Unemployment Analysis: District 7, Boston.
Language and Job Training Opportunities for Unemployed and Youths.

Introduction

District 7 in Boston is now starting a new round of campaign for city councilor. The main issues on District 7 are:
- Economic: High rate of unemployment.
- Education: Low rate of educational attainment rate.

Small number of Language training programs.

For reference, the educational attainment rates in District 7 are lower than that of Boston and the United States as a whole. 25.42% of people have a high school diploma or less and 20.6% have a Bachelor's degree or higher in District 7. Meanwhile, unemployment rate in communities of color is twice that of the average level in the state as a whole.

Thus, this project firstly focused on the change (from 2000-2015) of the unemployment in general, which will give an overview about the changes of main issue both in Boston and District 7.

Then this project identified the current concentrated areas of 1). unemployment with the education attainment (under bachelor degree) and non-English speakers who have limited English spoken. 2). School Enrollment Rate in Grade 9-12 with non-English speakers who have limited English spoken. These concentrated areas would be the main places that need to be offered more helps. For example, providing job-training opportunities around those areas for those individuals or families to learn more new skills for 21-st centuries jobs, and improving English Language Training program around those youths. Based on the maps, this project will identify the following questions.

1). What’s the change of unemployment from 2000 to 2015?
2). Are District 7 in high accessibility of MBTA stops?
3). What’s the relationship between the current locations of those training program and the distribution of unemployment in different categories?

Change of Unemployment in Boston

Unemployment in 2000

Unemployment in 2015

Limitations

The datasets of Job Training Services and Language Training Programs are coming from Reference U.S.A. There might have some inaccurate locations. Also, those datasets might have some missing locations of present services or newer ones.

Current opportunities of Language and Job Training in D7, Boston

Current Job Training Service

For those unemployed person who both didn't get Bachelor Degree and with limited English

Current Language Training Service

For those youths who currently enrolled in High School, as well as those unemployed person who both didn't get Bachelor Degree and with limited English Spoken.

Methodology

The datasets included in this analysis was initially from MassGIS, the City OF Boston Open Data, the US Census Bureau and Reference U.S.A. The following steps were projecting, joining data and different variables, geocoding the service location, and mapping. The main tools that have been used were clipping, projecting, re-classing, select by Attributes, select by Locations and Buffer.

Conclusions

Based on the map of 2015, the darkest areas, which showed the highest unemployment percentages over 16 years in 2015 (unemployment rate >9.01%), were concentrated at central, south, southeast, and northwest area. Despite the small area in north boundary of D7, there was not the other area that below the 5.4% unemployment rate.

By comparing the unemployment map of 2000 and 2015, we could find that the areas of highest unemployment rate increased to almost the whole areas of D7. Especially the south area that close to Franklin Park Zoo.

According to the data, there were only 3 job training services in D7 (totally 45 in Boston), and there were only 1 Language training program in D7 (totally 55 in Boston). Based on the map, the locations of job training and Language Training are all concentrated around the MBTA station. The location of job training services even gather at the north boundaries of D7. Those areas of higher unemployment rate with whom were under Bachelor Degree and Spoke English not well, and the area of lower school enrollment rate in grade 9-12 with whom spoke English not well are mostly far away from the Job Training Services and Language Training Program. However, District 7 has the high accessibility of bus. It would be better to provide job training and Language service around the South area that close to Franklin Park Zoo and the west area of District 7, Boston.