GIS Assignment – 2 Census Data

Part - 1

For this part we were asked to represent the correlation between education and employment. So, in order to perform that, data for employment (theme 13) and education (hypothesis for females) were used and who were only in Dublin.

SELECT electoral_divisions.t13_1_nsf,

electoral_divisions.t13_1_mdsof,

electoral_divisions.t13_1_pof,

electoral_divisions.t13_1_aptof, electoral_divisions.t13_1_asof, electoral_divisions.t13_1_stof, electoral_divisions.t13_1_closof, electoral_divisions.t13_1_scsof, electoral_divisions.t13_1_ppmof, electoral_divisions.t13_1_eof,

electoral_divisions.t10_4_pm,

electoral_divisions.t10_4_odndm,

electoral_divisions.t10_4_usm,

electoral_divisions.t10_4_tvm,

electoral_divisions.t10_4_accam,

electoral_divisions.t10_4_hcm,

electoral_divisions.t10_4_hdpqm,

electoral_divisions.t10_4_pdm,

electoral_divisions.t10_4_dm FROM electoral_divisions WHERE electoral_divisions.nuts3name = 'Dublin'

The above query was used to generate a map between education and employment within Dublin for females. First, I have created a map for all Ireland and then compared Dublin vs Cork and found out that Dublin is one city which contains more people doing their degrees and do also contains the more opportunities for jobs later. Below diagram displays the Dublin map only as I had filtered the query. It contains use of heat maps on top of graduated symbol.

For making queries, I have used the 'electoral divisions' for all, as I think its much more easy than others in comparison of searching for regions or place as it provides the nuts3name string which helps in locating the region.

Part - 2

This part was to check that which certain areas have higher amounts of people doing degrees. So, to find the right solution, it was considered to take some data and then generate maps based on it. So, Education(males) was chosen to check the primary degree holders in certain location. The query contains combination of some tables so that it can display for whole Ireland. The results which came back from this query was quite good as after carefully checking the attribute table and the map that is displays, it was concluded that best representation can be seen by heat maps, so a new vector geometry tool -> centroid was introduced and then generated a heat map which clearly displays that Dublin have higher amount of people doing their degrees. This can be seen clearly in the figure below.
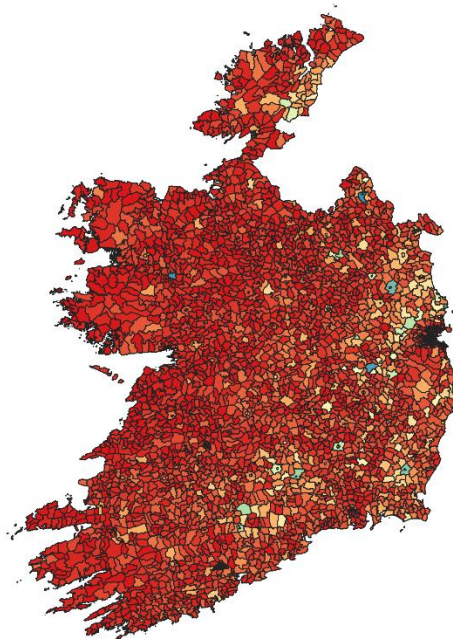

Part – 3 [check whether there is relationship between employment, socio-economic group and occupation.]

So next part was to examine if there is a correlation between employment, socio-economic and occupation. In order to achieve that first of all, some data was taken from the socio economic group for households only and can be in query below.

1. Socio economic group [households]
   SELECT electoral_divisions.t9_2_ha,
   electoral_divisions.t9_2_hb,
   electoral_divisions.t9_2_hc,
   electoral_divisions.t9_2_hd,
   electoral_divisions.t9_2_he,
   electoral_divisions.t9_2_hf,
   electoral_divisions.t9_2_hg,
   electoral_divisions.t9_2_hh,
   electoral_divisions.t9_2_hi,
   electoral_divisions.t9_2_hj,
   electoral_divisions.t9_2_hz,
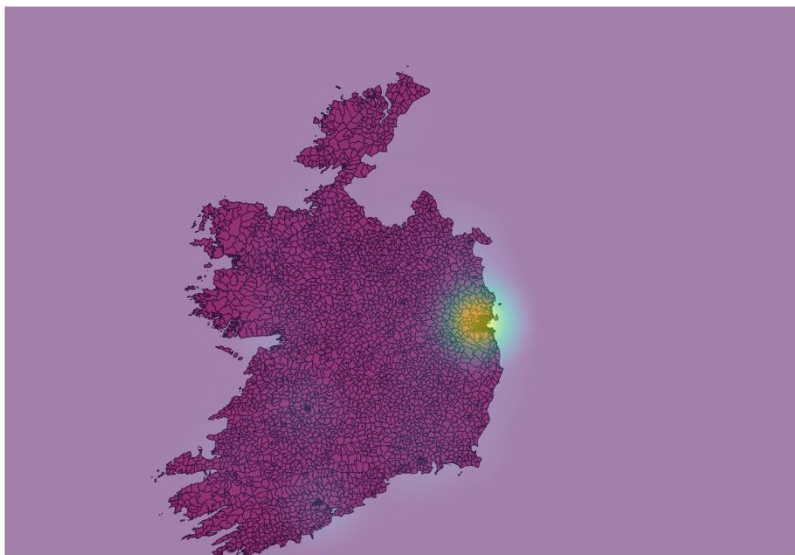   *electoral_divisions.t9_2_ht FROM electoral_divisions*

Then, a map was generated by taking that data into consideration and which displays the region divided up with the help of categorize symbol which maped the region with different colors and blue represent the more values and red represent the least values. It can be seen in figure below.

After some data was taken, then it was decided to display it on more better view so again use of heat maps were used so as to display the most commonly occurring socio economic group for households. It can be said that statistics for the figure below represent more focus on Dublin area as compared to any other region.

Finally, the data from above first 2 parts were taken and combined with the socioeconomic group so evaluate and it can be said that for all three of them Dublin city itself have everything common or we can most students are studying or pursuing their higher degrees and there is high scope of jobs opportunities after that. Below figure displays the combination of employment and occupation.

Part – 4

So, to measure unemployment between 2011 and 2016, two different maps were created with both male and female in total.

For 2011 -> So same as before, some data was taken to order to perform the query and then was created the map with the help of that. Finally use of Heat maps to see the difference in the better picture.

It can be clearly seen that cork, Galway, Dublin and limerick have high number of employments in Ireland and middle of country have less employment.

For 2016 -> As we can see in the map below, the employment has risen in country as compared to the 2011. The counties Dublin, Cork and Limerick have vast majority of more employments. Overall, the employment for the whole country didn't improve from 2011 to 2016, its just few of the counties which got really good increase in employment as they contain students pursuing their higher degrees or diploma which can also led to more employment opportunities.