Overview

Women in the garment industry work under challenging conditions which may include long hours of work, low pay and physical abuse. As a result, improvement of the working conditions in the apparel industry has been the central goal of various social programs. One such program, Better Work Program (BWP), monitors the extent to which apparel factories in developing countries comply with international labor standards. To this end, workers are surveyed on a broad range of topics including working conditions, compensation and benefits, training opportunities and health status.

In this project, the focus was on geocoding the survey data collected in Vietnam. Data collection took place between January 2009 and April 2011. During data collection, 2501 workers from 76 factories in Southern Vietnam were interviewed (see the map below for the districts where the factories are located). Preliminary analysis of the survey data indicated that poor health was a substantial problem among the Vietnamese workers and their family members. With this consideration, efforts were made to geocode the survey data pertaining to health care access and visualizing the relevant results.

Methods

At the initial phase of the project, one of the principal investigators of the Tufts University Better Work Monitoring and Evaluation Project was contacted and permission was requested to use the survey data. After getting consent, a small dataset was created by extracting the relevant survey items from the main dataset.

The name of the district where each respondent’s factory was located was essential for the geocoding process. In cases where the existing addresses did not include the district names, an online search was made to acquire that piece of information. The district names and the matching district IDs used in administrative boundary shape files were entered as additional columns into the excel sheet where the responses to the survey items were recorded.

In the later phases of the data preparation, responses to the survey questions were aggregated to the district level. In other words, the responses of the participants working in the same district were grouped together and summed up. In the last step, aggregated data was transferred into the GIS software program by joining the tabular survey data with the point data for districts. Once the tabular data was imported, pie charts and graduated colors were used for mapping quantities.

Conclusion

In this project, the health care section of the Better Work surveys administered to Vietnamese apparel industry workers were geocoded. Additionally, the survey results pertaining to worker health were visualized. The project was helpful in building the skills to import survey data into a geographic mapping software. It is our hope that the present study would pave the way for more detailed analysis in the future that would shed light to the reasons as to why a significant portion of Vietnamese workers report health issues.