “Purposive sampling is a non-probability sampling procedure in which elements are selected from the target population based on their fit with the purpose of the study and specific inclusion and exclusion criteria. To this end, key informants from the university and the industry under study, who have experience in university-industry linkage, were selected and interviewed.

3.5. Data Gathering Instruments

The researchers collected qualitative data from primary and secondary sources using two kinds of tools: interviews and document analysis.

3.5.1 Interview

Interview questions were designed for academic units, vice deans, presidents, and industry experts. The instruments were developed by one of the researchers and reviewed by the other researchers. In this regard, interview items for faculty and dean were shaped to address awareness of UIL, the objective of UIL, and the practice of UIL. On the other hand, interview items for presidents and industry experts were developed primarily based on a literature review, and most of the items addressed the issue of the third mission, namely, university-industry linkage. Generally, the interviewees were informed about the purpose of the study and assured that they would remain anonymous in the presentation and discussion of the results of the study. The researchers took note of the interviews with the consent of the interviewees, and analyzed the responses of the interviewees narratively. The researchers checked the reliability and validity of the instrument through expert review.

3.5.2 Document Analysis

Relevant documents such as the strategic plan, MoU, policies, legislation, directives, guidelines, instructors' and students' handbooks were analyzed thoroughly using content analysis techniques. This technique was preferred as it enables the researchers to analyze the content of documents.

3.6 Data Collection Methods and Procedures

The data collection strategy followed Creswell's (1998) qualitative inquiry data collection model. Accordingly, the model used for locating the partnership, gaining access, creating rapport, collecting data, recording data, resolving field issues, and storing data.

The researchers informed participants about the main objective of the study and assured them that the data would be used for research purposes only and kept confidential. A 20 to 45-minute interview was conducted with each interviewee. The interviewers took notes since the interviewees were not willing to be tape-recorded. Amharic was used for communication and later translated into English. The interviews were followed by document analysis. The researchers employed these procedures to minimize informant bias and data contamination.

Generally, data on U-ILTT objectives, practice, opportunities and challenges, innovation, commercialization, entrepreneurship, and intellectual property were obtained from the faculty using interviews. Similarly, data on research policy, guidelines, publications, HETRIIL policy, and legal frameworks were acquired from R & CS vice presidents. An in-depth interview was conducted with the Office of the Directorate. Finally, the integration of U-ILTT in the university's strategic plan, policy, senate legislation, previous linkage history, and the MoU was thoroughly examined after collecting documents from top management. Data were

collected until saturation, and this helped maintain the representativeness of the sample size.

3.7 Data Analysis

Qualitative data obtained from documents and interviews were analyzed qualitatively using content and narrative analysis techniques, respectively. To this end, the qualitative data gathered were analyzed, and meaning was derived from the data, taking the objective of the study into account.

3.8 Ethical Considerations

The researchers received a letter of support from the Institute of Educational Research, Center for Higher Education Research, and Training, to gather information from Unity University. The participants were then informed about the purpose of the study that they would participate only if they were willing, and that confidentiality would be guaranteed throughout the entire research process. Trustworthiness in reporting research results was also taken into consideration.

4. Results and Discussions

This chapter focuses on the data analysis, interpretation, and discussion of the study's major findings. Analysis and interpretation of the study findings were made in relation to the research questions. The data gathered through the two instruments were also interpreted based on the research objectives formulated. Additionally, the results obtained through these tools were cross-checked against previous study findings reviewed in the related literature.

4.1 Presentation and Analysis of the Results

In this section, the researchers tried to deal with awareness, practice, benefits, and challenges of U-ILTT. The data obtained from the data gathering tools were analyzed through narrative and content analysis.

4.1.1 Interview Results

4.1.1.1 U-ILTT Awareness

First, the key informants were asked about platforms created by the University to inform the students, lecturers, and other staff members about the U-ILTT. Informant I said that some efforts were made to create awareness among the Unity University academic community. In light of this, the Informant added:

> Although the university does not create explicit platforms to raise U-ILTT awareness among the Unity University academic community, efforts were made by the Research, Publication, and Community Outreach Directorate.

In addition, Informant II said:

> The process of awareness creation was not appropriately managed. Therefore, it is so difficult to say that all the academic staff members and students understand U-ILTT very well.

The data obtained from the respondents clearly indicated that there was a gap in the U-ILTT awareness creation of the University among both students and faculty.

Second, the key informants were asked whether or not the University participated in the U-ILTT workshops organized by the MoE. They

replied that U-ILTT initiatives were better during the former Ministry of Science and Higher Education (MoSHE), and it was given less emphasis after the merger with the MoE, which gives priority to policy and legal frameworks rather than organizing workshops. In relation to this, Informant III said:

> We used to participate in U-ILTT workshops organized by MoSHE, and we have gained insightful experiences. Nevertheless, MoE has not organized such workshops ever since MoSHE's merger into the MoE.

Similarly, Informants I and II stated that the MoE has stopped organizing U-ILTT workshops without disclosing the reason. They added that such workshops were useful platforms for exchanging experiences among the universities and the industries. In this regard, Informant II said:

> I think the MoE action was not appropriate, and it ignores the fact that we have a say as a stakeholder. We were expecting that the workshops would continue; however, it has been so long since we participated in U-IL workshops at the national level.

Likewise, Informant I said:

> The MoE has called off its duty of organizing annual U-ILTT workshops without disclosing its reasons. I think the workshops were useful platforms for experience-sharing between universities and industries.

To sum up, according to the informants, Unity University used to attend U-ILTT workshops previously organized by the MoSHE until the latter's merger with the MoE. The data obtained from the key informants revealed that U-ILTT workshops and other platforms were relevant to keep Universities updated and share best experiences.

Finally, the key informants were asked about their awareness of the HETRIIL policies, legal framework, proclamations, directives, guidelines, scopes, objectives, and benefits related to the UIL. Then they replied that HETRIIL policies and legal framework are still under revision, and this makes it difficult to judge the awareness of HETRIIL policies, proclamations, directives, and guidelines. However, they stated that the governing body of the university is well informed about recent HETRIIL developments of policies. Informant I, in this relation, said:

> I think the office in charge is well informed about HETRIIL standards, but I cannot guarantee that the entire academic unit knows about the issue. I myself have no idea about the details of policies, proclamations, and directives.

Informant II also said:

> I am sure that the top management is fully aware of higher education policies and legal frameworks, which are still under development. However, both private and public HEIs should get the draft policies and proclamations to prepare for the upcoming developments.

In the same way, Informant III mentioned:

> In my view, it is the responsibility of the MoE to create awareness about each policy regarding the legal frameworks that govern HEIs, which are undergoing revision. Additionally, HEIs should have their own say in policy issues.

The informants' responses showed that the top-level management has more awareness of the previous higher education policies and legal frameworks than the recent HETRIIL policies and legal frameworks. Conversely, the faculty and students lack awareness of previous and

current higher education policies, proclamations, directives, and guidelines, mainly related to U-ILTT.

Generally, the data obtained from the key informants revealed that there is a gap in the awareness of the HETRIIL policies, legal frameworks, proclamations, directives, guidelines, scopes, objectives, and benefits of U-ILTT, since there are new developments and newly emerging issues such as commercialization.

4.1.1.2 U-ILTT Practice at Unity University

The key informants were asked about the existence of a separate or independent U-ILTT Office in the university, and they affirmed that there is no separate U-ILTT Office in charge of creating linkage and working with the industry. In light of this, Informant I said:

> There is no separate U-ILTT Office in the university. However, the tasks are delegated to the Research, Publication, and Community Outreach Office, which is responsible for conducting research and disseminating the outcomes that solve problems, but I am not sure about the structure.

Similarly, Informants II and III stated that the duties and responsibilities of the U-ILTT Office are all supposed to be covered with research, publication, and community outreach. In this regard, Informant II said:

> No! It is rather considered a task to be incorporated under community outreach to solve problems and create a link. I think the U-ILTT Office is not independent, as it requires an additional budget.

Informant III correspondingly said:

> In our case, it is the Research, Publication, and Community Outreach Office that handles the activities related to U-ILTT, like searching for research grants and creating linkages. This is meant to be cost-effective.

The replays of the key informants indicated that a separate U-ILTT Office was not established, as it requires additional cost. Therefore, the university's top management has merged the duties and responsibilities of U-ILTT into a Research, Publication, and Community Outreach Office. In addition, the informants were asked about the involvement of the University Presidents and top officials in U-ILTT activities, and they replied that Presidents and higher officials are either directly or indirectly involved in the planning and implementation of U-ILTT. For instance, Informant II stated:

> The President, the Vice Presidents, and the Deans of faculties are involved in the planning and execution of U-ILTT. They also evaluate the U-ILTT reports. However, it is the sole responsibility of the Research, Publication, and Community Outreach Directorate to run the task.

Informant III, on the other hand, stated that the Research, Publication, and Community Outreach (RPCO) Office is in charge of the U-ILTT planning and implementation. Besides, Informant I stated that the Presidents and other top officials are directly involved in U-ILTT planning and actual linkage activities far more than the academic units. However, the President and higher officials are involved in the approval and evaluation process of U-ILTT.

> It is the responsibility of the RPCO office to prepare the U-ILTT plan and present it to the President for approval.

> Therefore, they are involved in the planning, implementation, as well as evaluation of the U-ILTT.

The informant's response asserted that the president and top-level academic officials of the university are involved in planning, executing, and evaluating U-ILTT. This indicates that the top-level officials have considered the linkage as one of their priorities. However, it was not considered a strategic priority led by a particular unit that is fully capacitated and in charge of the university's U-ILTT practice.

Then, the informants were asked about the strategy that the university follows to create and maintain linkages with industries. They asserted that the university has no well-defined and organized strategy to initiate discussions and reach an agreement with the industries aiming to enhance U-ILTT. However, they have indicated that some of the departments, such as Health, Architecture, and Urban Planning, have their own ways of establishing linkage with different industries. Regarding this, Informant VI said:

> Yes! We have established strong linkages following a win-win approach to enhance the benefits of these linkages. This is particularly well exemplified in the Departments of Health, Architecture, and Urban Planning.

In addition, Informant IV described that the university has created over 50 new linkages after its detachment from Midroc Technology Group, and added:

> The university used to have close relationships with 27 sister companies of Midroc Technology Group. Recently, the new management of the University has established a connection with over 50 companies following its separation from MTG.

Related to this, Informant V stated that the departments were empowered to have their strategies and follow a certain guideline, although a written document was not available. Finally, informants were asked about the university's best U-ILTT practice, and they identified two practices as the best: attaching students to the right industries to obtain the best work experience possible and creating employment opportunities. In light of this, Informant VI said:

> If there is one best practice of U-ILTT that I should mention, it is the fact that we have leveraged our connections to provide students with access to practical learning settings and opportunities for employment. I know that graduates of Unity University have opportunities to be hired by international companies, too.

Similarly, Informants IV and V stated that most students have job opportunities after completing their internship program. In this regard, Informant V stated:

> Our students are fortunate, either by chance or due to the efforts of their respective departments. For instance, most students from the Departments of Health, Architecture and Urban Planning, as well as FB, Civil Engineering, etc., were recruited by companies after completing their internships.

The results obtained from the key informants indicated that among the major activities expected from the contemporary university-industry linkage, Unity University practices focused on internship, training, and consultancy whereas the rest of the fundamental activities expected from the University-Industry linkage, such as joint applied research, technology transfer, externships, commercialization, innovation, incubation, spin-offs, and startups, entrepreneurship, were not practiced properly. In line with this, Unity University had also overlooked the major

policy issues and strategies of the university-industry linkage highlighted by MoSHE (2021). The findings of this case study also align with those of Hockaday (2020), who stated that commercialization is a process of identifying, protecting, and marketing university research outputs to transfer university research into business opportunities.

4.1.1.3 The Major Opportunities, Benefits, and Challenges of U-ILTT in the University Context

The informants were asked to describe the rationales to create a linkage with industries. The informants replied that the university establishes a linkage to foster long-term, sustainable relationships with industries that benefit both parties. Regarding this, Informant VII pointed out that:

> The ultimate goals of linking with industries are two: to understand the needs of companies, and equip our graduates accordingly. This, in turn, creates mutual benefit for both Unity University and the industries.

In light of this, Singh and Kaundal (2022) stated that the linkages between academia and industry have created a win-win situation for both academia and industry.

The informants were also asked to identify some of the opportunities created by the linkage, the benefits they obtained, and the challenges they faced. The informants stated that access to a practical learning platform, the chance to understand industry needs, job creation, and research funding are some of the opportunities and benefits obtained from the linkage. Concerning this, informant nine said that:

> The linkages have created an opportunity to understand the problems faced by industries, which in turn improves our research viability and helps us integrate the needs of various industries into our undergraduate and

> postgraduate curricula. Generally, it has increased the employability of graduates and the university's research output.

Informant eight added that:

> Practical learning opportunities, research funding, and employment opportunities are among the benefits we have received from the linkage so far. In relation to this, the university has benefited from the linkages with industry resources, either directly or indirectly, as a means of learning and research platform.

Conversely, the informants indicated that considering linkage as a burden, lacking interest in it, and preferring teaching activities rather than linkage were the major challenges. In light of this, informant seven stated that:

> Some industries consider linkage a burden and are unwilling to establish a collaborative relationship, even when we explain the benefits and insist on it. They claim that the university will not take full responsibility for any damage that will be caused during the internship.

Likewise, Informant nine said that:

> We have encountered two major problems. First and foremost, the students considered an internship as a requirement to be fulfilled for graduation, but not as a means to align their theoretical knowledge with practical skills. Second, the faculty prefers to spend more time on teaching and research than on establishing connections with industry.

Finally, informants were asked about the current state of U-ILT in the university. The informants stated that the university is working to create meaningful linkages with new industries and reestablish relationships with the existing companies to enhance the effectiveness of U-ILT. Regarding this, informant eight said that:

> I think we need to strive a lot to be considered as a higher education institute that creates relevant linkages worldwide. In fact, we are trying to enhance our collaborative efforts with diversified industries, considering their needs to fit with the programs we are offering.

According to the informant, the university is working aggressively to create effective linkages. As a result, the university linkage develops sharply. They also stated that the university has created 53 linkages within one year after four years of minimum linkage efforts as a result of its separation from MTG.

The data obtained from the key informants highlighted that U-ILTT has created practical learning opportunities for the University and resource sharing for the industries. Besides, the data revealed that the recent relationship between the University and the industries follows a win-win approach. However, lacking awareness and interest in U-ILTT, considering linkage as a burden, lacking interest in collaboration, and the tendency to prefer teaching, research, and community engagement activities over U-ILTT are the major challenges identified.

4.1.1.4 Analysis of Responses from the Industry Context

This section focuses on the analysis of U-ILTT awareness, understanding of the industry needs, opportunities, benefits, and challenges faced by the industry.

First, the informants were asked about students' understanding of the purpose of U-ILTT. Informants from the industry replied that most of the graduating students sent from the university to the bank did not want to learn how the banking industry operates; rather, they prefer tasks performed out of the office. In light of this, informant eleven said that:

> I think most of the graduating class aspired to graduate without understanding the working world, either because the university did not prioritize it, or they did not want to get to know how the service industry operates and how factories run.

Correspondingly, informant ten from the industry said that:

> The majority of prospective graduates who submitted their internship letters from the department of finance and business, economics, management, and marketing want the bank to provide them with positive feedback that indicates the appropriate completion of internship duties, without fully grasping the fundamentals of the banking industry.

In addition, Informant III from the industry replied that graduates did not understand the purpose of U-ILTT in general, and the internship in particular. Informant XII from the industry said:

> I don’t think so! They may have theoretical knowledge, but they do not have any idea about the business world. Prospective graduates lack communication skills, workplace competence, and motivation to handle tasks. They are not ready to learn from experts and to work in the industry.

Informants XI and XII mentioned a lack of awareness creation as one of the major problems. Generally, according to the informants, prospective graduates did not understand the purpose of U-ILTT in general and the internship in particular. Graduates lack workplace competence as a result of a lack of awareness creation by the university and their minimal concern for work.

Second, the informants from the industry were asked whether the university understood their needs, and they replied that there are intolerable differences emanating from the objectives of the two independent entities. However, they said that the university should be flexible enough to accommodate the needs of the industry. Regarding this, Informant XI said:

> There exists an inevitable difference in the needs of the university and the industry that emanates from their establishment objectives. I believe that the university should have the guts to understand our needs so that we can accommodate their needs too. In the meantime, it is difficult to generalize it.

Likewise, Informant X stated that the university did not meet their needs, and this has required the industries to make graduates capable of handling complex duties. Informant X stated:

> I am not sure! You know why? Almost all of the applicants who graduated recently did not meet our needs. We have allocated an additional budget for recruitment and training as a result of the minimum competency observed in applicants during the previous recruitment process. I think this is excellent feedback for the universities to improve their programs.

In the same fashion, Informant XII said:

> Universities used to operate traditionally without considering the needs of industry. However, in the past few years, they have taken the needs of the sectors into account and tried to let their students acquire the skills required in the workplace. This is a fundamental development that deserves admiration.

The informants' responses indicated that a skill mismatch still exists between the industries' expectations and the university curricula. As a result, graduates lack the attitude and competence to meet the minimum expectations of the world of work.

Finally, informants from the industry were asked about the benefits they have obtained from the linkage and the challenges they encountered. They replied that they have had the opportunity to access the university's facilities and expertise for training, consultancy services, and employee examinations. Informant XII added that working closely with academic staff would enable them to enhance students' competence and reduce the cost of on-the-job training. On the other hand, the informants stated that students' lack of interest and undefined internship objectives and task specifications are some of the challenges they faced. Concerning the benefits and challenges of the industry, Informant X said:

> We have got benefits such as training and consultancy from Unity University faculty. On the other hand, the very challenge we have faced is that most students are not interested in their internship. I think they participated in the internship program because it is one of the graduation requirements. Besides, they do not have their own objective to achieve during their internship period. Moreover, I am afraid that the university fully understands our needs.

Generally, the informants disclosed that they have had the opportunity to utilize the resources of the university and use the expertise of the faculty, which enhances their productivity and work efficiency. Inversely, they stated the fact that misalignment of needs and unspecified objectives of the internship program were some of the challenges that they have faced. These findings are in line with Bodley-Scott & Oymak (2023), the obstacles of U-ILTT.

The data obtained from the key informants revealed that graduating students from the university did not understand the main purpose of the U-ILTT, and they want the industries to write them a confirmation letter without acquiring the necessary practical skills, as they do not attend the internship program properly. Apart from this, the industries have demonstrated an interest in utilizing the university resources and using the expertise of the lecturers, although their needs are not aligned with those of the University.

4.1.2. Document Analysis

Documents such as the strategic plan, U-ILTT plan, policies, directives, guidelines, and MoUs signed between the university and industries were analyzed thoroughly using the content analysis method. The major emphasis of the document analysis was exploring the integration of U-ILTT in all the documents that were selected for the purpose of analysis.

The five-year strategic plan (2021-2025) integrates community outreach as one of the university's pillars with a third level of emphasis preceded by teaching, learning, and research. In relation to this, the issue of the third mission was overlooked in the strategic plan (SP). As a result, the U-ILTT plan was shallow and did not incorporate contemporary issues of U-ILTT. What is more, the key terms and phrases such as commercialization, innovation, IP, patent right, and entrepreneurship were not given due attention either in the SP or in the other documents.

The Unity University policy and guideline on research and publications, issued in 2020, includes five directives and three guidelines. The directives incorporated research and publication, research grant schemes, research code of ethics, journal publication guidelines, and formation and function of the research and publications committee (RPC). The guidelines focus on research, publication, and teaching materials preparation, evaluation, and financing. Apart from these directives and guidelines, the university has established a Senate Standing Committee for Research and Publications (Senate SCRP), responsible directly to the Senate presided by the vice president for Research, Publication, Communication, Community Service, and Linkage (PRCCSL). However, U-ILTT was given less emphasis in the guidelines. In addition, the duties and responsibilities of both the Senate SCPR and the Research and Publications Office overlooked the linkage. Major emphasis was given to material preparation, teaching, research, and publication.

Moreover, the issue of linkage or linkage with the industries was not mentioned explicitly by the policy-making executive organs, which include the Board of Governors, the Executive Committee, and the Senate. Furthermore, linkage was not stated in the duties and responsibilities of the presidents, directors, deans, department heads, and the faculty. However, teaching, research, and community service-related duties and responsibilities are well defined in the Senate Legislation under academic staff rights, duties, and responsibilities (Unity University Senate Legislation, 2012). For instance, the Legislation states that the faculty is required to conduct solo or joint collaborative research and disseminate the research outputs to the broader academic community, thereby solving community problems. In this regard, the legislation should also consider commercialization, innovation, and ownership, and promote entrepreneurship.

Another important point that could affect the linkage is the course load of the faculty. In light of this, the Senate Legislation states that

undergraduate instructors are expected to carry out 15 lecture hours (LHs) per week, whereas TVET instructors should carry out 20 LHs. Moreover, the head of departments shall take 9 LHs, deans 6 LHs, and Presidents 3 to 4 LHs. Moreover, if academic staff members want to teach additional hours, they could get approval from their respective departments or deans. This suggests that the academic staff's preference is to spend more time on teaching activities and generate immediate additional income than partaking in research and linkage activities, which require extra effort.

As a replica of the Senate Legislation, the Instructors' Handbook emphasizes teaching, research, and community service-related duties and responsibilities, but not the third mission of HEIs. Similarly, the Students' Handbook highlights general rules and regulations that the students should abide by. It could have been better if the Handbook had encouraged creativity and innovation that could enhance students' progression and graduate outcomes with the commercialization of innovations and entrepreneurship.

The revised standard quality assurance policy of Unity University aims to improve infrastructure and resources, governance, program relevance and curriculum, teaching, learning and assessment, students' progression and graduates' outcome, research and community outreach, and internal quality of the university. Besides, the policy manual highlights the benefiting organizations from research projects, consultancy, and community service. It also states the need to create research links with national and international academic institutions and the industries.

In a nutshell, the academic staff have published over 200 peer-reviewed articles on the Ethiopian Journal of Business and Development (EJBD) since 2000 and have disseminated the research outputs. The university requires the articles to be technology, business, education, environment, agriculture, health, social science, and development-focused. However,

there is no evidence that indicates commercialization of the research outputs and ownership of innovation. Likewise, the majority of special award winners of Unity University were acknowledged for their academic contributions, and a few of them for their research and entrepreneurship efforts. The recognition should also involve successful innovators and industrial leaders.

Moreover, the document analysis showed that there were strong student internship programs at the university. Unity University, as a member of the MIDROC Technology Group companies, has a big comparative advantage to attract students to its different companies more than any other public and private higher education institutions in Ethiopia. Unity University used to have an exemplary UIL with the MIDROC Technologies Group in the area of students' internship and related community services. The rationale for this relationship was to develop their human capital as well as produce quality and price-competitive products and services for their customers. There was an understanding between both parties that such a partnership is beneficial for both parties.

The smooth and productive University-Industry Linkage needs to consider a number of issues to identify factors that are imperative for the success of the partnership, plan meticulously, and identify key action points for implementation. This involves scanning the environment in which Unity University and MIDROC companies operate, providing important input for preparing a blueprint for the university-industry linkage. To this effect, Unity University conducted a survey in selected MIDROC companies using structured questionnaires to develop a roadmap for meaningful engagement between Unity University and MIDROC companies in the areas of research, consultancy, and community services. This shows that the UIL between Unity University and MIDROC Technology Group had a strong foundation.

Three departments at Unity University, namely Architecture and Urban Planning, Civil Engineering, and Mining Engineering, offer internship opportunities to students as volunteers or for academic credit, allowing them to gain hands-on practical skills. Twenty-four companies of the MIDROC Technology Group were involved in the students' internship program. There are several benefits of an internship for departments, students, and the industries in general, and MIDROC Technology Group in particular. Among these, the following are worth considering for meaningful engagement. Some projects can be supported by students through their new ideas. The industries also save salary as interns do assignments unpaid, and ties with the Department/University are strengthened, and communication is improved. With respect to benefits to the students, they gain career-related experience and practical knowledge; they also explore career venues and opportunities, get academic credit and work experience for their resumes, and their exposure to the real world of work increases self-confidence, to mention a few.

The document analysis also revealed that Unity University had an astonishing entrepreneurship experience. Unity University used to organize public lectures given by well-known and successful entrepreneurs. For instance, Kibur Genna, Haile Gebreselassie, Ermias Amelga, Eyesuswork Zafu, and others were mentioned, among others.

To sum up, MoUs were signed in the last few years between Unity University and sister companies of Midroc Technology Group, which include Dashen Bank, Huda Real Estate, Midroc Construction, Midroc Gold Mine, etc. The MoUs had created opportunities for practical learning experience in the industries. For instance, the Department of Architecture and Urban Planning, Civil Engineering, Construction Technology and Management, Mining, etc., have sent students to Huda Real Estate, Midroc Construction, and Midroc Gold Mine for internship. In addition, prospective graduates from the Department of Accounting and Finance, Economics, Management, and Marketing, including TVET

and Distance and Continuing Education, were sent to Dashen Bank. However, the linkage with MTG was interrupted recently as Unity University closed its mining program. Besides, Unity University shifted the linkage to industries other than Midroc following its separation from MTG in 2020. As a result, Unity University has created a link with over 50 companies such as Dashen Bank, Federal Housing Corporation, Mesay Wondweson Consulting Architects and Engineers, Addis Mebratu Consulting Architects and Engineers, Jamboro Real Estate, ETG Designers and Consultants S.C., to mention some.

5. Conclusions and Recommendations

5.1 Conclusions

Unity University, as the first private University in Ethiopia, has the privilege to enroll eligible higher education students. However, like any of the public and private universities in the country, it mainly focuses on research and community outreach, preceded by teaching and learning. In addition, Unity University used to participate in U-ILTT workshops organized by MOSHE, and such opportunities are not available since MoE had quit the initiative due to the question raised by MoE about its relevance, effectiveness, and impact. Unity University used to have a strong university-industry linkage practice with Midroc Technology Group, and the entrepreneurship public lectures were so successful. In addition to this, the university governing authorities are fully aware of the previous policies and legal frameworks, but they are not well informed about the current developments of policies and legal frameworks of HETRIIL. In relation to this, the academic unit and the students lack awareness about the previous and the current working policies of HETRIIL.

Moreover, there is no separate U-ILTT Office that is in charge of coordinating the duties of University linkage with different industries. In fact, the issue of linkage was considered to be one of the responsibilities

of the research, publication, and community outreach directorate. Furthermore, the executives of the University are involved in the planning, execution, and evaluation of the U-ILTT plan, even though U-ILTT was not considered as one of their strategic priorities. Besides, the university has no well-defined strategy to follow in order to create linkages with industries. Furthermore, the issue of U-ILTT was not well integrated into the strategic plan of the University. In fact, this is a common problem in most of the private HEIs. Conversely, the Departments of Health, Architecture, and Urban Planning have developed their own ways to initiate linkage with industries.

The contemporary issue of the linkage, such as commercialization of research outputs and innovations that incorporate innovation ownership, intellectual property rights, and entrepreneurship, collaborative applied research, and spin-offs etc., was given less emphasis. In fact, the university emphasizes the practice of internship to meet the standard set by MoE and ETA, and the students abide by the practice because it is a fundamental requirement. In relation to this, the industries considered internships as a burden, but not as an institutional responsibility. This clearly states that the students, the university, and the industries lack the proper awareness of the current developments in U-ILTT. Besides, the new externship implementation directive is not recognized by the industries. The findings also revealed that internship, training, recruitment examination, and consultancy are the most popular U-ILTT practices of Unity University and the collaborative industries. Nevertheless, contemporary trends of linkage, such as commercialization and innovation, were overlooked by the university and the industries.

In general, private universities should engage in the third mission to overcome social and economic problems of the community, as successful universities in the USA, China, Japan, and Germany have created meaningful collaboration with different industries, generating billions of dollars by solving real-life problems of society.

To sum up, access to work experience and employment opportunities were mentioned by the university as the best experiences obtained from the linkage. Likewise, access to the use of university resources, consultancy, training, and recruitment examination were the outcomes obtained by the industries as a result of their linkage with the university. This clearly showed that the contemporary issues of the linkage, such as joint research, technology transfer, innovation, commercialization, IP, and entrepreneurship, were overlooked. Finally, the findings indicated that the university is striving to create meaningful new linkages and reestablish the existing linkages with companies in order to enhance the effectiveness of U-ILTT. This helps the university to enhance its linkage with the industries, which develops the linkage sharply. Generally, the university has created linkages with different industries with the rationale to maintain sustainable relationships with the industries and cherish mutual benefits. Similarly, the relationships have created access for practical learning, prospects to understand the needs of the industries, employment opportunities for graduates, and minimal research funding. Conversely, considering the linkage as a burden, a lack of interest in U-ILTT for its requiring more time and expertise, and preferring teaching activities to linkage were some of the major challenges identified in this case study.

5.3. Recommendations

The researchers forward the following recommendations based on the findings of the study. To begin with, both the Unity University and the collaborating industries should consider the linkage as one of the top priorities, allocate budget, and establish an independent U-ILTT Office responsible for handling linkage duties with varied industries. In addition, Unity University should integrate the linkage in its strategic plan and take it into account in the periodic revision of its Senate Legislation, policies, directives, guidelines, and handbooks. Moreover, contemporary issues of the third mission, such as innovations, commercialization, innovation ownership, intellectual property rights and entrepreneurship, and

collaborative applied research should be considered as the major activities of U-ILTT apart from internship, consultancy, and training. Furthermore, Unity University should create U-ILTT awareness for top management, academic units, and students or trainees on the current trend as well as recent developments of policies, strategies, and legal frameworks of HETRIIL.

The university should also explicitly integrate U-ILTT in the strategic plan and in other policies. Similarly, the university should incorporate the issue of commercialization in the academic staff promotion criteria and prepare incentives for the successful implementation of U-ILTT.

The University and the industries should be fully aware of the fact that U-ILTT will be successful when the parties are willing to collaborate to maintain mutual benefits. Concerning this, Priya et al. (2021) stated that U-ILTT will sustain as long as it benefits the interests of both parties.

The government, specifically the MoE, and ETA, should apply Proclamation No. 1298/2015 into work and create awareness on the responsibilities of the industries to cooperate for different linkage activities of HEIs. As a rule, the government should also enforce the proclamation aggressively to bring about the desired changes and to let different stakeholders share the benefits of U-ILTT.

This case study has employed a qualitative approach to explore the current trends of U-ILTT in private higher education institutions, with a specific focus on Unity University. Moreover, it would have been better if more industries were considered in this study. However, the study has looked only at Dashen Bank in order to get the reflections from the industry perspective. Accordingly, the findings of the study may not be comprehensive and cannot be generalizable to other private HEIs. To sum up, different findings will be obtained if using quantitative and mixed research methods. Therefore, further investigation is required to come up with firm conclusions substantiated with empirical evidence.

References

Abraham Abebe Assefa (2016). University-Industry Linkage Practices, Determinants and Challenges Theoretical and Empirical Article Review: Lessons for Effective and Successful Collaboration, *International Journal of Research in Management, Economics and Commerce*, 6(03), 1-17.

Bekir Parlak & Kadir Caner Dogan (2022). *The Handbook of Public Administration*, Vol. 2. Livre de Lyon Press, Lyon.

Bodley-Scott & Oymak, E. (2023). *University-Industry Partnerships for Positive Change: Transformational Strategic Alliances towards UN SDGs*. Policy Press.

Creswell, J. W. (1998). *Qualitative Inquiry and Research Design: Choosing Among Five Traditions*. London: Sage Publications.

Datta, A., Mukherjee, D., & Jessup, L. (2015). Understanding Commercialization of Technological Innovation: Taking Stock and Moving Forward. Innovation & Organizational Behavior eJournal.

Degaga, A., & Senapathy, M. (2021). Challenges and Opportunities of University and Industry Nexus in Ethiopia: A Systematic Review. *Shanlax International Journal of Management*.

Etzkowitz, H. (2008). The Triple Helix: University-Industry-Government Innovation in Action. Routledge, London and New York, 15.

Grimm, K., & Weissenberger-Eibl, M.A. (2019). Drivers and effects of UIRCs: closing gaps in current research. *International Journal of Economics and Business Research*.

Hailu, A.T. (2024). The role of university–industry linkages in promoting technology transfer: implementation of triple helix model relations. *Journal of Innovation and Entrepreneurship, 13*, 1-17.

Hanurawan, F. (2012). Qualitative Research in Psychology. *Journal of Educational, Health and Community Psychology*, 1(2), 120-132.

Harman, G. and Sherwell, V. (2002). Risks in University-Industry Research Links and the Implications for the University. *Journal of Higher Education Policy and Management*, 24(1), 37-51.

Higher Education and Training, Research Institutions and Industrial Linkage Policy and Strategy, (2021). MoE, Addis Ababa, Ethiopia

Kemparaj, U. Chavan, S. (2013). Qualitative research: a brief description. *Indian Journal of Medical Sciences*, 67 (3), 89-98.

Kenney M. & Patton, D. (2009). Reconsidering the Bayh-Dole Act and the Current University Invention Model.

Lwehabura, M.J., & Stilwell, C. (2008). Information literacy in Tanzanian universities. *Journal of Librarianship and Information Science, 40*, 179 - 191.

Markman, G.D., Siegel, D.S., & Wright, M. (2008). Research and Technology Commercialization. *Entrepreneurship*.

Morrison, K. (2014). What is qualitative research? *Educational Research and Evaluation*, 20(4), 328-329.

MoSHE (2021). Higher Education and Training, Research Institutions and Industrial Linkage Policy and Strategy, Federal Democratic Republic of Ethiopia, Ministry of Science and Higher Education. Policy document.

Nimtz, L. E. and Others (1996). University-Industry Partnership: Meeting the Challenge with a High-Tech Partner, *SRA Journal*, (27)2, 9-17.

Oxford Research Encyclopedia of Business and Management Qualitative Research (2022) Foundations, Approaches, and Practices. Oxford Research Encyclopedia of Business and Management.

Priya, D.A., Saxena, P.T., Dwivedi, D.R., & Vishwakarma, K. (2021). University-Industry Linkage & Development of Higher Education: A Study about Faculty Perception. *Journal of Contemporary Issues in Business and Government*.

Sierra, L.M., Vargas, M.E., & Torres, V.G. (2017). An Institutional Framework to Explain the University: Industry Technology Transfer in a Public University of Mexico. *Journal of Technology Management & Innovation, 12*, 4-12.

Sale, J, Sale, J. Thielke, S. (2018). Qualitative research is a fundamental scientific process. *Journal of Clinical Epidemiology*, 102,129-133.

Seppo, M. (2019). The Policy Suggestions Concerning Motivations and Barriers of University-Industry Cooperation, *Theory and Practice of Economic Policy,* (20)1. 226-246.

Singh, S. and Kaundal, B (2022). Academia-Industry Linkages: Theoretical and Empirical Review Article. *World Journal of Advanced Research and Reviews*, 15(1), 104-115.

Tegegne, H.R., Girmay, H.A., Gebremedhen, Y.B., Olle, B.O., Domez, G.A., & Gebreyesus, M.A. (2024). Status and challenges of university-industry linkage in the Tigray Regional State of Ethiopia. *Industry and Higher Education*.

Teressa, T.D. (2022). The Function of University-Industry Linkages in the Implementation of Undergraduate Field-Based Learning in Higher Learning Institutions in Ethiopia. *Creative Education*.

Tom Hockaday, (2020). *University Technology Transfer: What It Is and How to Do It*., Baltimore: Johns Hopkins University Press.

Tweheyo, G., Abaho, E., M Verma, A., & Abaasi Musenze, D.I. (2024). Institutional Factors and Commercialization of University Research Outputs and Innovations in Uganda. International Journal of Social Science & Economic Research.

Tweheyo, G., Abaho, E., & M Verma, A. (2022). The Commercialization of University Research Outputs: A Review of Literature. Texila International Journal of Management.

Wonglimpiyarat, J. (2014). Technology Transfer and Entrepreneurial Development through University Business Incubation Process in Thailand.

Yilma, E. (2018). Determinants of University-Industry Linkage: Evidence from Dire Dawa City. *European Journal of Business and Management, 10*, 11-25.