

CHAPTER I

INTRODUCTION

Information technology and online review platforms are advancing the global movement toward sustainable development, especially through the adoption of the Sustainable Development Goals (SDGs) (Küfeoğlu, 2022). While facing significant challenges such as climate change, pollution, and resource scarcity, the SDGs serve as a guide to steer actions toward more sustainable practices. Therefore, SDG 12 provides a framework that emphasizes the importance of transitioning to sustainable consumption and production patterns (Castellano et al., 2024).

SDG 12 focuses on sustainable consumption and production patterns, which are at the root of the triple planetary crisis (climate change, pollution, and biodiversity loss) (Martínez-Acosta et al., 2023). The Implementation of SDG 12 is important for protecting the well-being of current and future generations, especially as resources become increasingly scarce and the global population continues to grow (United Nation, 2023). However, the implementation of SDG 12 still reveals that many countries face challenges in formulating and producing indicators (Chan et al., 2018).

Understanding the context of SDG 12 based on its indicators is important for evaluating progress toward sustainable consumption and production. This study examines the public discourse surrounding SDG 12, specifically exploring sustainable practices and the emotional traits associated with them. Using Natural Language Processing (NLP), public conversations related to SDG 12 can be analyzed in depth to capture meaning, patterns, and context in human language. This analysis identifies key issues such as resource management, waste reduction, and emotional traits from global discussions, thus providing more targeted insights to support the implementation of SDG 12.

Several studies on SDG 12 have primarily focused on individual issues, such as production efficiency, waste management, and resource consumption. Some studies also highlight the importance of improving resource efficiency in production and distribution processes, as well as reducing environmental impacts

through circular economy approaches (Castellano et al., 2024; Jacob-John et al., 2021; Martin et al., 2024). Although various strategies have been introduced, a gap remains in understanding the broader relationships among different types of unsustainable consumption and production practices (Martin et al., 2024).

Past research has primarily focused on technical aspects and individual issues, neglecting the importance of public discourse surrounding SDG 12. Public discourse is explored through user-generated content on social media, including reviews and comments (Aditya et al., 2023). Nonetheless, there remains a significant gap in understanding how society engages with issues of sustainable consumption and production, particularly on digital platforms, which have emerged as key spaces for discussion.

This research seeks to identify and map issues associated with SDG 12 by utilizing BERT for text classification. The analysis draws on data from X and YouTube to examine how these issues are discussed in public discourse, categorizing them into predefined stages outlined in the study. Leveraging BERT facilitates accurate and contextual text classification, enabling the study to capture public perceptions and opinions on sustainable consumption and production through an experimental multi-stage classification framework (Aditya et al., 2023).