



**MEKELLE UNIVERSITY**

**COLLEGE OF SOCIAL SCIENCES AND LANGUAGES**

**DEPARTMENT OF FOREIGN LANGUAGES AND LITERATURE**

**PHONOLOGICAL AND MORPHOLOGICAL ANALYSES OF  
ENGLISH BORROWED WORDS ON TIGRINYA BILLBOARDS**

**BY**

**ALIF GEBRETSADIK TINSUE**

**MEKELLE, TIGRAY, ETHIOPIA**

**OCTOBER, 2025**

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**A THESIS SUBMITTED TO THE DEPARTMENT OF FOREIGN  
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**MEKELE, TIGRAY, ETHIOPIA**

**OCTOBER, 2025**

## DECLARATION

This thesis is my original work and has not been presented for any academic studies or examination in any other university or higher learning institution, and all sources of materials used for this work have been acknowledged.

Alif Gebretsadik ..... -----  
Signature Date

This thesis has been submitted for examination with my approval as university supervisors

Advisor: Fikre Gebrekidan (PHD) ----- .....  
Signature Date

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## *Abstract*

*Tigrinya language, like many others, continuously expands its lexicon by borrowing words, particularly from English. This study provides a descriptive analysis of English borrowed words found on Tigrinya billboards in Mekelle. The primary objective is to identify the most frequently borrowed words and describe the phonological and morphological processes that characterize their adaptation into the recipient language. Data were collected through photographic documentation of public signage and analyzed qualitatively. The findings indicate that direct lexical importation is the predominant strategy, characterized by significant phonological modification to agree with Tigrinya phonotactic. Key adaptive processes include systemic vowel substitution, monophthongization, schwa replacement, add glottal stop to reduce vowel initials, and epenthetic vowel insertion to resolve illicit consonant clusters. Morphologically, free lexeme and hybrid compounding are the principal method of blending foreign and native elements. This direct import of lexemes presents potential challenges for lexical accessibility and comprehension. The study concludes that while active phonological nativization occurs, the prevalence of direct imports highlights a pressing need for standardized language planning and policy to ensure communicative clarity and preserve the functional integrity of Tigrinya in public domains.*

*Key words: Borrowed, billboard, importation, phonological, morphological*

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# CHAPTRE ONE

## INTRODUCTION

This study deals with Tigrinya words borrowed from English language that appear in the name of organizations displayed on billboards. This chapter presents the background of the study, statement of the problem, research questions, objectives of the study, significances of the study, delimitation of the study, and limitation of the study.

### 1.1 Background of the Study

Language is a fundamental tool for human communication, enabling people to share messages, build relationships, and express their identities through verbal symbols effectively. Through communication, individuals develop a sense of self, build relationships, and express ideas using the verbal symbols. As communication evolves, so does language constantly changing to accommodate new concepts and societal developments. According to Schendl (2001: 1), “All aspects of language are subject to change, including phonology, morphology, syntax, and semantics.” Thus linguistic change, particularly in phonological and morphological aspects is a natural and ongoing process across all language including Tigrinya.

Words play a vital role in communication in conveying meaning. In any language, individual words or combinations of words are used to represent specific concepts or objects. These words carry meaning regardless of context and are often governed by particular conventions or regulations (Infoterm, 2005; Leitchik, 2003; Chancellery, 2002). New terms, therefore, need to conform to the morphological structure of the target language in order to function effectively. According to Bozdechová (2015:3), “Terms serve several functions, including cognitive, interpersonal, referential, and intertextual roles.” This underscores the necessity for phonological and morphological alignment when introducing borrowed terms.

Every language integrates new words, often by borrowing from others. This process varies in extent across languages but is evident in most of them, including Tigrinya. As Yule (1996) explains, word formation involves various processes. Borrowing is one the word formation process evidenced in almost all languages including Tigrinya. It involves adopting words from other languages and integrating them into the native lexicon.

Tigrinya, a modern Ethio-Semitic language functioning as a working language in the Tigray region of Ethiopia and in Eritrea, exemplifies this universal linguistic phenomenon. Its lexical repository has been historically enriched through contact with languages such as English and Amharic, a trajectory documented by scholars including Girmay (1983) and Mekonnen (1991). In contemporary urban landscapes, particularly in a hub like Mekelle, this contact is most visibly materialized in the linguistic landscape specifically, on public billboards advertising commercial and institutional entities.

These billboards represent a fertile, yet critically under examined, site of linguistic inquiry. They feature a pervasive use of English-derived nomenclature embedded within Tigrinya textual frameworks. While extant research has productively analyzed borrowing in specialized domains such as health and agriculture (Abraha, 2022) and phonological adaptation patterns of spoken and written (Gebremedhin, 2015), the specific morpho-phonological processes governing the integration of Anglicism in this public, commercial register remain largely unexplored. This study, therefore, positions itself within this research lacuna, aiming to deconstruct the systematic adaptations that occur when English lexemes are assimilated into the Tigrinya linguistic system within this unique semiotic domain.

## **1.2. Statement of the Problem**

The pervasive integration of English-derived lexemes into the Tigrinya linguistic landscape, particularly within organizational nomenclature on public billboards, occurs in a scholarly and regulatory vacuum, resulting in unstandardized practices that threaten lexical accessibility and linguistic integrity.

“Although borrowing is a very important source for developing the vocabulary items and terminologies of a language, the borrowed words should conform to the morphological and Phonological structure of the recipient language,” (Komolafe, 2014:86). Moreover, in the developed world, advances in science and technology stimulate the introduction of words into the language from various technical and scientific spheres denoting objects, phenomena, technologies, and processes, and without linguistic variation of the target language, the terms are assimilated into every usage (Hrytsai, 2015).

Recent studies have identified the growing number of borrowed English words in Tigrinya. For instance, Abraha (2022) highlighted how health and agricultural terminology in Tigrinya has been influenced by borrowing from English and Amharic. Similarly, Gebremedhin (2015) examined phonological adaptation in borrowed terms, while Tesfay (2016) and Ayalew (2018) investigated English loanwords in media and signage.

However, despite these efforts, there is a limited research on how English borrowed words are used in the public signage, particularly on billboards that display the names of businesses, institutions, and services. The naming of organizations often reflects a combination of Tigrinya with English or Amharic, with no apparent standardized or regulated linguistic convention governing such nomenclatures.

This situation has introduced multiple challenges. First, the overuse of foreign words can hide meaning for local readers, especially those with limited exposure to English. Second, such practices may gradually erode the linguistic integrity of Tigrinya by introducing foreign grammatical patterns. Lastly, lack of a clear policy or institutional oversight contributes to inconsistencies in the way borrowed words are used.

This study is; therefore, driven by the central problem: to what extent do English borrowings in Tigrinya billboard nomenclature undergo systematic phonological and morphological adaptation to conform to the recipient language's structures. None, to the best of my knowledge, have explicitly addressed the linguistic adaptation of English borrowings in the naming of organizations displayed on public billboards in Tigrinya. This study's aim is to fill this gap by focusing on how borrowed English words are integrated or not integrated into Tigrinya, particularly with respect to their phonological and morphological properties.

### **1.3. Research Question**

The study aims to address the following basic research questions:

1. What phonological process occurs then English words are borrowed into Tigrinya billboards?
2. How English borrowed words morphologically adapted or formed in Tigrinya billboard nomenclature?
3. Which type of borrowings is most common in billboard names?

## **1.4. Objectives of the Study**

Related to the statement of the problem, the objectives of this research are stated as follow.

### **1.4.1 General Objective**

The general objective of this study is to examine how the English borrowings are phonological and morphologically adapted into Tigrinya, with particular emphasis on the naming of organizations as displayed on billboards in Mekelle.

### **1.4.2 Specific Objectives**

The specific objectives of the study are:

1. to identify the main phonological adaptation strategies applied to English borrowed words in Tigrinya;
2. to examine the morphological process through which English words are integrated into Tigrinya;
3. to identify the most common type of borrowings in billboard names.

## **1.5. Significance of the Study**

This study offers both theoretical and practical contributions to the field of linguistics, particularly in the areas of phonology, morphology, and lexical borrowing. Theoretically, it provides insight into how English loanwords are incorporated into Tigrinya and whether they conform to the recipient language's phonological and morphological rules. The findings will contribute to ongoing academic discussions on language contact, borrowing, and structural integration.

Practically, the research is expected to benefit a range of stakeholders. For students and educators, it can serve as a valuable resource for understanding language change and adaptation. For business owners and the general public, it will raise awareness on the linguistic implications of using foreign terms in naming practices. The study may also guide language policy-makers and cultural institutions in Tigray by emphasizing the importance of preserving linguistic clarity, and promoting consistent, culturally grounded naming conventions. Over all it uses as reference for other studies.

## **1.6. Delimitation or Scope of the Study**

This research focuses specifically on English borrowed words that appear in the naming of organizations on public billboards within Mekelle city. It is limited to the phonological and morphological aspects or characteristics of the written form or phonemic of the borrowed

words on billboards and evaluated their process of integration into Tigrinya. On the other hand, this study did not include verified spoken data and other linguistic areas such as syntax, pragmatics, or discourse.

The scope is deliberately narrowed to Mekelle due to practical constraints related to time, resources, and accessibility. In addition to this Mekelle was selected due to its urban setting, diverse linguistic landscape, and widespread use of English in commercial and institutional naming.

### 1.7. Limitations of the study

Limitations are unexpected problems that face the researcher in the actual study. Therefore, the limitation that the current researcher encountered is lack of standardized spelling in public signage, which affects the consistency of data collection. Despite this challenge, the study offers a focused analysis of an understudied linguistic phenomenon in a specific urban context and the researcher focus on the borrowed words written in Tigrinya so as to solve the lack of standardization spelling in public signage.

### 1.8. Definition of Key Terms

To ensure clarity and consistency, the following key terms are defined as they are used within the context of this study:

- **Borrowing:** the linguistic process by which words or expressions from a source language are adopted into a target language, either with or without structural modification.
- **Tigrinya Nomenclature Organizations:** this refers to organizational names such as schools, shops, hotels, and other establishments written in Tigrinya and displayed on public billboards in Mekelle city.
- **Dictionary:** a reference resource, typically organized alphabetically, that provides information on word meanings, pronunciation, origin, and usage. In this study, dictionaries were used to verify the source and meaning of borrowed English words.
- **Source Language:** the original or donor language from which a word is borrowed. In this study, English serves as the primary source language.
- **Recipient Language:** the language that receives and incorporates a borrowed word. In the context of this research, Tigrinya is the recipient language into which English terms are integrated.

- **Phonological adaptation:** refers to the process where speakers of a language modify borrowed words to conform to the phonological rule and pattern of their language. This involves change to both the individual sound or segmentation adaptation and the sound sequence or suprasegmental adaptation within a word.
- **Morphological adaptation:** this refers to structural change in a word. This involves changes to both derivational and inflectional structure adaptation.

## **CHAPTER TWO**

### **REVIEW OF RELATED LITERATURE**

This chapter presents a comprehensive review of key linguistic concepts, theoretical frameworks and summarizes previous studies relevant to the phonological and morphological aspects of borrowed words. It includes discussion on phonology, morphology, word formation processes, and the specific phonological and morphological processes. It also highlights both international and local research studies that help in the development of this study.

#### **2.1. Linguistic concepts**

##### **2.1.1. Phonology**

Phonology is the study of the systematic organization of sounds in languages. According to Finegan (2008), it investigates how speech sounds function within a particular language, focusing on elements like phonemes and allophones.

Odden (2005) states that phonology is one of the core fields that composes the discipline of linguistics, which is defined as the scientific study of language structure. The speech sounds of language that we study in phonology are symbolic sounds that represent the physical sounds of language. Odden (2005) adds that the point which is most important to appreciate at this moment is that the “sounds” which phonology is concerned with symbolic sounds. They are cognitive abstractions, which represent but are not the same as physical sounds.

A common characterization of the difference between phonetics and phonology is that phonetics deals with "actual" physical sounds as they are manifested in human speech, and concentrates on acoustic waveforms, formant values, and the physical principles underlying the production of sounds. Phonology, on the other hand, is an abstract cognitive system dealing with rules in a mental grammar: principles of subconscious "thought" as they relate to language sound (Odden, 2005).

Jolayemi (2010) adds that the syllabic structure is the systematic structure of phonemes which are pronounced at once collectively, categorized into onset, nucleus, and coda.

### 2.1.1.1. Segmental Phonemes of English and Tigrinya

Each language possesses a unique phonological system, a fundamental principle in phonological theory (Odden, 2005). This is exemplified by the contrast between Tigrinya and English. Tigrinya, as an Ethio-Semitic language, is characterized by its use of ejective and emphatic consonants and a relatively simple vowel inventory Buckley, (1997). In contrast, English exhibits a broader vowel inventory featuring tense-lax distinctions and diphthongs, but lacks ejective consonants entirely (Katamba, 1989; Roach, 2009).

**English Vowels:** English has a more complex vowel system than Tigrinya. The following inventory of twenty vowel sounds is standard in descriptions of Received Pronunciation (RP) and General American (GA) (Ladefoged & Johnson, 2011; Roach, 2009).

**Monophthongs:** /i:/ (beet), /ɪ/ (bit), /e/ (bet), /æ/ (bat), /ɑ:/ (father), /ɒ/ (lot), /ɔ:/ (thought), /ʊ/ (put), /u:/ (boot), /ʌ/ (cut), /ɜ:/ (nurse), /ə/ (common)

**Diphthongs:** /eɪ/ (face), /aɪ/ (price), /ɔɪ/ (choice), /əʊ/ (goat), /aʊ/ (mouth), /ɪə/ (near), /eə/ (square), /ʊə/ (cure)

**English Consonants:** The English consonant inventory is as follows (Katamba, 1989; Ladefoged & Johnson, 2011):

Plosives: /p, b, t, d, k, g/

Fricatives: /f, v, θ, ð, s, z, ʃ, ʒ, h/

Affricates: /tʃ, dʒ/

Nasals: /m, n, ŋ/

Liquids: /l, ɹ/

Glides: /j, w/

**Tigrinya Vowels:** Tigrinya has a seven-vowel system, which is standard for many Ethio-Semitic languages (Buckley, 1997). These are:

/ə/ ኣ (as in ማካከል /mikiʔələ/ 'name of person'), /u/ ኡ (as in ኡሙን /ʔumun/ 'honest' /i/ ኢ (as in ኢሎም /ʔiləm/ 'they said'), /a/ ኣ (as in ኣብ /ʔab/ 'in'), /e/ ኤ (as in ማካኤል /mikiʔel/ 'Mikael'), /i/ ኢ (as in ኢግሪ /ʔigri/ 'leg'), and /o/ or /ɒ/ ኦ (as in ኦም /ʔəm/ 'tree')

**Tigrinya Consonants:** Tigrinya's consonant inventory is notably larger and includes phonemic distinctions absent in English, specifically ejectives and emphatics (Buckley, 1997 and Nugus 2021). The core inventory includes the following consonants: These are:

Plosives and Ejective: /b/; /t, t', d/; /k, k', g, g<sup>w</sup>/; /k<sup>w</sup>, k'<sup>w</sup>/

Affricates and ejective: /tʃ, tʃ', dʒ/

Fricatives and ejective: /f/; /s, s' z/; /ʃ/; /ħ, ʕ/; /h/

Nasals: /m, n, ŋ/

Liquids: /l, r/

Glides: /w, j/

Glottal: /ʔ/

### 2.1.1.2. Syllable Structure of Tigrinya and English

A fundamental difference between the two languages lays in their phonotactics the rules governing permissible sound sequences and syllable structures.

**Tigrinya Syllable Structure:** Tigrinya follows a highly restricted syllabic structure, most commonly represented as consonant-vowel (CV) or consonant-vowel-consonant (CVC). As Buckley (1997) and Daniel (2004, p. 45) state, “Each syllable in Tigrinya language typically consists of an initial consonant (onset), a vowel (nucleus), and, optionally, a final consonant coda. For example, “ባሕሪ” /baħ.ri/ means sea. As Buckley (1997) highlights, Tigrinya generally prohibits consonant or vowel clusters, emphasizing a simplified phonotactic structure. When gemination occurs, it is often analyzed such that the final consonant of one syllable becomes the onset of the following syllable (e.g., /gəb.bir/ for ‘pay taxi’), further adhering to the preference for CV patterns.

**English Syllable Structure:** English, conversely, allows for a much wider range of complex syllable structures due to its tolerance for consonant clusters both in the onset and coda positions (Hammond, 1999; Roach, 2009). These structures include: vowel (V): as in I /aɪ/, consonant-vowel (CV): as in me /mi:/, consonant-vowel-consonant (CVC): as in cat /kæt/, consonant-consonant-vowel (CCV): as in play /plaɪ/, consonant-consonant-vowel-consonant (CCVC): as in stop /stɒp/, consonant-vowel-consonant-consonant (CVCC): as in hand /hænd/, consonant-consonant-consonant-vowel (CCCV): as in spray /spɹeɪ/, and consonant-consonant-consonant-vowel-consonant (CCCVC): as in strengths /stɹɛŋkθs/. Therefore, while

both languages share the basic consonant-vowel (CV) and consonant-vowel-consonant (CVC) patterns, English permit a vastly greater degree of syllabic complexity. This fundamental phonotactic difference is the primary driver of the pervasive epenthesis observed when English words are borrowed into Tigrinya, as the recipient language must repair illicit clusters to conform to its own structural constraints (cf. Kager, 1999).

### **2.1.1.3. Phonological Process**

Phonological process deals with the patterns of speech sound change that simplifies pronunciation of a language. It is the study of sound system of a language, including how sounds are organized, used and change in different contexts. In short phonology study of the sound system of a language, including how sounds change in different contexts and are organized or used.

#### **2.1.1.3.1. Types of Phonological process**

Phonological rules describe systematic sound changes that occur within specific linguistic environments. Scholars such as Chomsky and Halle (1968), Kenstowicz (1994), and Odden (2005) have classified these rules into several major categories as follows:

##### **1. Assimilation Process**

Chomsky & Halle (1968) describe assimilation as a feature-changing rule in the Sound Pattern of language. It is the modification of a sound in order to make it more similar to some other sound in its neighborhoods. The advantage of having assimilation is that it results in smoother, more effortless, more economical transitions from one sound to another. While Kenstowicz (1994) notes assimilation as a universal process in phonology. Ramelan, (1994:78), states “Assimilation is the process of changing one phoneme into another phoneme as the result of putting morphemes together.” Assimilation is one type of morpho-phonemic changes. On the basis of which sound influences the assimilated sound, we distinguish two kinds of assimilation: progressive assimilation, when the change of one sound into another one is influenced by a preceding sound, and regressive assimilation, when it is influenced by the following sound (Ramelan, 1994). For example, consider the regular plural ending in English. It is written as s, but it may, in fact, be pronounced as [-s] as in [pet-s] pets, or as [-z] as in [bel-z] bells or even as [-ɪz] as in [r~uz-ɪz] roses, this is an example of progressive assimilation. The choice is not random. The principle that determines the shape of the suffix is voice assimilation and the English prefix in- changes to [ɪm] before bilabials:

impossible → impossible. In Tigrinya the alveolar nasal /n/ assimilates to the place of articulation of the bilabial stop /b/, becoming the bilabial nasal [m] as in አንበሳ /ʔanbəsə/ ('lion') → [ʔambəsə].

## 2. Dissimilation Process

Dissimilation occurs when two similar sounds become less alike to ease pronunciation or when a sound changes one of its features to become less similar to an adjacent sound, usually to make the two sounds more distinguishable. Odden (2005) explains dissimilation as a markedness driven process to make sounds more distinct from other sounds in their environment and Trask (1996) emphasizes its role in historical sound change. Example in English, the adjective forming suffix -al has two phonetic manifestations. Sometimes it is /-al/, as in electrical and sometimes it is as /-ar/, as in angular. Another example is the English word fifths /fifθs/ often pronounced as [fifts] (dissimilation of two fricatives).

## 3. Insertion (Epenthesis) Process

Nathan (2008:82) asserts “Not only can segments be deleted; sometimes they can be inserted instead.” There seem to be two basic reasons for insertion: preventing clusters of consonants that violate syllable structure constraints in the language, and easing transitions between segments that have multiple incompatibilities. Kenstowicz (1994) highlights epenthesis as a repair strategy for syllable constraints. Example (English): athlete often → [ˈæθəˌlɪt]; in Tigrinya, ስደድ /sɪdəd/ (*to drive away*) because in Tigrinya consonant cluster is impermissible.

## 4. Deletion (Elision) Rules

Hyman (1975) stated that deletion involves the loss of a segment in certain phonological contexts. It is a common feature in Bantu and Semitic languages, and Hayes (2009) describes deletion rules as simplification strategies in prosodic systems by which a sound present in the phonemic form is removed from the phonetic form in certain environments for ease of production. Example (English): friendship → [frɛnʃɪp] (loss of /d/). Example (Tigrinya): መንገድ /mɛngədi/ → መገድ /mɛgədi/.

## 5. Metathesis Rules

Metathesis is the reordering of sounds within a word. Campbell (2004) argues metathesis is often motivated by ease of articulation, while Hock (1991) treats it as a historical phonological process. Example (English): Old English bridd → Modern English bird, in Tigrinya ደብሪ /dɛbri/ → ደርቢ /dɛrbi/.

## 6. Neutralization Process

A phonemic contrast is lost in a specific environment. Trubetzkoy (1939/1969) introduced neutralization in *Principles of Phonology* and Iverson and Salmons (2011) discuss neutralization as central in markedness theory, two sounds that are normally distinct and can change word meanings become the same sound in a specific context. This context is usually defined by its position in a word (e.g., at the end) or by the sounds that surround it. Example (German): Rad → [ʁa:t] (final devoicing).

## 7. Strengthening (Fortition) and Weakening (Lenition) Process

Fortition: refers to sounds become “strength,” usually more constricted. This "strength" is explained by a sonority hierarchy, which ranks sounds based on their loudness, openness, and airflow obstruction. For example, Spanish: /d/ → [d̪] after a pause. In Tigrinya for example, in the Word-initial glottal stop addition (/ʔ/) before vowel-initial words (e.g., ኣብ /ʔab/ 'in') strengthens the syllable onset.

Lenition: Lass (1984) identifies lenition as a universal tendency in diachronic change, and Kirchner (2001) explains lenition through effort minimization theory. Sounds become “weaker,” less constricted. For instance, the Latin word *vita* becomes *vida* in Spanish (t → d). While lenition is a process of phonetic easing (making words easier and faster to pronounce in connected speech), fortition is often a process of phonological highlighting (making important sounds at the beginnings of words more distinct and clear). Together, they represent the constant push-and-pull in all languages between the goals of effort minimization and clarity of communication.

## 8. Flapping (a special assimilation in English)

Kager, (1999), states that flapping is a constraint interaction in Optimality Theory.

For instance, the alveolar stops /t/ and /d/ becomes a flap [ɾ] between vowels.

Example: butter → [bʌɾə].

## 9. Vowel Harmony

Clements & Sezer (1982) provide a foundational analysis of vowel harmony and Archangeli & Pulleyblank (1994) explore its universality in grounded phonology. They describe vowel harmony as it refers to vowels in a word agree in features such as backness or rounding. Example (Turkish): Suffix vowel harmonizes with root vowel.

## 2.1.2. Morphology

Morphology refers to the study of word structure and the rules by which words are formed and modified. It is the study of the internal structure and formation of words in a language focusing on the rules and patterns that govern how words are formed and how they convey meaning. As explained by Yule (2006), morphology examines the smallest units of meaning, known as morphemes, and how these units interact to form complete words. These morphemes can be categorized into two broad types: free morphemes, which can function independently (e.g., “book”), and bound morphemes, which must be attached to other elements (e.g., prefixes like “un-”).

Furthermore, morphemes can be classified into lexical and functional categories. Lexical morphemes convey specific content (e.g., “run,” “house”), while functional morphemes serve grammatical functions (e.g., “and,” “the”). Affixation, involving prefixes, suffixes, or infixes, is a common morphological process used to modify or create new words.

### 2.1.2.1. Morphological Process

Morphological processes involve the internal structure and formation of words using meaningful units called phonemes. It is a process of creating new words through mechanisms like inflection (modifying words for grammar), derivation (adding affixes to change meaning).

#### 2.1.2.1.1. Types of Morphological process or rule

**1. Affixation:** as Katamba (1993); Aronoff & Fudeman (2011) state affixation refers to adding prefixes, suffixes, infixes, or circumfixes to a root to form new words. Example in English, teach → teacher; in Tigrinya, *məmh̄ir* > *məmh̄iran* ‘teacher > teachers’.

**2. Compounding:** Combining is a process of combining two or more independent words to create a new word Bauer (2001); Lieber (2016). For example, blackboard (black + board) *bet+kiristiyan* > *betkiristiyan* ‘church > churches’

**3. Reduplication:** Inkelas & Zoll (2005); Moravcsik (1978) states that repetition of a whole or part of a word to indicate plurality, intensity, or emphasis. For example, in English, bye-bye, and in Tigrinya *ħas’inə-məs’in* ‘metals’.

**4. Conversion (Zero-Derivation):** As Marchand (1969); Bauer & Huddleston (2002) examined conversion refers to changing a word’s class without adding an affix. Example, email → to email (noun → verb) Borrowed nouns may shift into verbs (rare in Tigrinya)

**5. Internal Change (Apophony):** Hockett (1958); Spencer (1991) explain Internal Change (Apophony) as altering the internal vowel/consonant to mark grammatical contrast. For example, sing → sang.

**6. Suppletion:** Entirely replacing a form with an unrelated root or a completely different root (Mel Cuk, 1994; Matthews 1991). Example, go → went, and in Tigrinya “አሎ” (*he is present*) → “ነደኛ” (*he was*).

**7. Inflection:** In Bybee, (1985); Spencer & Zwicky, (1998) Words inflection refers to add morphemes to indicate grammatical features (tense, case, gender, number). For example, Walk → walked; in Tigrinya, “አሎ” (*he is present*) → “አላ” (*she is present*).

**8. Derivation:** Creating new lexemes by adding affixes that change meaning or word class (Aronoff, 1976; Katamba, 1993). For example, in English the word happy → unhappy by adding the prefix -un and in Tigrinya the word “ጽቡቅ” (*good*) → “ጽቡቅነት” (*good natured*) by adding the suffix “-ነት”/net/.

Affixation and inflection are the most productive morphological rules in both English and Tigrinya. Borrowed English words in Tigrinya often undergo derivational affixation (e.g., video → vidyonya “cameraman”).

### 2.1.3. Word Formation

In linguistics, word formation is concerned with how new words are created or adapted within a language. Harley (2006) describes words as fundamental linguistic units that carry meaning and can function independently in communication. Various processes contribute to word formation, including compounding, clipping, conversion, coinage, and borrowing.

Stokwell and Donka (2001) said that words as being the most basic of language, the most fundamental unit through which meaning is represented in language. Words are the smallest free-standing forms that represent the meaning. In linguistics, word formation refers to the ways in which new words are made on the basis of other words or morphemes.

Yule (1985) identifies several common types of word formation:

**1. Coinage:** as Yule 2006 states coinage refers to Creating entirely new terms base on the name of a person or a place is called eponyms. Some eponyms are technically terms, based on the name of those who first discovered or invented things.

**2. Borrowing:** this is the most common source of new word by adopting terms from other languages. According to Brun and Pei (1983; 1966) borrowing is a process whereby new words are formed by adopting words from other languages together with the concept or idea they stand for.

**3. Compounding:** Combining is joining of two or more existing words to produce a single form. In other words, it is “Combination of two free forms, or words that have an otherwise independent existence” (Adams: 1973).

**4. Blending:** Blending is the combination of two separate terms to produce a single new term process by merging parts of two words (Yule: 2006). According to God by et al. (1982), blending is the process whereby new words are formed by combining parts of two words, usually the beginning of one word and the end of another.

**5. Backformation:** Yule (2006) states that backformation is a very specialized type of reduction process. Typically, a word of one (usually a noun) is reduced to form a word of another type (usually a verb). Another definition of backformation is the process by which new words are formed by the deletion of a supposed affix from an already existing word.

**6. Acronyms:** it is means of forming words from initial letters of a set of other words. It is also the process whereby a new word is formed from the initial letters of the constituent words of a phrase or sentence.

**7. Affixation:** Adding prefixes or suffixes. Prefixes are bound morphemes that are added to the beginning of the word whereas suffixes are bound morphemes which are added to the end of the word. Infixes are bound morphemes that are inserted within the words.

**8. Conversion:** conversion is a process by which new words are created by using a word in new functions. This is a process of changing the grammatical category of a word.

Each of these methods contributes to the dynamic nature of language development, including Tigrinya.

#### **2.1.3.1. Borrowing**

Borrowing is one of the most common ways languages expand their lexicon. It involves adopting words or expressions from a different language, often to express new concepts or accommodate cultural exchange. As Katamba (2005) notes, linguistic borrowing frequently occurs when a language lacks terms for newly introduced ideas or technologies. Radford et

al. (2012) emphasize that cultural and technological dominance often influences which languages serve as sources of borrowing.

Yule (2006) defines borrowing as the process by which one language takes over words from another, integrating them into its own structure. Brun and Pei (1983; 1966) further elaborate that borrowing includes both the lexical item and its associated concept. Borrowing serves two main linguistic purposes: lexical enrichment, by filling gaps where no equivalent term exists in the recipient language and social and symbolic function, reflecting identity, modernity, or prestige.

## **2.2. Theoretical Frameworks for Loanword Adaptation**

This study employs a multi-tiered theoretical approach to provide a comprehensive analysis of the data.

### **2.2.1. A Taxonomic Framework for Borrowing:** Betz (1959) and Duckworth (1977)

The foundational framework for this analysis is the typology of borrowing strategies established by Betz (1959) and later refined by Duckworth (1977). This model provides a robust classificatory system for categorizing the formal relationship between a source word and its borrowed counterpart, focusing on the degree of substitution by native elements.

Betz (1959) and Duckworth (1977) classify borrowing into three major types:

1. **Importation:** refers to the direct borrowing of a lexical item. It occurs when a foreign word is reproduced in a language. A word is adopted with minimal change. It can appear as a foreign word (retaining original spelling, pronunciation, form and meaning) or as a loanword (adapted to the recipient language's system).
2. **Partial Substitution:** A hybrid word where one part is borrowed and the other is replaced by a native element.
3. **Full Substitution:** The borrowed concept is entirely re-expressed using elements from the receiving language.

Under full substitution, additional categories emerge:

Loan translation, literal translation of the original word's elements; loan rendering, Partial translation; loan creation: New word coined to reflect a foreign concept, and loan meaning, an existing native word acquires a new meaning influenced by the source language.

Betz and Duckworth's framework offers a nuanced approach for analyzing the ways borrowed words adapt to the recipient language's phonological and morphological norms.

This study applies their classification in analyzing English borrowings into Tigrinya, particularly in public signage.

### **2.2.2. Optimality Theory**

Optimality Theory (OT; Prince & Smolensky, 1993) provides a powerful explanatory model for the systematic phonological processes that produce them. OT posits that phonological systems are governed by a universal set of conflicting constraints, ranked in a language-specific hierarchy. The "optimal" output is the form that satisfies this hierarchy best.

**Markedness Constraints:** Prohibit perceptually difficult or structurally complex configurations (e.g., ONSET: Syllables must have a beginning consonant; NO-CODA: Syllables must not end in a consonant).

**Faithfulness Constraints:** Demand that the output matches the input (e.g., DEP-IO: Do not insert segments; IDENT-IO: Do change features).

### **2.2.3. The Sociolinguistics of Globalization and Linguistic Landscapes**

A complete analysis must also account for the systematic exceptions to phonological adaptation. The sociolinguistics of globalization (Blommaert, 2010) and the study of linguistic landscapes (Gorter, 2006; Shohamy & Gorter, 2009) provide the necessary lens. This framework posits that public signage is not merely communicative but also symbolic and ideological. Language choice is an act of identity performance and a deployment of symbolic capital.

## **2.3. Review of Previous Studies**

This section reviews international and local studies that have investigated lexical borrowing, particularly focusing on the phonological and morphological integration of English words into Tigrinya. While some research has addressed language borrowing in areas such as media, health, and education, relatively little has been written about organizational naming in public signage.

### **2.3.1. International Related Studies**

Globally, research on lexical borrowing has addressed issues such as code-switching, translation, and language contact. Although direct studies on English borrowings in Tigrinya are limited, relevant work has explored how Tigrinya integrates foreign terms in various contexts.

Research on machine translation (iiste.org, 2021) focused on the challenges of translating English into Tigrinya, especially dealing with borrowed and technical terms. This study found out, borrowed English terms in Tigrinya caused ambiguity in machine translation models. This indicated that many borrowed words were either translated or inconsistently adapted, necessitating clearer phonological and morphological rules.

Zapata (2007) analyzed types of words and word-formation processes in world languages, including borrowing and blending. He examines borrowing was one of the most common word formation processes, especially in languages with colonial or technological influence from English. The study emphasized that borrowed words often retain their phonological structure but adapt morphologically over time.

### **2.3.2. Local Related Studies**

Several Ethiopian studies have explored the influence of English on Tigrinya, particularly focusing on vocabulary borrowed in domains such as code-switching, media, and health and agriculture.

Bahire (2020) studied on code-switching between English and Tigrinya in FM radio broadcasts, particularly analyzing how borrowed English words are morphologically integrated into Tigrinya speech. He examined the incorporation of English words were often adopted without morphological modification, especially in technical and modern domains. However, some borrowings showed partial adaptation by Tigrinya affixation.

Abraha (2022) studied the linguistic and conceptual appropriateness of borrowed terms from English and Amharic into Tigrinya in the fields of health and agriculture. His findings indicate that most borrowed terms were adapted phonologically into, but not morphologically. Some terms were directly imported, while others were given approximate equivalents in Tigrinya.

Ayalew (2018) examined billboard language in Addis Ababa and Mekelle, focusing on sociolinguistic dimensions like code-switching and language choice. English terms were heavily used in urban signage, often for prestige or modernity. Tigrinya terms were less favored, and borrowed words were often not phonologically adapted.

Gebre-medhin (2015) investigated how English borrowings are phonologically adapted into Tigrinya, using a corpus of spoken and written texts. English words are systematically modified to match Tigrinya's phonotactic constraints. This included vowel insertion, consonant substitution, and stress pattern adjustment.

Tesfay (2016) analyzed English loanwords in Tigrinya media, particularly in newspapers and radio broadcasts. English borrowings are gaining acceptance in urban Tigrinya, especially in youth and media discourse. However, these borrowings are often not fully integrated morphologically.

Yohannes (2020) studied the phonotactic constraints in the adaptation of English borrowings. Certain sound clusters in English are disallowed in Tigrinya, leading to predictable substitution or deletion patterns during borrowing.

Berhane (2017) focused on the morphological integration of English loanwords in Tigrinya. He found Suffixation and compounding are the primary strategies for integrating English words. These borrowed words were made to conform to Tigrinya's grammatical rules, though inconsistencies remained.

Haile (2019) explored derivational and inflectional morphology in Tigrinya using English loanwords. Borrowed terms increasingly participate in native morphological processes, showing the growing productivity of English elements in Tigrinya word formation.

Tekle (2018) analyzed urban code-switching and lexical borrowing in Mekelle and Addis Ababa. Urban speakers often mix English and Tigrinya, especially in commercial and educational contexts. This borrowing is driven by prestige and globalization, and often lacks regulation or standardization.

While these studies provide important insights into how Tigrinya borrows from English in various domains, none have focused specifically on morph-phonology nomenclature used in public billboards. The current research addresses this gap by investigating how English borrowings appear and function within the commercial linguistic landscape in Mekelle.

## CHAPTER THREE

### RESEARCH METHODOLOGY

This chapter outlines the location of the study, research design, data sources, data collection instruments, and methods of data analysis used in the study to provide a clear and systematic description of how the research was conducted to investigate the phonological and morphological adaptation of English borrowed words in Tigrinya organizational names displayed on public billboards in Mekelle City.

#### 3.1. Location of Study Area

The research area of this study is Tigray, which is found in northern Ethiopia, and within Tigray, the data were collected from naming organization on billboards in Mekelle city.



Map of Tigray region (Northern Ethiopia)...

#### 3.2. Research Design

This study employed a descriptive qualitative research design. As Pavol (2005) explains, qualitative research is appropriate for linguistic inquiry as it facilitates an in-depth exploration of phenomena through non-numerical data, focusing on understanding patterns, processes, and meanings in their natural context. This design was deemed appropriate because the study aims to describe and analyze the specific linguistic features of phonological and morphological adaptations of borrowed words, rather than to quantify them. The descriptive nature allows for a detailed documentation and interpretation of how English words are integrated into the Tigrinya linguistic landscape on billboards.

#### 3.3. Source of Data and Sampling

The source of data of this study is primary data, which are Tigrinya language organizational names displayed on public billboards in Mekelle. These include business names, institutional signs, shop, café, service providers, and commercial displays. A purposive sampling

technique was employed to select the data. Therefore, Mekelle was selected due to its urban setting, diverse linguistic landscape, and widespread use of English in commercial and institutional naming. This non-random sampling method was chosen to ensure that the data collected were rich and directly relevant to the research objectives (Creswell & Poth, 2018). The researcher systematically surveyed major commercial areas, main roads, and public spaces in Mekelle from February up to April, 2025 and identified and selected thirty (30) billboards that explicitly featured English borrowings within Tigrinya text.

### **3.4. Data Collection Tools**

The researcher functioned as the primary instrument for data collection, a common practice in qualitative linguistic fieldwork where contextual understanding, phonetic transcription, and interpretive judgment are essential. Data collection proceeded through the following steps: First the researcher physically located and identified billboards that met the study's criteria through observation. Second each relevant billboard was photographed to create a permanent and accurate visual record and available to survey. Third identified English borrowed words were extracted from the billboard texts and compiled into a master list alongside their Tigrinya spellings. Finally verify and transcribe the standard pronunciation of each English source word were verified using the Oxford English Dictionary. Each word pair (English source and Tigrinya borrowing) was then transcribed using the International Phonetic Alphabet (IPA) to facilitate precise phonological and morphological comparison.

### **3.5. Methods of Data Analysis**

The data were analyzed through the An Integrated Theoretical Approach: typological lens of Betz (1959) and the adaptive framework of Duckworth (1977), Optimality Theory (Prince & Smolensky, 1993), and described both the words of the source and target languages qualitatively using the International Phonetic Alphabet. The researcher examined each borrowed term to determine its borrowing type and whether it underwent any phonological or morphological adaptation. The findings were then organized and discussed based on linguistic patterns and theoretical implications. This methodological approach enables a comprehensive understanding of how English borrowings function within the Tigrinya linguistic system, particularly in the context of public nomenclature. The IPA transcriptions of the English source words and their Tigrinya counterparts were systematically compared to identify the phonological and morphological process.

## **CHAPTER FOUR**

### **Phonological and Morphological Analysis of English Borrowed Words in Tigrinya in nomenclature organization on Billboards**

This chapter constitutes the empirical core of the present investigation, offering a rigorous phonological and morphological analysis of English borrowed words as they are assimilated into the Tigrinya linguistic framework. The primary data, drawn from the nomenclature of organizations featured on public billboards in Mekelle, are scrutinized to elucidate the systematic patterns of linguistic adaptation.

The phonological and morphological aspects of English borrowed words in Tigrinya landscape especially on naming of organizations on billboards are analyzed within the context of the theoretical framework and related literature. On the other hand, the analysis focuses on the types of English borrowings displayed in Tigrinya billboards and how these words are phonologically and morphologically adapted or not adapted into the recipient language. This involves a contrastive analysis of paired transcriptions: the source English word in its standard phonological form (using the International Phonetic Alphabet) and its adapted Tigrinya counterpart. This permits a fine grained examination of the phonological transformations that occur during the borrowing process.

The Tigrinya syllable structure is consonant-vowel (CV) or consonant-vowel-consonant (CVC), strictly prohibiting complex consonant clusters and mandating a consonantal onset for all syllables (Buckley, 1997). This phonotactic constraint is a primary driver of the adaptive processes documented below. The ensuing subsections categorize and analyze the observed adaptive processes. Data are presented in tabular form for clarity, accompanied by explicit commentary on the identified phonological and morphological shifts.

#### **4.1. Analysis of Phonological Adaptation Processes**

The assimilation of English borrowings is characterized by a suite of highly regular, rule governed phonological processes. These processes function as repair strategies, modifying illicit phonological structures in the source language to conform to the constraints of the recipient language

### 4.1.1. Systemic Vowel Substitution

A predominant adaptive strategy involves the mapping of English vowels onto the nearest Tigrinya phonemic equivalents. This process is necessitated by the more restricted vowel inventory of Tigrinya, which lacks several phonemic distinctions present in English.

#### 4.1.1.1. Ash Replacement

The English near-open front unrounded vowel ash sound /æ/ (as in 'trap', 'cat') is not a phoneme in Tigrinya. The closest vowel in terms of height and backness is the open central unrounded vowel /a/. The following data shows a consistent, categorical substitution of /æ/ with /a/ during borrowing.

**Table 1: Ash replacement /æ/**

English words	IPA	Borrowed Tigrinya words	IPA	Phonological difference
Fashion	/'fæʃən/	ፋሽን	/faʃən/	/æ/ → /a/
Ambassador	/æm'bæsədər/	አምባሳደር	/ʔambasadər/	/æ/ → /a/
Organic	/ɔ:r'gænik/	ኦርጋኒክ	/ʔɔrganik/	/æ/ → /a/
Taxi	/'tæksɪ/	ታክሲ	/taksi/	/æ/ → /a/
Brand	/brænd/	ብራንድ	/bɪrand/	æ/ → /a/
Magic	/'mædʒɪk/	ማጅክ	/madʒik/	/æ/ → /a/
Café	/'kæfeɪ/	ካፌ	/kafe/	æ/ → /a/
passport	/'pæspɔ:t/	ፓስፖርት	/paspɔrt/	/æ/ → /a/

The data evince a consistent and predictable pattern of vowel substitution. English vowels absent from the Tigrinya inventory are systematically replaced by their closest native counterparts. The front low vowel /æ/ is uniformly realized as the central low vowel /a/.

#### 4.1.1.2. Lax Replacement

Lax vowels are articulated with less muscular effort, a less extreme tongue position, and are typically shorter and more centralized. English lax vowels absent from the Tigrinya inventory are systematically replaced by their closest native counterparts.

**Table 2: Substitution of lax /ɪ/ sound**

Electronics	/ɪˌlekˈtrɒnɪks/	ኤሌክትሮኒክስ	/ʔeləktɾoniks/	/ɪ/→/e/
Electric	/ɪˈlektɪk/	ኤሌክትሪክ	/ʔelektirik/	/ɪ/→/e/
Organic	/ɔːrˈɡæɪnɪk/	ኦርጋኒክ	/ʔɔrganik/	/ɪ/→ /i/
Taxi	/ˈtæksɪ/	ታክሲ	/taksi/	/ɪ/→ /i/
Furniture	/ˈfɜːnɪtʃəɪ/	ፊርኒቸር	/fərnitʃər/	/ɪ/ → /i/
Magic	/ˈmædʒɪk/	ማጁክ	/madʒik/	/ɪ/→ /i/
Clinic	/ˈklɪnɪk/	ክሊኒክ	/kɪlinik/	/ɪ/ → /i/

The high front lax vowel /ɪ/ is replaced by the Tigrinya sound /e/ when it located at the beginning of a word whereas at the middle and at the end, it replaced by /i/ sound. This shows that effectively neutralizing the lax distinction, a feature that is non-phonemic in Tigrinya.

#### 4.1.1.3. Schwa Replacement

The English schwa /ə/, a product of vowel reduction in unstressed syllables, is systematically replaced by full vowels in Tigrinya. This process, known as vowel fortition, occurs because Tigrinya does not exhibit vowel reduction; all syllables typically carry full vocalic weight, conforming to its phonotactic and prosodic norms.

**Table 3: Schwa Replacement**

English words	IPA	Borrowed Tigrinya words	IPA	Phonological difference
Dynamo	/ˈdaɪnəmoʊ/	ዲናሞ	/dinamɔ/	/ə/ → /a/
Global	/ˈɡləʊbəl/	ግሎባል	/gilɔbal/	/ə/ → /a/
Machine	/məˈʃiːn/	ማሽን	/maʃin/	/ə/ → /a/
Specialty	/ˈspeʃəlti/	ስፐሻሊቲ	/ʔispeʃaliti/	/ə/ → /a/
Bajaj	/bəˈdʒɑːdʒ/	ባጃጅ	/badʒadʒ/	/ə/ → /a/
Ambassador	/æmˈbæsədər/	አምባሳደር	/ʔambasader/	/ə/→ /a/
Academy	/əˈkædəmi/	አካዳሚ	/ʔakadami/	/ə/ → /a/
Garage	/ɡəˈɪɑːʒ/	ጋራጅ	/garadʒ/	/ə/ → /a/
Restaurant	/ˈ.ɪɛst(ə)rɒnt/	ሬስቶራንት	/restɔrant/	/ə/→/ɔ/

The systematic replacement of the reduced schwa with full vowels /a/ or /ɒ/ underscores a fundamental phonological constraint in Tigrinya. This fortition process ensures that all syllables in the borrowed lexical item are structurally well formed according to the recipient language's requirements.

#### 4.1.1.4. Monophthongization

English diphthongs are consistently simplified into Monophthongs or restructured as vowel-glide sequences. This adaptation aligns with Tigrinya's preference for simplex syllabic nuclei, which conform to a consonant(C) vowel (V (Glide)) consonant(C) template, as opposed to the complex vocalic elements found in English.

**Table 4: Monophthongization**

English Words	IPA	Borrowed Tigrinya words	IPA	Phonological difference
Photo	/fəʊtəʊ/	ፎቶ	/fɒtɒ/	/əʊ/ → /ɒ/
Bakery	/'beɪkəri/	ቤካሪ	/'bekəri/	/eɪ/ → /e/
Shower	/'ʃaʊər/	ሻወር	/'ʃawər/	aʊ/ → /a/
Proud	/praʊd/	ፕራውድ	/'pɪrawid/	/aʊ/ → /aw/
Golden	/'gəʊldən/	ጎልደን	/'gɒldən/	/əʊ/ → /ɒ/
Skylight	/'skaɪlaɪt/	ስካይላይት	/'ʃɪskajlajt/	/aɪ/ → /aj/
Dynamo	/'daɪnəməʊ/	ዲናሞ	/'dɪnamo/	/aɪ/ → /i/, and /oʊ/ → /ɒ/
Generator	/'dʒenəreɪtər/	ጀነሬተር	/'dʒenəretər/	/eɪ/ → /e/
Café	/'kæfeɪ/	ካፌ	/'kafe/	/eɪ/ → /e/
Cake	/keɪk/	ኬክ	/'Kek/	/eɪ/ → /e/

This process of monophthongization or glide formation is a critical phonological filter. Complex English vocalic elements are decomposed into structures that are licit within the Tigrinya phonological system, demonstrating the active role of the recipient language's phonology in shaping loanword integration. For example, English diphthongs /aɪ/, /aʊ/, /oʊ/, /əʊ/, and /eɪ/ are replaced with Tigrinya Monophthongs /i/ or /j/, /a/ or /aw/, /ɒ/, /e/ respectively, /əʊ/ becomes /ɒ/ as in (photo /fəʊ.təʊ/ → ፎቶ /fɒtɒ/); /aʊ/ becomes /aw/ as in

(shower /ʃaʊər/ → **ሻወር** /ʃawər/); /aɪ/ becomes /j/ as in skylight /skaɪlaɪt/ → **ስካይላይት** /ʃiskajlajt/ and /eɪ/ becomes /e/ as in cake /keɪk/ → **ኬክ** /kek/.

#### 4.1.2. Consonantal Substitution

English consonants that are not present in the Tigrinya phonemic inventory are substituted with the closest available native consonant or the more adapted based on place and manner of articulation.

**Table 5: Consonant Substitution**

English words	IPA	Borrowed Tigrinya Words	IPA	Phonological difference
Launch	/lɔːntʃ/	<b>ላውንጅ</b>	/lawnidʒ/	/tʃ/ → /dʒ/
Garage	/gəˈrɑːʒ/	<b>ጋራጅ</b>	/garadʒ/	/ʒ/ → /dʒ/
Group	/gɹuːp/	<b>ግሩፕ</b>	/girup/	/ɹ/ → /r/
Grocery	/'gɹɒsəɹi/	<b>ግሮሰሪ</b>	/girɒseri/	/ɹ/ → /r/
fridge	/frɪdʒ/	<b>ፍሪጅ</b>	/firidʒ/	ɹ/ → /r/
passport	/pæspɔːt/	<b>ፓስፖርት</b>	/paspɔrt/	/ɹ/ → /r/
Sport	/spɔːt/	<b>ስፖርት</b>	/ʃispɔrt/	/ɹ/ → /r/
Proud	/praʊd/	<b>ፕራውድ</b>	/pirawid/	/ɹ/ → /r/
New	/njuː/	<b>ኒው</b>	/niw/	/juː/ → /w/

English uses the alveolar approximant /ɹ/ (the English "r", where the tongue approaches the alveolar ridge but doesn't touch it) while Tigrinya uses an alveolar tap or trill /r/. Therefore, the alveolar approximant /ɹ/ is invariably realized as the alveolar tap or trill /r/, a common substitution cross-linguistically. The voiced palato-alveolar fricative /ʒ/ is consistently adapted as the voiced palato-alveolar affricate /dʒ/. In fact, both are not native sounds in Tigrinya language, but shows a process of not adapted to more adapt. The adaptation of the voiceless affricate /tʃ/ to its voiced counterpart /dʒ/ (as in Launch) may be influenced by orthographic conventions or a tendency towards voicing assimilation in certain environments. English has the sound /juː/ (a palatal approximant /j/ + a long close back vowel /uː/), as in "new," "cue," "few." But Tigrinya does not have this exact /juː/ sound sequence as a common phonological unit. To a Tigrinya ear, the English /juː/ sounds closest to the sequence of

sounds they do have: /i/ + /w/. The English /j/ sound is very close to the vowel /i/. In fact, the vowel /i/ can easily glide into a /j/ sound. The English long vowel /u:/ is very close to the semivowel /w/ which is its glide counterpart. A long /u:/ can easily be heard as a glide towards /w/. Therefore, the common sound sequence in English /nju:/, replaced by the most comfortable and existing sound sequence: /n/ + /i/ + /w/ in Tigrinya.

#### 4.1.3. Epenthesis to Resolve Illicit Consonant Clusters

Tigrinya's canonical consonant-vowel (CV) or consonant-vowel-consonant (CVC) syllable structure prohibits the complex consonant clusters that are prevalent in English. The primary repair strategy for such illicit clusters is epenthesis the insertion of a vowel, most commonly the central vowel /i/ or the glottal stop consonant with central vowel /ʔi/, and the high front vowel /i/.

**Table 6: Vowel Epenthesis for Cluster Resolution**

English words	IPA	Borrowed Tigrinya words	IPA	Phonological difference
Clinic	/'klɪnɪk/	ክሊኒክ	/kɪlinik/	Insertion /i/
Promise	/'pɹɒmɪs/	ፕሮሚስ	/pɪrɒmis/	Insertion /i/
Sport	/spɔːt/	ስፖርት	/ʔɪspɔrt/	Addition /ʔi/
Specialty	/'speʃəlti/	ስፕሻሊቲ	/ʔɪspeʃaliti/	Addition /ʔi/
New	/nju:/	ኒው	/niw/	Insertion /i/
Global	/'glɔʊbəl/	ግሎባል	/gɪlɒbal/	Insertion /i/
Grocery	/'gɹɔʊsəri/	ግሮሰሪ	/gɪrɒseri/	Insertion /i/
Skylight	/'skaɪlaɪt/	ስካይላይት	/ʔɪskajlajt/	Addition /ʔi/
Proud	/praʊd/	ፕራውድ	/pɪrawid/	Insertion /i/
Bank	/bæŋk/	ባንክ	/baŋki/	Addition /i/
House	/haʊs/	ሃውስ	/hawis/	Insertion /i/
Group	/gru:p/	ግሩፕ	/gɪrup/	Insertion /i/

Epenthesis emerges as the most frequent and systematic phonological process observed. It occurs predictably to break up impermissible initial like /kl-/, /pɹ-/, /gl-/, /gɹ-/) by inserting the /i/ sound; adding /ʔi/ to impermissible initial clusters like /sp-/or /sk-; insert /i/ to /nj-/

cluster and add /i/ at the final to break the /-ŋk/) clusters, ensuring the Tigrinya phonotactics or syllable structure. It is noteworthy that word-final epenthetic vowels, while phonologically motivated, may over time become susceptible to reanalysis as nominal suffixes, potentially initiating a path toward morphological integration.

#### 4.1.4. Glottal Stop Addition

A fundamental phonotactic rule in Tigrinya mandates that all syllables must have a consonantal onset. Consequently, English words beginning with a vowel receive a prothetic glottal stop /ʔ/ in their adapted form, which is represented orthographically by the first order character (e.g., ኣ for /ʔa/).

**Table 7: Glottal Stop Addition**

English words	IPA	Borrowed Tigrinya words	IPA	Phonological difference
Academy	/ə'kædəmi/	ኣካዳሚ	/ʔakadami/	Addition /ʔ/
Electronics	/ɪˌlek'trɒnɪks/	ኤሌክትሮኒክስ	/ʔelektrɒnɪks/	Addition /ʔ/
Ambassador	/æm'bæsədər/	አምባሳደር	/ʔambasader/	Addition /ʔ/
Electric	/ɪ'lektɪk/	ኤሌክትሪክ	/ʔelektirik/	Addition /ʔ/
Online	/ˈɒnlajn/	ኦንላይን	/ʔɒnlajn/	Addition /ʔ/
Organic	/ɔːr'gæntɪk/	ኦርጋኒክ	/ʔɔrganik/	Addition /ʔ/

Prothesis (Addition glottal stop /ʔ/ at the beginning of a vowel initial word) is an obligatory phonotactic process in Tigrinya. The addition of the glottal stop and replacement the non-native vowel sounds ensure that the borrowed word conforms to the fundamental CV (consonant-vowel) syllable structure of the language, thereby integrating it seamlessly into the Tigrinya phonological stream. This is also called vowel harmony process.

#### 4.1.5. Neutralization of Vowel Length

English phonemic vowel lengths are neutralized during the adaptation process. Long vowels are changed to their corresponding plain vowels.

**Table 8: Neutralization of Suprasegmental Features**

English word	IPA	Tigrinya word	IPA	Phonological difference
Unique	/ju:'ni:k/	ዩኒክ	/junik/	/u:/→/u/, /i:/→ /i/
Furniture	/'fɜ:nɪtʃə/	ፈርኒቸር	/fərnɪtʃər/	/ɜ:/→/ə/
Group	/gru:p/	ግሩፕ	/gɪrup/	/u:/ →/u/
Juice	/dʒu:s/	ጃስ	/dʒus/	/u:/ → /u/
Target	/'tɑ:rgət/	ታርገት	/target/	/ɑ:/ → /a/
Organic	/ɔ:r'gænik/	ኦርጋኒክ	/ʔɔrganik/	/ɔ:/→ /ɒ/
passport	/pæspɔ:t/	ፓስፖርት	/paspɔrt/	/ɔ:/→/ɒ/
Sport	/spɔ:t/	ስፖርት	/ʔɪspɔrt/	/ɔ:/→/ɒ/

As vowel length is not a distinctive (phonemic) feature in Tigrinya, English long vowels such as /u:/, /i:/, /ɜ:/, /ɑ:/, and /ɔ:/ are systematically realized as their plain vowel counterparts /u/, /i/, /ə/, /a/, /a/, and /ɒ/ respectively to match Tigrinya vowel quality.

**4.1.6. Stress Neutralization**

English unpredictable phonemic stress pattern is typically neutralized according to feature of the receiver language Tigrinya which is plain sound tendencies.

**Table 9: Stress Neutralization**

English word	IPA	Tigrinya word	IPA	Phonological difference
Restaurant	/'rɛstə.rɒnt/	ሬስቶራንት	/restɔrant/	/'ɪ/ → /r/
Promise	/'pɹɒmɪs/	ፕሮሚስ	/pɪrɒmis/	/'p/→ /p/
Specialty	/'speʃəlti/	ስፕሻሊቲ	/ʔɪspeʃaliti/	/'s/→/s/
Online	/'ɔn.laɪn/	ኦንላይን	/ʔɒnlajn/	/'ɔ/→/ɒ/
Organic	/ɔ:r'gænik/	ኦርጋኒክ	/ʔɔrganik/	/'gæ/→ /ga/

The above table shows that the concomitant loss of the original English stress pattern and its replacement with a more predictable Tigrinya plain pattern further exemplifies the

comprehensive and obligatory nature of phonological nativization, losing the suprasegmental features.

#### 4.1.7. Loanwords without phonological change

Loanwords without phonological and morphological change are often called direct importation or zero adaptation. These are words borrowed from English into Tigrinya that retain their original English pronunciation with minimal to no change to fit Tigrinya's sound system. This typically happens under the condition of the English word's sound structure already conforms to Tigrinya's phonotactic rules.

Here is a list of English words commonly used in Tigrinya (especially in urban areas and on billboards) that are pronounced the same or nearly the same as in English.

**Table 10: loanwords without phonological and morphological change**

English	IPA	Tigrinya borrowed words	IPA	Phonological difference
Bus	/bʌs/	ባሰ	/bas/	/ʌ/ → /a/
Shop	/ʃɒp/	ሻፕ	/ʃɒp/	No change

The above table shows that direct imported with minimal or no change in the sound structure. For instance, shop /ʃɒp/ in English remains the same ሻፕ /ʃɒp/ in Tigrinya because it already fit the (C)V(C) syllable structure of Tigrinya perfectly. They don't need to be changed.

In addition to this, the sound /ʌ/ becomes /a/ which is the only the vowel changes slightly (/ʌ/ → /a/), which is a very common and minimal substitution.

## 4.2. Morphological Adaptation Analysis

The billboard data confirm that Tigrinya integrates English loanword through multiple morphological pathway:

### 4.2.1. Free Morpheme Borrowing

The core finding of the morphological analysis is that individual English loanwords are imported into Tigrinya and treated as unanalyzed, monomorpheme entities within the Tigrinya system. This means that the internal morphological structure of the source word

(e.g., roots, stems, and affixes) is disregarded. The borrowed word is absorbed as a single, indivisible unit or "chunk" of meaning. This is called free morpheme borrowing.

**Table 11: lexical borrowing**

English words	IPA	Borrowed Tigrinya words	IPA	Morphological adaptation	
				Free morpheme	Bound morpheme
Academy	/ə'kædəmi/	<b>አካዳሚ</b>	/ʔakadami/	Yes	No
Group	/gɹu:p/	<b>ግሩፕ</b>	/girup/	Yes	No
Online	/'ɔn,lain/	<b>ኦንላይን</b>	/ʔɔnlajn/	Yes	No
Ambassador	/æm'bæsədər/	<b>አምባሳደር</b>	/ʔambasader/	Yes	No
Juice	/dʒu:s/	<b>ጅስ</b>	/dʒus/	Yes	No
Electric	/ɪ'lektɪk/	<b>ኤሌክትሪክ</b>	/ʔelektirik/	Yes	No
Clinic	/kɪnɪk/	<b>ክሊኒክ</b>	/kilinik/	Yes	No
Bank	/bæŋk/	<b>ባንኪ</b>	/baŋki/	Yes	No
House	/haʊs/	<b>ሃውስ</b>	hawis	Yes	No
Grocery	/'gɹəʊsəri/	<b>ግሮሰሪ</b>	/girɔseri/	Yes	No

Apparent affixes, such as initial /ʔ/, middle /i/, and the final /-i/ in /ʔɔnlajn/ (online), /kilinik/(clinic), and /baŋki/ ('bank'), are conclusively analyzed as epenthetic consonant and vowels inserted for phonotactic reasons (to remove vowel initial and to resolve the illicit initial and final cluster), is not as genuine Tigrinya morphological markers. Why because no inflectional examples were found within the billboard corpus where English borrowings were inflected for native Tigrinya grammatical categories such as case, number, or gender. Similarly, derivational affixes participation in Tigrinya derivational processes (e.g., affixation with native morphemes to form agentive nouns or other derived forms) was not observed, but simply there is free lexeme borrowing.

This clear dissociation indicates a temporal hierarchy in integration: phonological integration is immediate and systematic, driven by the imperative of pronounce ability, whereas morphological integration is a subsequent, diachronic process that requires the loanword to

be decomposed into constituent morphemes and enter the productive grammar of the recipient language.

#### 4.2.2. Hybrid borrowing

Language contact, particularly in contexts of globalization and technological advancement, invariably leads to lexical borrowing. A salient outcome of such contact is hybrid borrowing (or loan blends), a process wherein a new lexical unit is formed by combining a loanword from a donor language with a native word from the recipient language (Haspelmath, 2009). English lexical item is integrated into a native Tigrinya syntactic structure. This entails the fusion of native and foreign morphemes into a single lexical or phrasal unit. This process results in expressions that are neither fully native nor fully foreign but a structural amalgam of both. The following table presents the core data for analysis, showcasing the hybrid compound, and its constituent parts.

**Table 12: hybrid borrowing**

Expressions on	English word	Tigrinya word	Gloss
billboards			
ኣንበሳ ኢንተርናሽናል ባንኪ	International, bank	ኣንበሳ /ʔanbəsa/	‘Lion’
ስኒ ዩኒየን	Union	ስኒ /sini/	‘Tooth’
ቤት ፐስታ	Post	ቤት /bet/	‘House’
ፍረ ኒው ፋሽን	New, fashion	ፍረ /fire/	‘Fruit’
ፎቶ ኮፒ ኣሰና	Photo, copy	ኣሰና /ʔaləna/	‘We have’
ዘመናዊ ዲዛይን ስፌት	Design	ዘመናዊ ስፌት /zəməṇawi sifet/	‘Modern sewing’
ወደዘራዘር ፋሽን	Fashion	ወደዘራዘር /wəzərazr/	‘Pretty’
ፎቶን ዲጂታል ሓወስቲ	Photo, digital	ሓወስቲ /hawəlti/	‘Obelisk’
መደሓኒት መደበር ሪሊፍ	Relief	መደሓኒት መደበር /məðhanit mədəbər/	‘Drug, shop’
ትምህርቲ ማጂክ ካርፐት	Magic, carpet	ትምህርቲ	‘Education’

		/timhɪrti/	
ቤት ጽማቅ ስርጋኒክ	Organic	ቤት ጽማቅ /bət s'imax/	'House juice'

The data, drawn from billboard expressions, demonstrates a strategic integration of English lexical items with native Tigrinya morphemes and syntactic structures. Both native and foreign materials appear side by side in one lexical or phrasal unit. It is the combination of parts of a borrowed form with native material, creating a mixed lexical item based on the word order or grammar of the receiver language, Tigrinya. This process facilitates the introduction of modern, global concepts while simultaneously anchoring them within the indigenous linguistic and cultural framework, illustrating a dynamic interplay between language contact, semantic specificity, and cultural identity. Example: “**አንበሳ ኢንተርናሽናል ባንክ**” (Anbesa International Bank). The native word “Anbesa” (lion) is blended with the borrowed phrase International Bank to create a unique institutional name.

The data reveals two primary structural patterns:

**Noun + Noun Compound:** This is the most common pattern, where a Tigrinya noun functions as a modifier for the borrowed English noun phrase. The structure follows the Tigrinya syntactic rule where the modifying element precedes the head noun.

Example: Anbesa (Modifier) + International Banki (Head Noun). This structure is analogous to native Tigrinya compounds and demonstrates the application of native grammar to foreign lexical items.

**Noun Phrase + Verb Phrase:** One example demonstrates a move beyond nominal compounding to a full clausal structure.

Example: Photo Copy (Borrowed Noun Phrase as object) + Alena (Native Verb Phrase; "we have"). This constructs a complete declarative sentence common in advertisement discourse, meaning "We have photo-copying services."

### 4.2.3. Compound Formation

Compound formation occurs when a foreign word combines with a native element lexical item to form a new compound Haugen, (1950). Borrowed English words combine with a Tigrinya lexical items to form a new compound, following the native Noun + Noun or noun + adjective pattern.

**Table 13: compound formation**

Expressions on	English word	Tigrinya word	Gloss
billboards			
<b>ቤት ፐስታ</b>	Post	<b>ቤት</b> /bet/	‘House’
<b>ቅዱስ ሚካኤል</b> <b>ላውንደሪ</b>	Laundry	<b>ቅዱስ ሚካኤል</b> /xidus miki?el/	‘St. mikael’
<b>ዘመናዊ ዲዛይን ስፊት</b>	Design	<b>ዘመናዊ</b> <b>ስፊት</b> /zəməṇawi sifet/	‘Modern sewing’
<b>መድኅኒት መደበር</b> <b>ሪሊፍ</b>	Relief	<b>መድኅኒት መደበር</b> /mədħanit mədəbər/	‘Drug, shop’
<b>ማእከል ቋንቋ ዩኒክ</b>	Unique	<b>ማእከል ቋንቋ</b> /maʔkəl x <sup>w</sup> anx <sup>w</sup> a	‘Center language’
<b>ኒያላ ሆቴል</b>	Hotel	<b>ኒያላ</b> /niyala/	‘Name of animal’

The borrowed English word combines with a native Tigrinya element lexical item to form a new compound. This is morphological process of word formation, but not full phrase. For example, “**ቤት ፐስታ**” (Bet posta, “Post Office”) illustrates a prototypical loan compound, in which the borrowed Posta is integrated with the native Bet (“house”) to yield a culturally and semantically transparent unit. The borrowed item is slotted into an existing native morphological template and the compound word “**ዘመናዊ ዲዛይን ስፊት**” (Zemenawi Design Sfet, Modern Design Sewing) similarly demonstrates the embedding of the English design within a Tigrinya compound structure.

#### 4.2.4. Coinage

Coinage denotes the creative innovation of new lexical items through the recombination of borrowed and native material, frequently motivated by the stylistic and commercial imperatives of advertising discourse. Haspelmath, (2009) views coinage occurs where borrowed lexemes are repurposed for modern branding. English borrowed words are mixed with native elements to achieve stylistic or semantic novelty, especially in advertising.

**Table 14: coinage**

Expressions on billboards	English word	Tigrinya word	Gloss
አንበሳ ኢንተርናሽናል ባንክ	International, bank	አንበሳ /ʔanbəsə/	‘Lion’
ፍረ ኒው ፋሽን	New, fashion	ፍረ /firə/	‘Fruit’
ወይዘራዝር ፋሽን	Fashion	ወይዘራዝር /wəyzərəzɪr/	‘Pretty’

Unlike mere compounds, coinages often involve semantic re-interpretation or playful adaptation. Furthermore, coinage emphasizes semantic or stylistic creativity and newness, not just structural combination. The new term may carry a figurative or symbolic meaning beyond its literal sense. For example, “ፍረ ኒው ፋሽን” (Fre New Fashion) exemplifies coinage in that the Tigrinya word *fre* (literally “fruit/fresh”) is semantically extended to evoke “freshness” in the sense of novelty, which is then paired with the borrowed *fashion*. “ወይዘራዝር ፋሽን” (Weyzerazer Fashion) similarly fuses the Tigrinya adjective *weyzerazer* (“pretty, attractive”) with the English *fashion*, producing a coined expression designed to appeal to consumers.

#### 4.2.5. Loan Creation or semantic extension

Loan creation happens when borrowed foreign words are introduced but given new, localized meanings that differ from their source. Loan creation refers to semantic extension when borrowed words develop meanings unique to the recipient language Weinreich (1968). Borrowed English words are integrated but its meaning is shifted or narrowed to fit a new, local context.

**Table 15: loan creation**

Loan word	Original meaning	Meaning in Tigrinya
ግሮሰሪ /gɪrɒsəri/	grocery store or retail food stuff	Small shop or kiosk
ባንክ /banki/	Bank institution	Money exchange

ፎቶ /foto/	Photo	photography studio
ሆቴል /hotel/	strictly lodging places	both restaurants and guesthouses

The above words show the introduction of English borrowings that undergo semantic adaptation within the Tigrinya context, resulting in locally specific new or narrowed meaning. This is semantic change (extension or narrowing) rather than structure. For example, the borrowed word “ግሮሰሪ” (grocery) is frequently employed in reference to small neighborhood shops or kiosks, diverging from the broader English usage of “grocery store.” Similarly, “ባንክ” (banki) is at times used in billboard discourse to denote money exchange services rather than formal full banking institutions, reflecting semantic narrowing and contextual adaptation. These borrowed words are not combined with native material but reinterpreted.

## CHAPTER FIVE

### FINDING AND DISCUSSION

This chapter provides a summary of the major findings and discussions

#### 5.1. Findings

The study was designed to analyze how English borrowed words appearing on Tigrinya billboards are phonetically and structurally adapted to fit the native linguistic system. The data were analyzed through the integrated theoretical approach: typological lens of Betz (1959) and the adaptive framework of Duckworth (1977), and Optimality Theory Prince & Smolensky, (1993) theory of borrowing. The research focused on two key aspects: phonological and morphological adaptation.

The predominant borrowing mechanism observed is lexical importation. However, this is not a mere wholesale adoption. The data compellingly illustrate that importation is almost invariably accompanied by a systematic process of phonological adaptation, a recalibration of the source language's phonetic substance to align with the phonotactic and phonemic constraints of Tigrinya. This finding positions the borrowing process not as one of passive reception, but of active phonological restructuring.

The phonological analysis uncovers a suite of highly regular, predictable processes, indicative of a rule-governed adaptive grammar. These processes function as repair strategies for phonological "ill-formedness" from the perspective of the Tigrinya phonological system. This is evidenced by several categorical processes:

**Systemic Vowel Substitution:** The Tigrinya vowel inventory less proliferates than that of English, acts as a selective filter. Non-native vowels are mapped onto the nearest native phoneme. The English near-open front vowel /æ/ is categorically realized as the open front vowel /a/ (e.g., fashion /'fæʃən/ → “ፋሽን” /faʃən/). The central vowels, particularly the schwa /ə/ is unstable in adoption and is consistently replaced by full vowels, typically /a/. (e.g., specialty /'spɛʃəlti/ → “ስፕሻሊቲ” /ʔispeʃaliti/), effectively eliminating vowel reduction, a pervasive feature of English prosody that is alien to Tigrinya. The complex vocalic nuclei of English (diphthongs) are systematically simplified to conform to Tigrinya's preference for monophthongal syllables. This process is known as monophthongization. This is evident in shifts such as /əʊ/ → /o/ (photo /fəʊtəʊ/ → “ፎቶ” /fotə/) and /aɪ/ → /j/

(skylight /'skarlait/ → “ስካይላይት” /ʔiskajlajt/), where the diphthong is reanalyzed as a vowel-glide sequence, a structure more congruent with the Tigrinya syllabic template.

**Consonantal Replacement:** English consonants absent from the Tigrinya phonemic inventory are substituted by the closest available native counterpart. The most consistent substitution involves the English alveolar approximant /ɹ/, which is invariably realized as the Tigrinya alveolar trill /r/. Furthermore, the voiced post-alveolar fricative /ʒ/ is consistently adapted as the voiced post-alveolar affricate /dʒ/ (e.g., garage /gə'ɹɑ:ʒ/ → “ጎራጅ” /garadz/), a process that can be interpreted as fortition (strengthening), aligning with cross-linguistic tendencies in loanword adaptation (Kang, 2011).

**Epenthesis as a Phonotactic Repair Strategy:** The most statistically frequent adaptive process is epenthetic vowel insertion, a direct response to the stringent Tigrinya syllabic structure that disperses complex consonant clusters (Daniel, 2004). An insertion vowels, predominantly the central vowel /i/ and add glottal stop /ʔ/ with the central vowel /i/ or the high front vowel /i/, are inserted to break impermissible clusters, both word-initially (e.g., sport /spɔ:ɪt/ → “ስፖርት” /ʔisport/) and word-finally (e.g., bank /bæŋk/ → “ባንክ” /baŋki/). This process ensures every syllable conforms to the canonical (C) V (C) pattern.

**Prothesis and Prosodic Neutralization:** A prophetic glottal stop /ʔ/ is obligatorily inserted before vowel initial words to satisfy the Tigrinya constraint requiring a consonantal onset for all syllables (e.g., academy /ə'kædəmi/ → “አካዳሚ” /ʔakadami/). Additionally, the phonemic vowel length distinctions of English are neutralized; long vowels are changed to plain to fit the Tigrinya system where length is not phonemic (e.g., group /gɹu:p/ → “ግሩፕ” /girup/).

The morphological analysis reveals a clear hierarchy of borrowing strategies, from direct importation to more creative adaptations, with a notable dissociation between phonological and morphological integration at the word level.

**Lexical Importation (Loanwords):** The predominant strategy is the borrowing of free morphemes without structural change even Tigrinya has its own words to express the concept beyond phonological adaptation. Borrowed words are treated as unanalyzed, monomorphemic entities and show no evidence of inflection for native Tigrinya grammatical categories (e.g.,

case, number) within the corpus. Apparent affixes are epenthetic vowels, not genuine morphological markers (e.g., the /-i/ in /baŋki/ is phonotactic, not inflectional).

Hybrid Formation (Loan Blending): A highly productive strategy is the formation of hybrid compounds, where an English lexical item is integrated into a native Tigrinya syntactic structure. For example, “**ቤት ፖስታ**” (**post office**)

Loan Creation and Semantic Extension: The analysis identified instances of loan creation, where borrowed words acquire new, localized meanings that diverge from their source semantics. For example, “**ግሮሰሪ**” (grocery) refers specifically to a small shop or kiosk, and “**ባንክ**” /banki/ can denote a money exchange service, representing a semantic narrowing within the Tigrinya context.

Coinage: The creative innovation of new terms for branding purposes was observed, often involving the semantic extension of Tigrinya words combined with English borrowings, such as “**ፍረ ኒው ፍሽን**” (Fre New Fashion, lit. "Fruit New Fashion"), where fre evokes "freshness."

## 5.2. Discussion

The findings necessitate a discussion that moves beyond mere description to engage with broader theoretical implications in contact linguistics, sociolinguistics, and language policy.

The systematicity of the adaptive processes provides compelling evidence for the operation of a language-specific phonological filter (Peperkamp & Dupoux, 2003). The Tigrinya linguistic system does not passively accept foreign phonological material; it actively perceives and (re)produces it through the constraints of its own phonology. The categorical nature of substitutions (/æ/ → /a/, /ɪ/ → /i/) and the predictability of epenthesis indicate that these are not performance errors but are reflective of the underlying grammatical imperative to render illicit structures pronounceable within the recipient language's phonology. This can be effectively modeled within an Optimality Theory (OT) framework (Prince & Smolensky, 1993), where markedness constraints specific to Tigrinya (e.g., onset, no-coda, complex-coda) are highly ranked, dominating faithfulness constraints that would preserve the source language's form. The systematic neutralization of vowel length and diphthongs further

underscores the comprehensive nature of this phonological recalibration, extending to suprasegmental features.

Morphological integration, however, requires the word to be reanalyzed as a set of morphological constituents within the recipient language, a process that occurs over time and through frequent use in varied grammatical contexts. The billboard corpus, representing a specific and often deliberately foreign-looking register, captures these words in a preliminary, preassimilated state.

The coexistence of nativized and unadapt forms cannot be explained by structural factors alone; it demands a sociolinguistic interpretation. The resistance to nativization in words like bus and shop is an act of metalinguistic signaling (Jaworski & Thurlow, 2010). By retaining the English pronunciation, name creators index values such as modernity, sophistication, and global connectedness. This practice, often termed "linguistic emblemization," uses the foreign form as a symbolic resource to construct a specific brand identity. This finding corroborates and refines the work of Ayalew (2018) and Tekle (2018), demonstrating that the linguistic landscape is not just a reflection of language contact but an active site for the performance of social identity.

This dual strategy creates a diglossic like tension within the linguistic landscape. While nativized forms like /garadz/ are accessible to the wider Tigrinya-speaking populace, unadapt forms or hybrid borrowing (e.g., in “ፎቶ ኮፒ” /fɒtɒ kɒpi/ “አለና” /ʔaləna/ meaning we have photo copy) may present significant barriers to intelligibility for monolinguals or those with limited English proficiency. This raises critical questions about linguistic equity and public communication. The documented lack of standardization leads to inconsistency, potentially fostering confusion and alienating segments of the public. This empirical evidence provides a robust foundation for language policy interventions, underscoring the urgency of the recommendations put forward by organizations like UNESCO (2005) and Infoterm (2005) for developing coherent terminology policies that balance innovation with inclusivity.

This study suggests that a comprehensive model of borrowing in linguistic landscapes must integrate both formal linguistic and sociolinguistic perspectives. The structuralist perspective (e.g., Betz, Duckworth) effectively explains the how of adaptation the predictable phonological rules. The sociolinguistic perspective is essential to explain the why of non-

adaptation the symbolic capital associated with certain unaltered forms. The Tigrinya data illustrates that these are not competing but complementary forces: the default, rule governed process is phonological nativization, but this can be deliberately suspended for specific lexemes in specific contexts to achieve particular social indexicality.

In conclusion, the phonological and morphological landscape of English borrowings in Tigrinya organizational nomenclature is a testament to the dynamic interplay between deep-seated linguistic structures and surface level social strategies. It reveals a language that is simultaneously resilient, systematically adapting foreign words to its own core grammar, and permeable, allowing a stratum of unassimilated forms to function as sociolinguistic markers. This complex reality challenges purist language ideologies and highlights the need for nuanced, evidence-based approaches to language planning in an increasingly globalized world.

The findings align with previous studies that suggest urban environments tend to adopt English borrowings with little to no modification (Abraha, 2022; Gebremedhin, 2015). The predominance of the importation borrowing type demonstrates a linguistic trend in which English words are integrated into Tigrinya commercial language by mixed with Tigrinya words.

The analysis demonstrates that English borrowings in Tigrinya are predominantly importation as loanwords in Betz's (1959) terms, with minimal semantic alteration morphologically but clear phonological and occasional morphological adaptation. Following Duckworth's (1977) framework, these adaptations are systematic: vowel substitutions to nearest equivalents, schwa replacement, consonant cluster simplification through epenthesis or epenthetic vowel insertion to conform to Tigrinya syllable structure, and consonant substitution are the most common strategies. Beyond their structural classification, the hybrid compounds serve a crucial pragmatic function. The combination of a Tigrinya element (e.g., “አንበሳ” /'anbesa/, 'lion') with an imported English term (e.g., 'International Bank') performs an act of semantic and cultural localization. The native element grounds the foreign concept in a local cultural framework, making it more familiar and resonant to the target audience. This strategy effectively bridges the global (the international bank) and the local (a powerful cultural symbol), demonstrating a sophisticated negotiation of identity within the linguistic landscape.

However, the addition of vowels and glottal consonant showed Tigrinya phonotactics, with further inflectional changes occurring only after full assimilation into the language.

These patterns support the importation model proposed by Betz (1959), where foreign terms are integrated into the recipient language with minimal change. While this practice can enrich the vocabulary of Tigrinya, it also introduces the risk of linguistic dilution and reduced accessibility for speakers who are not familiar with English.

Overall, the discussion emphasizes that while English borrowings add perceived value to commercial identities; they can also disrupt linguistic norms and create communicative barriers. This underscores the need for greater linguistic awareness and potential regulation regarding public language use in Tigrinya-speaking areas.

## CHAPTER SIX

### CONCLUSION AND RECOMMENDATIONS

This chapter presents the conclusion and recommendations of the study based on key findings to present a conclusive summary and deriving a set of targeted, actionable recommendations. The conclusions are drawn from the systematic phonological and morphological analysis of English borrowings in Tigrinya organizational nomenclature, while the recommendations are formulated to address the identified linguistic, communicative, and policy-oriented challenges.

#### 6.1 Conclusion

This study has undertaken a rigorous examination of the phonological and morphological processes governing the integration of English loanwords into Tigrinya, specifically within the domain of public billboard nomenclature in Mekelle. The investigation, grounded in empirical data from Mekelle linguistic landscape, culminates in several definitive conclusions that contribute to the broader understanding of language contact, lexical borrowing, and linguistic change in a globalized urban context.

The primary conclusion is that the integration process is predominantly phonologically motivated and highly systematic. The Tigrinya linguistic system does not passively absorb foreign lexicon; rather, it actively filters English words through its own inherent phonotactic and phonemic constraints. The analysis demonstrates a suite of predictable, rule-governed adaptive processes:

**Systemic Phonemic Substitution:** Non-native English vowels and consonants are consistently mapped onto the nearest Tigrinya equivalents (e.g., /æ/ → /a/, and /ɹ/ → /r/), illustrating the primacy of the recipient language's phonemic inventory.

**Structural Repair through Epenthesis:** The insertion of vowels, predominantly /i/ or /i/ is the most frequent strategy to resolve illicit consonant clusters, ensuring strict adherence to Tigrinya's canonical consonant-vowel or consonant-vowel-consonant syllable structure. Prothesis (e.g., glottal stop insertion for vowel-initial words) further underscores this phonotactic enforcement.

Prosodic and Suprasegmental Neutralization: English diphthongs are systematically monophthongized, vowel length distinctions are neutralized, and stress patterns are recalibrated to align with Tigrinya's prosodic norms, effectively eliminating features alien to the native phonological system.

Second, and central to this inquiry, are the conclusions regarding morphological adaptation, which reveal a complex and stratified landscape:

Morphological Stasis at the Lexical Level: A paramount finding is the clear dissociation between phonological and morphological integration. Borrowed words are overwhelmingly treated as unanalyzed, monomorphemic entities. They undergo mandatory phonological nativization but exhibit a conspicuous absence of inflection for native Tigrinya grammatical categories (e.g., case, number, gender) or participation in derivational processes. Apparent suffixes are conclusively analyzed as epenthetic vowels motivated by phonotactics (e.g., the final /-i/ in /baŋki/), not genuine morphological markers. This indicates that full morphological assimilation is a subsequent, diachronic process not yet realized for these recent borrowings, which remain as fossilized "islands" within the lexicon.

Productivity at the Phrasal and Compound Level: Conversely, significant morphological activity is observed not within the loanwords themselves, but in their external deployment within native syntactic and morphological frameworks. The highly productive strategy of hybrid compounding (e.g., “አንበሳ ኢንተርናሽናል ባንክ”, Anbesa International Bank) demonstrates the resilience of Tigrinya grammar, which provides the structural templates into which foreign lexemes are slotted. This process aligns with Duckworth's (1977) category of partial substitution and represents the primary method of integrating borrowed concepts into a relatable cultural framework.

Strategic Use of Advanced Borrowing Techniques: Beyond compounding, the corpus reveals the use of more sophisticated morphological strategies, albeit less frequently. Loan creation or semantic extension (e.g., “ግሮሰሪ” (grocery) referring to a small kiosk) illustrates the dynamic reassignment of meaning to borrowed terms within the recipient language's semantic system. Instances of coinage (e.g., “ፍረ ኒው ፋሽን”, Fre New Fashion) further highlight the creative, agentive role of language users in blending native and foreign elements for novel branding purposes.

A third, crucial conclusion is that the stark dissociation between phonological and morphological integration. At this stage of borrowing, particularly in the curated context of billboards, loanwords are treated as unanalyzed, monomorphic entities. There is scant evidence of derivational or inflectional morphology applying to these borrowings. What may appear to be suffixation is, upon closer analysis, typically a phonotactically motivated epenthetic vowel rather than a genuine morphological marker. This finding supports a staged model of lexical assimilation where phonological nativization is a prerequisite for subsequent morphological integration, which occurs only through deeper and more varied usage in the language.

Fourth, the study concludes that the linguistic landscape is stratified and sociolinguistically charged. Alongside the nativized forms exists a significant stratum of loanwords imported with minimal phonological alteration even Tigrinya contains words that substituted them (e.g., gym, shop, market, digital). This resistance to adaptation is not arbitrary but serves a metalinguistic function. The retention of English forms functions as an emblem of modernity, global connectivity, and prestige, a symbolic resource leveraged for brand identity construction. This creates a diglossic-like tension within the public sphere, where accessibility for the wider Tigrinya-speaking populace may be compromised for the sake of symbolic capital.

Finally, the pervasive and unregulated use of these borrowings, often where Tigrinya equivalents exist or could be coined, highlights a significant challenge to linguistic standardization and functional clarity. The absence of a coherent policy leads to inconsistency, potential communicative barriers, and a gradual erosion of the language's functional domains in public life. Thus, the phenomenon is not merely a linguistic curiosity but a pressing sociolinguistic issue with implications for language vitality, equity of access to information, and cultural sovereignty.

In essence, the Tigrinya linguistic landscape, as reflected in its billboards, is a testament to a language at a crossroads: it is simultaneously resilient, systematically adapting foreign material to its core grammar, and permeable, allowing a layer of unassimilated forms to function as sociolinguistic markers of a globalized identity.

## 6.2 Recommendations

Based on the foregoing conclusions, this study proposes the following multipronged recommendations aimed at stakeholders in academia, government, and commerce. These are designed to foster linguistic pride, ensure communicative clarity, and guide the conscious development of the Tigrinya language.

Language Planning and Policy Institutions (Tigray Language Academy, Culture and Tourism Bureau) should develop and formalize a terminology policy because there is an urgent need for a comprehensive terminology policy that provides clear guidelines for lexical borrowing. This policy should outline preferred strategies (e.g., favoring loan translation or creation over direct importation where possible) and establish mechanisms for the official coinage and standardization of new terms, especially in high-domains like commerce and technology.

The Tigray Culture and Tourism Bureau should conduct workshops and awareness programs for entrepreneurs, advertising agencies, and business owners. These campaigns should educate them on the impact of their linguistic choices, emphasizing the value of using accessible, standardized Tigrinya names to connect with the broader public and preserve cultural heritage. In addition to this they should approve an online Tigrinya database terms for develop and maintain common concepts in business, services, and technology. This living resource would serve as a practical guide for naming new enterprises and reduce reliance on ad-hoc English borrowings.

The Government and Regulatory Bodies should enforce signage regulations. The Municipal authorities in Mekelle and other Tigrinya speaking urban centers should introduce regulations that encourage or mandate the use of Tigrinya as the primary language in public signage and organizational names. This is not to prohibit English outright but to ensure that Tigrinya has prominence and that any foreign terms used are properly glossed or explained, and incorporate the use of standardized Tigrinya nomenclature into business licensing requirements or offer tax incentives to organizations that adopt officially endorsed Tigrinya names, thereby linking linguistic practice to economic benefit.

Future researchers (Linguists) should move beyond the billboard corpus to investigate the morphological behavior of established loanwords in spoken Tigrinya discourse. Longitudinal studies tracking how words like video (→ vidyonya) acquire native morphology would

provide invaluable insights into the later stages of assimilation. Moreover, conduct large-scale surveys and interviews to understand the attitudes of Tigrinya speakers towards borrowed versus native terms are needed. This would help determine whether the use of English is driven by producer preference, perceived consumer demand, or a lack of accessible alternatives. Academic institutions should support large-scale lexicographical projects focused on modern terminology. This involves not only documenting borrowings but also actively engaging in the creative work of term formation using Tigrinya's own rich morphological processes (compounding, derivation, etc.).

The private sector and business owners should be encouraged to see the strategic value in unique, Tigrinya language brand names that resonate with local identity and history, rather than defaulting to generic English terms. This can be a powerful differentiator in the market. Even borrowing is deemed necessary; businesses should strive to use forms that have undergone phonological nativization to ensure they are intelligible to the widest possible audience, thus fulfilling the primary communicative function of a public sign.

In summary, the goal of these recommendations is not to stifle linguistic innovation or contact but to manage it consciously. By adopting a proactive and coordinated approach, stakeholders can ensure that the evolution of Tigrinya in the face of globalization is guided by principles of clarity, accessibility, and cultural authenticity, thereby safeguarding its vitality for future generations.

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Appendix















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