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| Geographical Info Systems  Assignment 2 – Report  Census Data 2011-2016: Geographical Analysis | |
| Module code : CMPU4032: 2022-23 | |
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# Assignment Overview

## High Level Description – Census Data Analysis (2011-2016)

This document covers the design, implementation, and observations on all parts of the November 2022 CA(2) for the GIS module (TU060 – DS – Year 2).

The geographical focus of this report in on the central and northern Electoral Divisions in Dublin County. The *central* areas also cover the Electoral Divisions in the Dublin South-Central and South-East constituencies.

The purpose in limiting the scope to these areas is to concentrate more on the perceived ‘east-west’ socio-economic divide in north and central Dublin, as opposed to the more traditional ‘north v south’ narrative.

Section 2 displays a series of maps highlighting the following data points from the 2011 and 2016 Irish census data;

* Distribution of Education Levels across EDs, and how this relates to Employment Levels
* The impact of Education Levels on Socio-Economic groups in north Dublin EDs.
* The relationship of Occupation types to Education within the selected EDs.
* How Employment rates have changes in the EDs from 2011 to 2016.

# Data and Maps

## Geographical Comparison 1 – Based on Stated Problem

Examples in class;

* Education v Income in different areas.

Techniques in class;

* Layer symbols over each other like Choropleth first and then a graduated symbol. (Income v Education).

Correlation between education and employment is key theme of assignment.

Geographical area should be at least ED (Electoral divisions) – 3440 of these.

## Geographical Comparison 2 – Based on Stated Problem

Examples in class;

* Education v Income in different areas.

Techniques in class;

* Layer symbols over each other like Choropleth first and then a graduated symbol. (Income v Education).

## Changes in Unemployment Rates Between 2011 and 2016

The maps below compare the change in unemployment rates across the central and north Dublin Electoral Divisions between the 2011 and 2016 Census readings.

*Figure – 2011 Unemployment Rates*

Map

Description automatically generated

*Figure – 2016 Unemployment Rates*

Map

Description automatically generated

The unemployment rates are noticeably lower in the 2016 data. It will be interesting to determine if this trend continues to improve when the 2022 census data becomes available.

# Insights and Conclusions

## Problem 1

The

## Problem 2

The

## Changing Patterns in Rates in Employment

It is clear that employment rates have significantly improved in the period since the 2011 economic collapse, particularly in EDs in the Dublin North constituency.

However, stubborn pockets of higher unemployment remain in areas such as Mulhuddart, Finglas, and Ballymum, highlighting the challenges which persist in these areas.