



**DUBLIN INSTITUTE
of TECHNOLOGY**
Institiúid Teicneolaíochta Bhaile Átha Cliath

Geographical Information Systems

Assignment 2 – Census Data

DT228

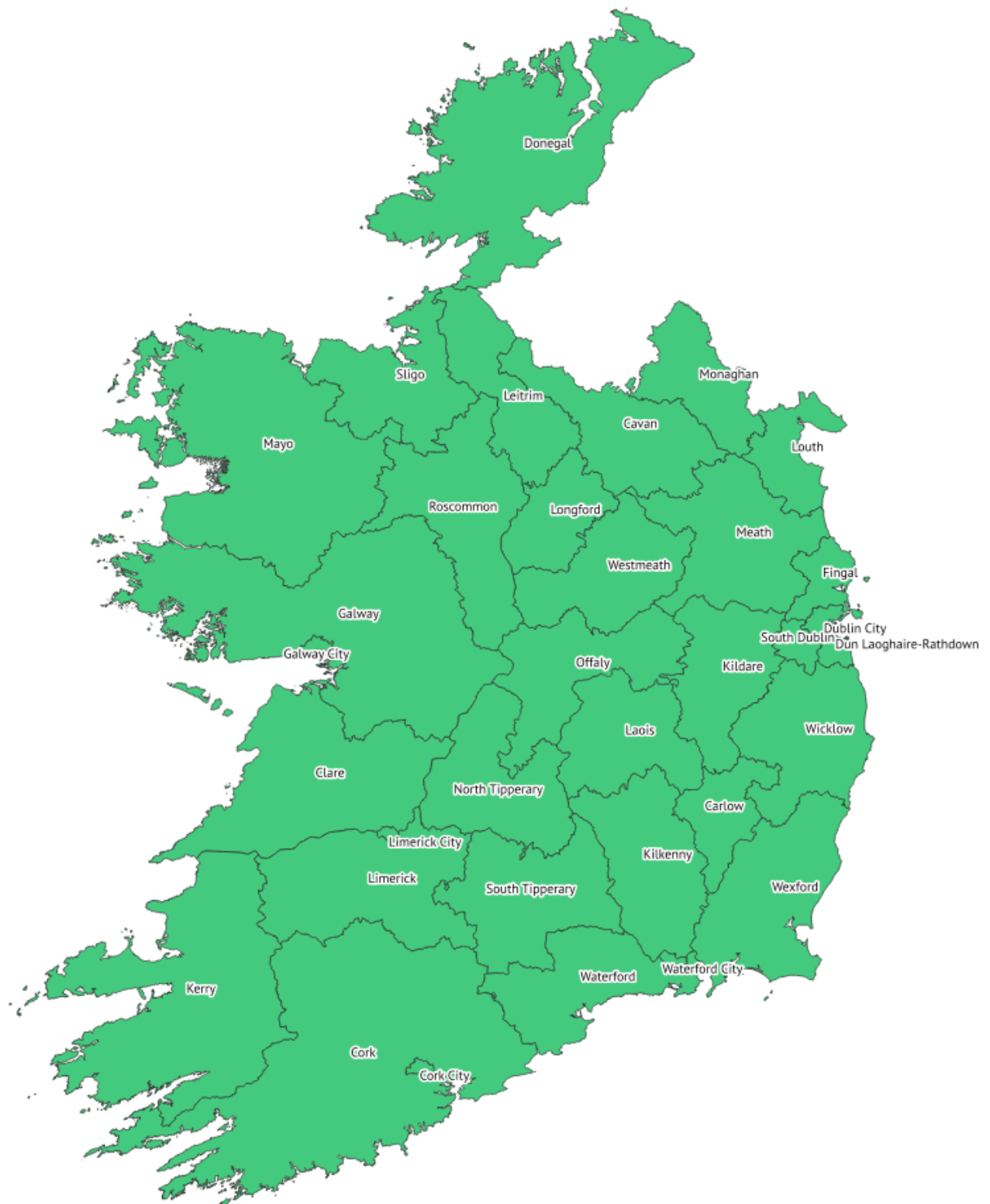
BSc in Computer Science

Paul Petrisor

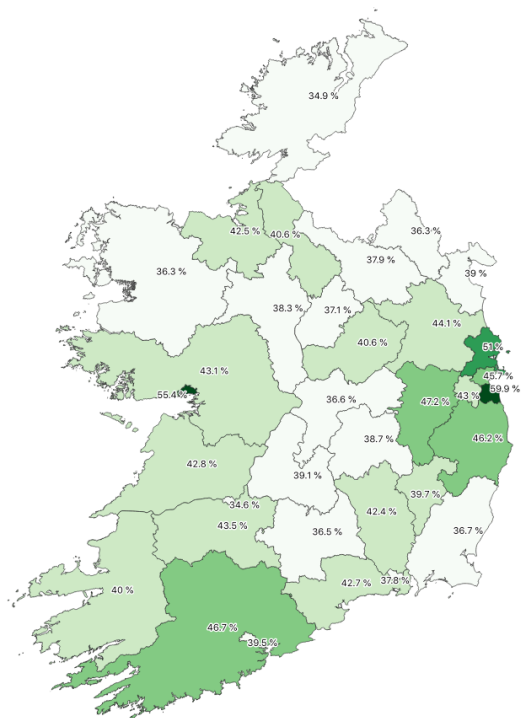
School of Computing
Dublin Institute of Technology
05th May 2019



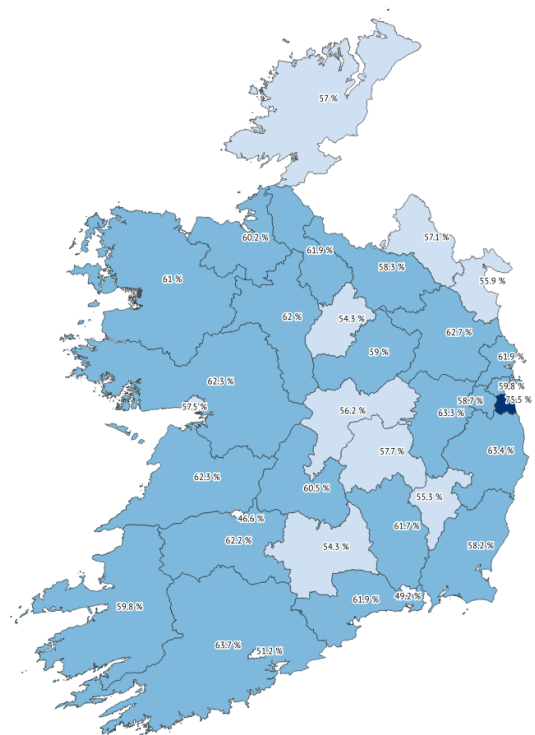
The map used for the assignment is divided into 29 counties and five Cities representing the local authority areas. There are 26 administrative counties outside Dublin and 4 Cities, Cork, Limerick, Waterford and Galway. Dublin is divided into 4 local authority areas, Dublin City, Fingal, South Dublin and Dún Laoghaire-Rathdown.



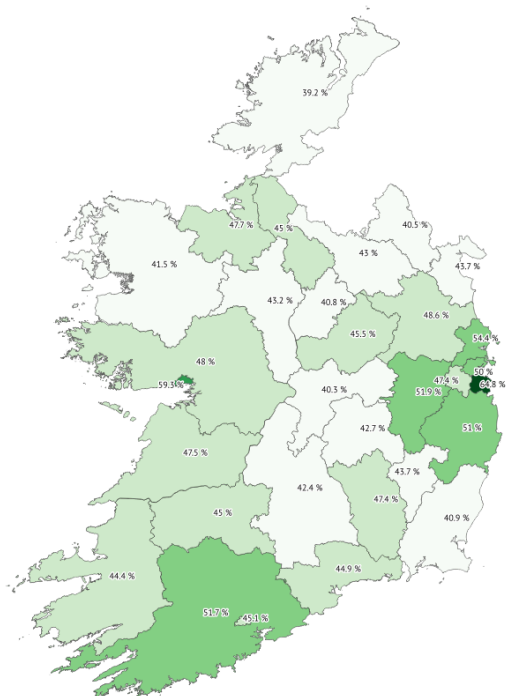
Educational achievements vs. employment prospects



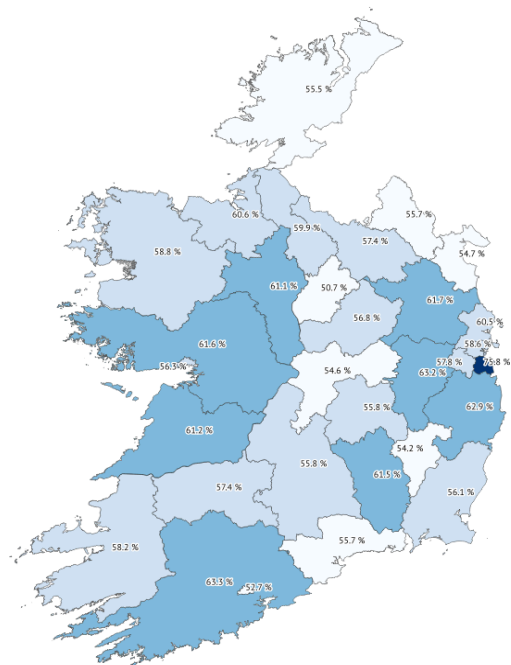
Third level holders 2011



Skilled occupations 2011



Third level holder 2016



Skilled occupations 2016

The image above presents the third level education holders and skilled workers in Irish counties from 2011 and 2016. The scope is to find if there is a correlation between higher education and employment prospects for highly skilled people.

Third level education is considered any studies completed after the secondary school. The data used for this is: *Technical or Vocational qualification Advanced Certificate/Completed Apprenticeship , Higher Certificate, Ordinary Bachelor Degree or National Diploma , Honours Bachelor Degree, Professional Qualification or both , Postgraduate Diploma or Degree and Doctorate(Ph.D.) or higher.*

Skilled occupations are considered occupations that require one form of higher education. These occupations include *Manager, Directors, Professional, Associate Professional, Technical, Administrative , Secretarial and other Skilled occupations.*

Between 2011 and 2016 was an 5% average national increase in third level education holders. On the other side the skilled jobs occupancy remains at same levels or dropped slightly in some areas. This proves that there is **no** correlation between education achievements and employment prospects.

Given that unemployment rate also dropped by national average of around 6 percent from 2011 to 2016, it means that highly qualified people are working in positions they are over-qualified.

Map of Ireland showing the percentage of the population aged 65 and over in each county for 2016. The map uses a color scale from light orange (lowest percentage) to dark red (highest percentage). The highest percentages are in Dublin (49.9%) and Wick (35.9%). The lowest percentages are in Donegal (21.2%) and Sligo (20.3%).

| County | Percentage (%) |
|------------------|----------------|
| Donegal | 21.2 |
| Sligo | 20.3 |
| Galway | 22.5 |
| Mayo | 26.8 |
| Leitrim | 23.3 |
| Fermanagh | 22.7 |
| Tyrone | 19.3 |
| Monaghan | 23.5 |
| Louth | 26.4 |
| Dublin | 49.9 |
| Wick | 35.9 |
| Wexford | 27.7 |
| Carlow | 30.7 |
| Kilkenny | 29.4 |
| Waterford | 21 |
| County Kerry | 25.3 |
| County Cork | 19.8 |
| County Clare | 24.3 |
| County Limerick | 21.3 |
| County Tipperary | 25.2 |
| County Wick | 21.3 |
| County Kerry | 26.3 |
| County Cork | 28.2 |
| County Wick | 41.2 |
| County Wick | 26.8 |
| County Wick | 23.3 |
| County Wick | 22.7 |
| County Wick | 19.4 |
| County Wick | 24.7 |
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| County Wick | 24.7 |
| County Wick | |

Dún Laoghaire-Rathdown recorded 49.9% and Galway City 41.2% of their occupants as holding such a qualification.

The figure consists of two maps of Ireland, each showing the percentage of the population aged 65 and over in 2006. The left map displays data by county, while the right map displays data by region.

County-level data (Left Map):

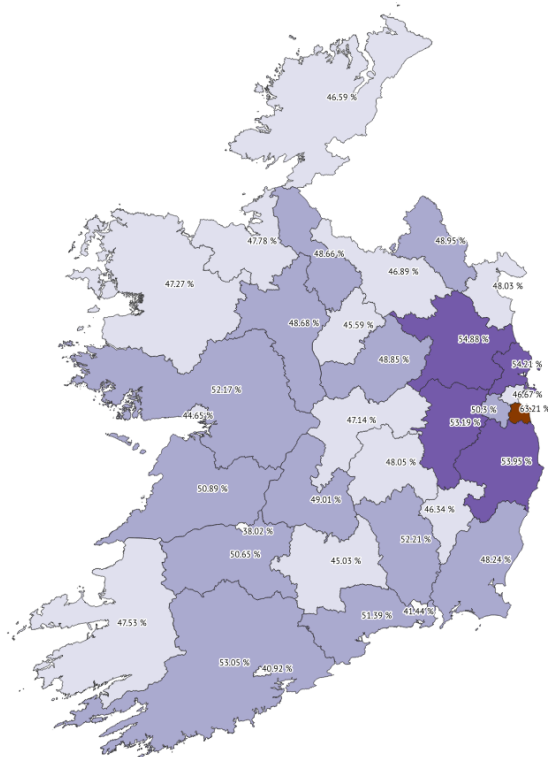
| County | Percentage (%) |
|----------------|----------------|
| Donegal | 26.2 |
| Sligo | 23.8 |
| Monaghan | 20.6 |
| Louth | 21.2 |
| Meath | 20.5 |
| Leitrim | 21.2 |
| Longford | 21.1 |
| Westmeath | 23.2 |
| Galway | 21.4 |
| Clare | 23.3 |
| Wexford | 24 |
| Wick | 25.1 |
| Carlow | 22.2 |
| Waterford | 24.7 |
| Other counties | 14.8 - 19.5 |

Regional data (Right Map):

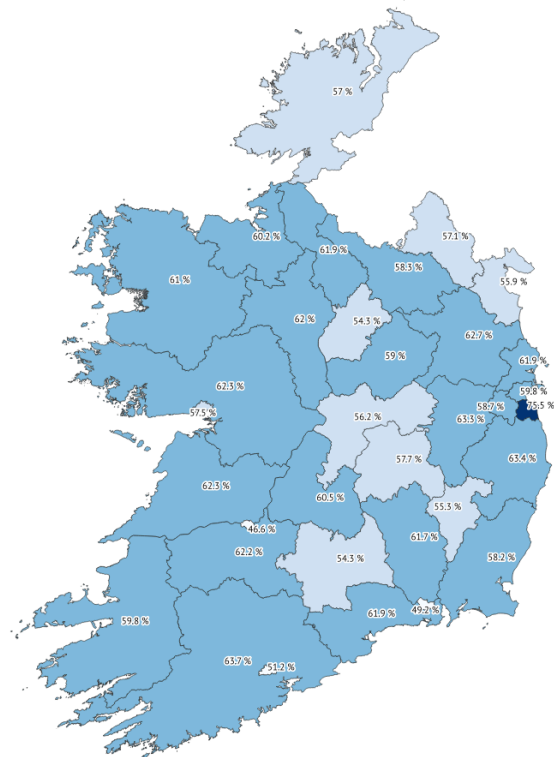
| Region | Percentage (%) |
|---------------|----------------|
| North | 16.7 |
| South | 16.6 |
| West | 15.7 |
| East | 15.4 |
| Other regions | 9.2 - 14.5 |

- Between 2011 and 2016 unemployment levels dropped across the country.
- Higher levels of unemployment were recorded in many rural areas with Donegal being the first place with 26.2% in 2011 and Longford holding the national high in 2016 with 19.6%.
- The lowest rate recorded was 11.2% in 2011 and 7.4% in 2016 in Dún Laoghaire-Rathdown.
- Apart from Dublin are the lowest unemployment rate is recorded in Cork County 14.8% in 2011 that dropped to only 9.2% in 2016. Cork city recorded 22.2% in 2011 and 15% in 2016. The conclusion can be that people are living outside the urban area but travel for work into the big cities.

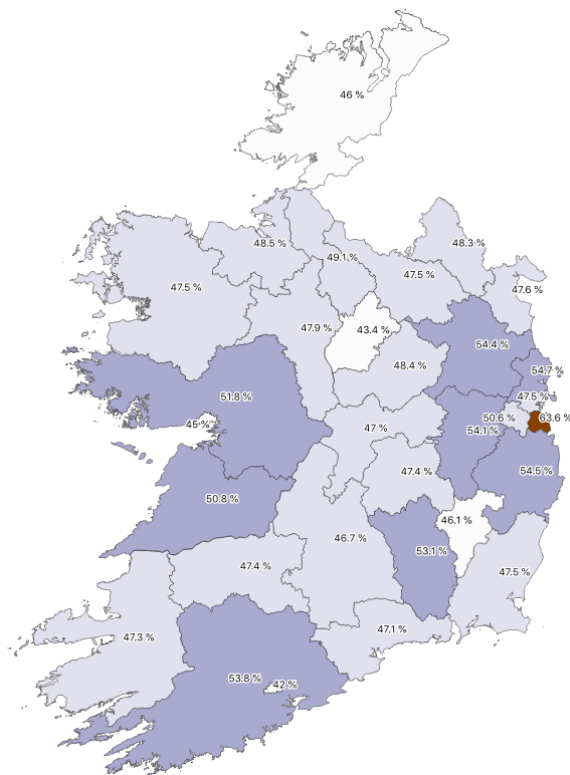
The question to be answered in the next part is if there a correlation between employment – socio-economic group and occupation



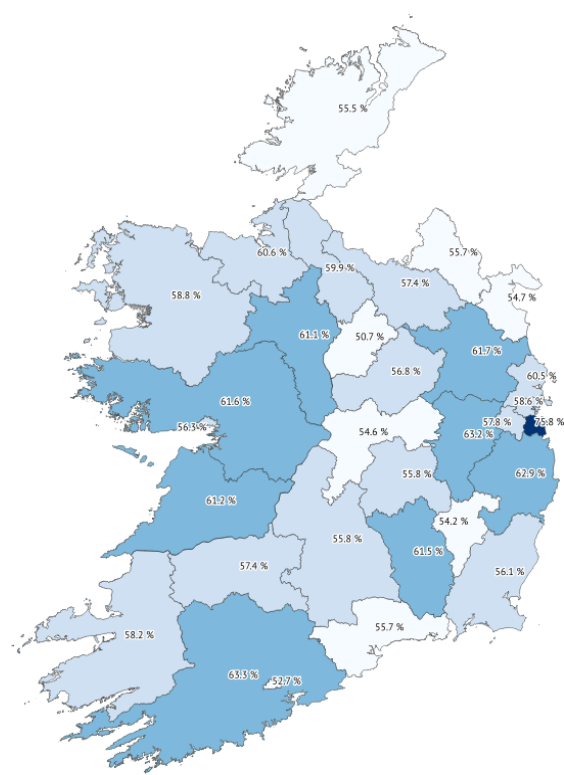
Socio-economic category 1 - 2011



Skilled occupations - 2011



Socio-economic category 1 - 2016



Skilled occupations - 2016

Socio-economic group 1 consists of *Professional, Managerial, Technical and Skilled* workers.

Skilled occupations considered for this are: *Managers, Directors, Professional, Associate Professional, Technical, Administrative, Secretarial and other Skilled occupations.*

By comparing the socio-economic group 1, skilled occupations and unemployment rate maps from 2011 and 2016 it can be observed that low unemployment rates are recorded in areas where dominant is socio-economic group 1 and the occupations related to the social category.

This shows there is a correlation between employment – socio-economic groups and occupations with people belonging to a good socio-economic category more likely to be employed.