

## Introduction

Transparency in business operations has increased across industries as consumer demand for companies to share their sustainability practices has expanded<sup>[1]</sup>. Because of this, businesses have begun to reinvigorate earlier operational goals that involved actions to improve environmental protection, social equity, or economic stability to align with the three conceptual pillars of sustainability – economy, society, and environment<sup>[2]</sup>. Companies have started to integrate sustainability into their business models, endorsed these strategies, goals, and actions, and documented these efforts on their public websites<sup>[3]</sup>. Currently, there is no defined method for consolidating how sustainability is evaluated for public transparency across a range of businesses. If decision-makers had access to a standardized process for deciding where business operations align within the three conceptual pillars, it could play a key role in aiding the transition to sustainability and identifying where integration is lacking within the three pillars<sup>[4]</sup>.

## Purpose Statement

The purpose of this research is to build on a method used to visualize and quantify qualitative content related to sustainability. It provides an example of how framework analysis can aid in the development of the sustainability field and how content analysis can be operationalized to compare geographical and company differences in a dataset<sup>[5]</sup>. As such, this research assesses the extent to which businesses are engaging in practices across all sustainability dimensions.

## Site and Situation

Our research focused on Texas manufacturers from various food, beverage, and textile manufacturing. Of these firms, 66% are within the boundaries of Texas's four largest metropolitan statistical areas (MSAs; Fig. 1).

## Methods

We examined the websites of 164 manufacturers within Texas's four largest MSAs. The websites were from food, beverage, and textile manufacturing companies. We used framework analysis to pre-define themes relative to the three conceptual pillars of sustainability: "economic", "social", and "environment". We developed a codebook to guide our theme identification and used Atlas.ti to code mentions of sustainability practices found on manufacturers' websites. We exported the coded data to MS Excel for further analysis. We used descriptive statistics to describe the extent to which businesses are practicing sustainability. Finally, we plotted these quantifications on a ternary diagram for visual comparison relative to sustainability pillars and MSAs.

## Sustainability Practices Assessment

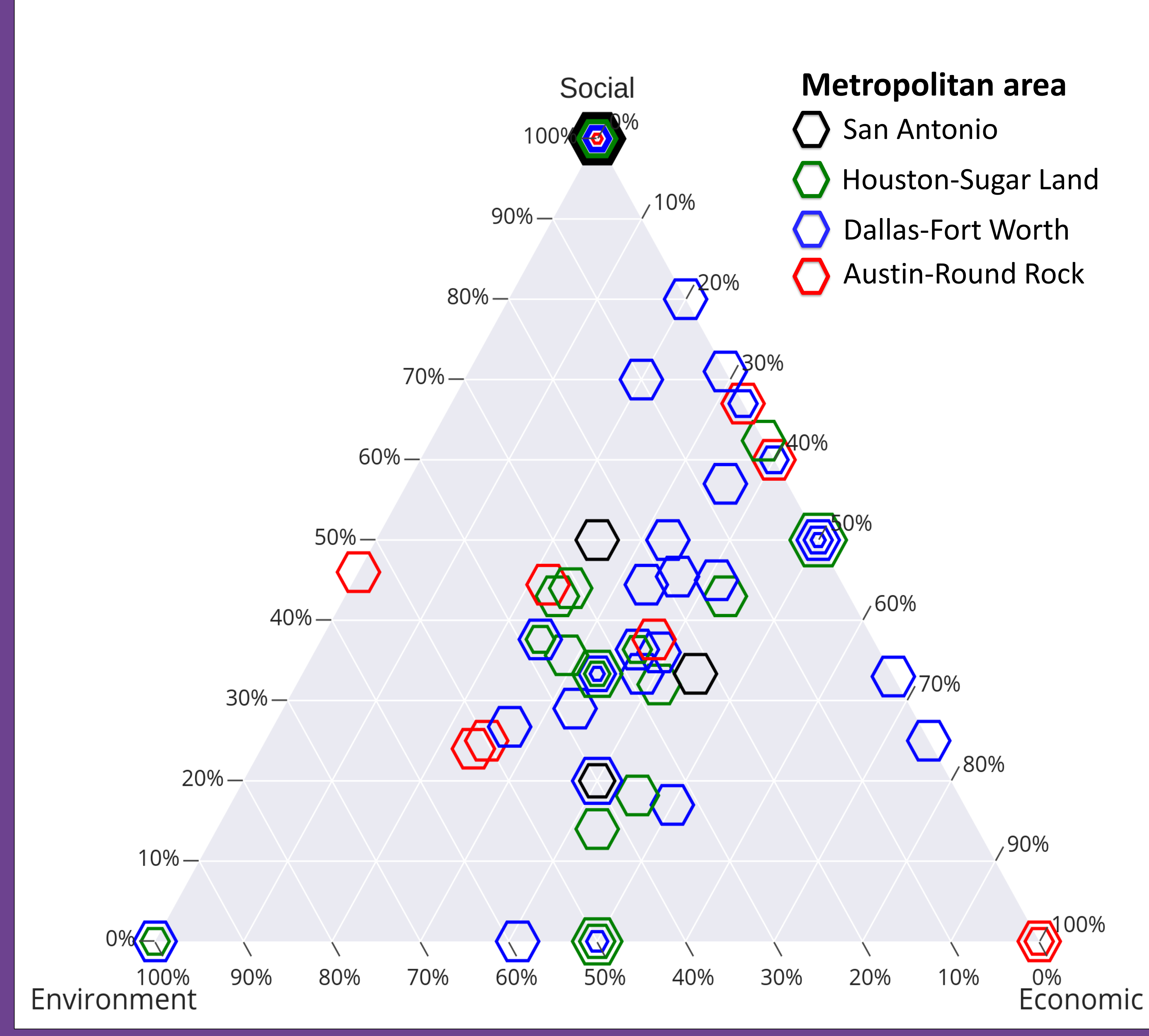


Figure 2. Visualization of sustainability pillars mentioned by manufacturers (n=74) on their websites by MSA.

## Study Area

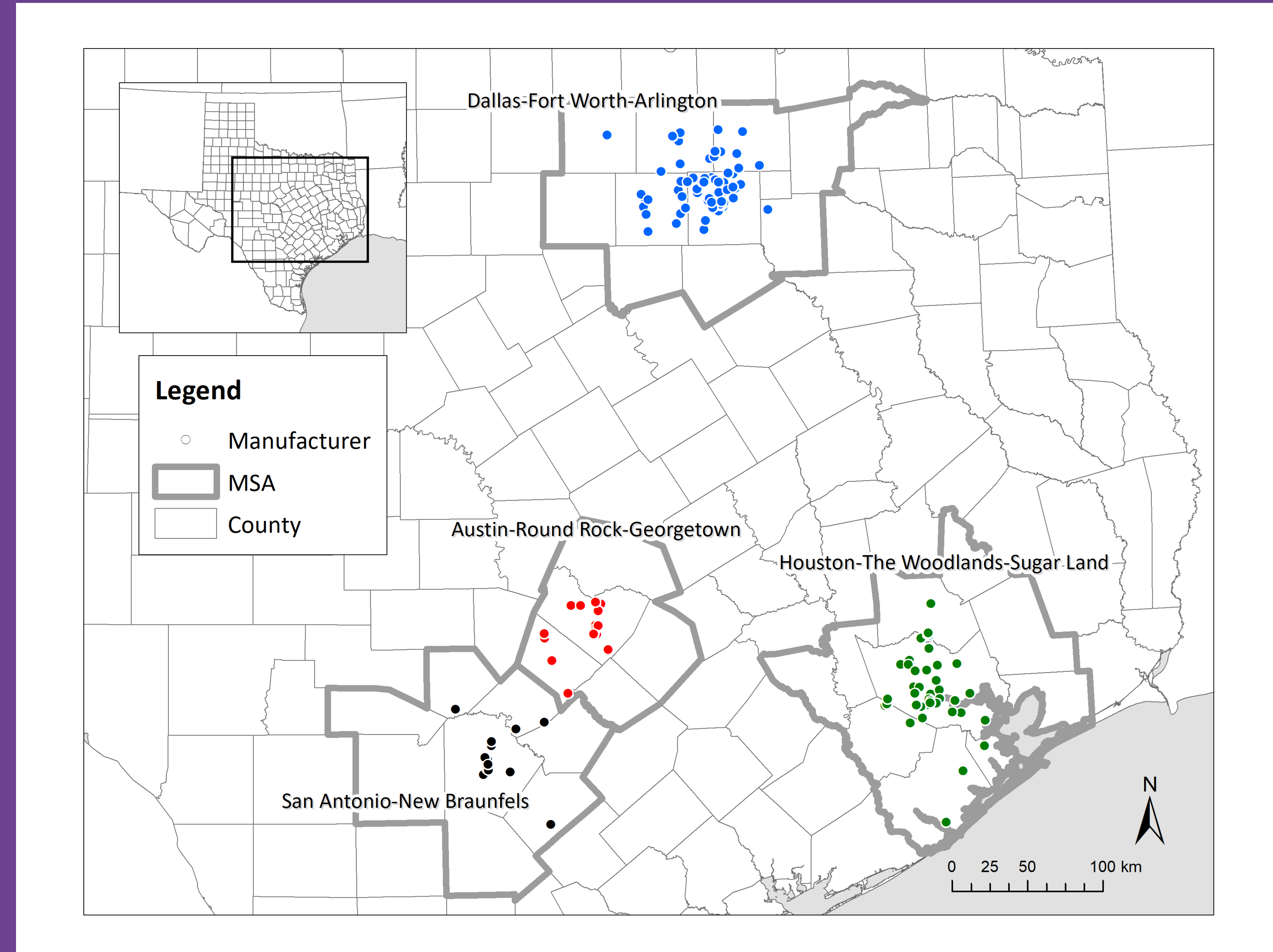


Figure 1. Location of municipalities with TPOs in major Texas MSAs.

## Descriptive Statistics

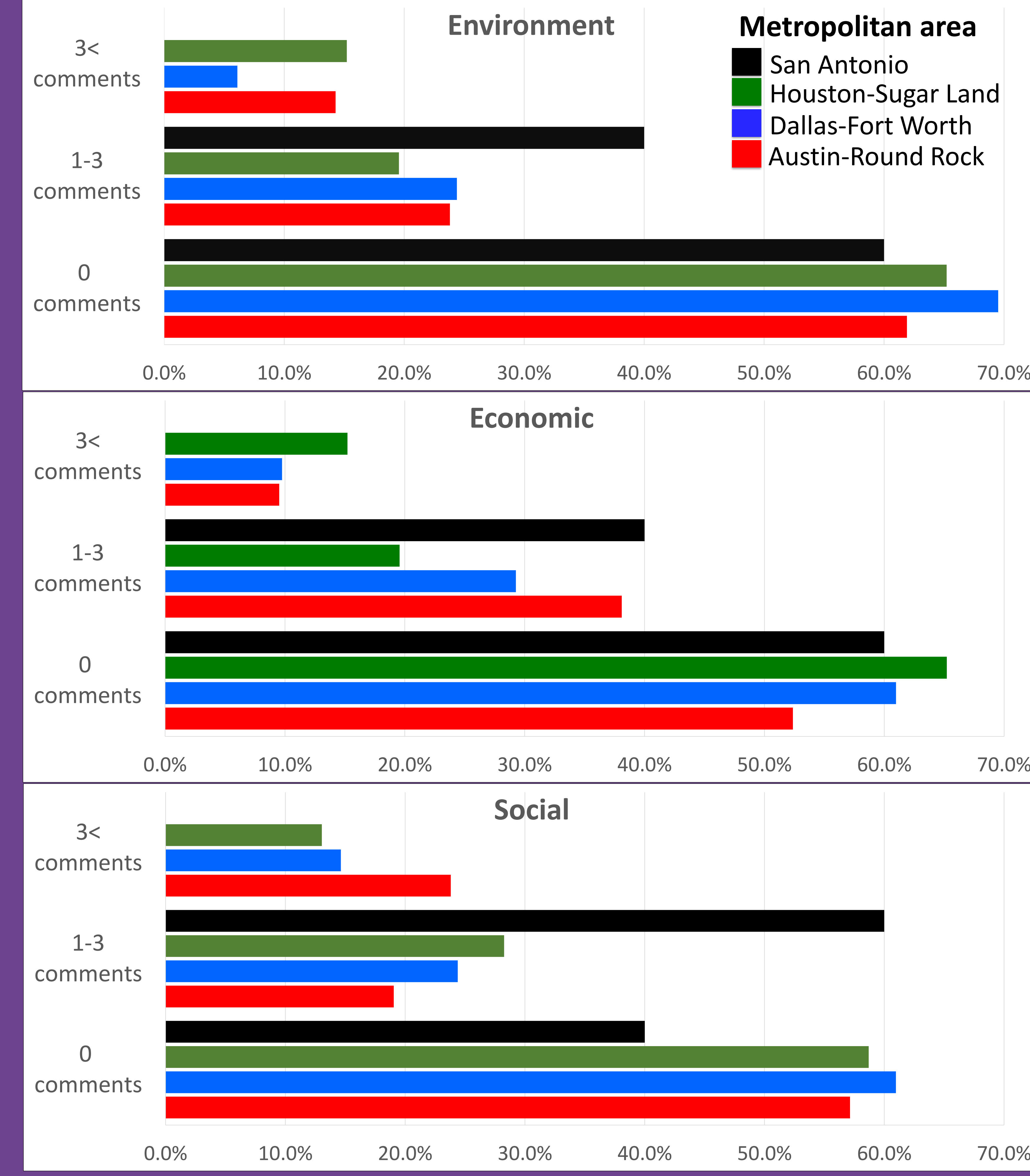


Figure 3. Mentions of sustainability practices on manufacturers' websites (n=164) by MSA.

## Conclusions

The results of this research show how location can influence manufacturers' sustainability efforts. Business location results in slight variations in sustainability uptake and focus. Dallas-Fort Worth and Houston area manufacturers tend to strike a balance across all three sustainability pillars, whereas approximately 70% of companies from San Antonio, who included sustainability content, focused only on social aspects (Fig. 2, 3). There was also a similarity in the limited content related to environmental sustainability. Of the 74 websites with sustainability content, 43% of these did not mention any environmental sustainability practices. Of all websites under review, 56% did not mention any sustainability content; this result was equally comparable across locations and industry. Taken together the results suggest that integration of sustainability practices remains nascent despite consumer demand for transparency and sustainability.