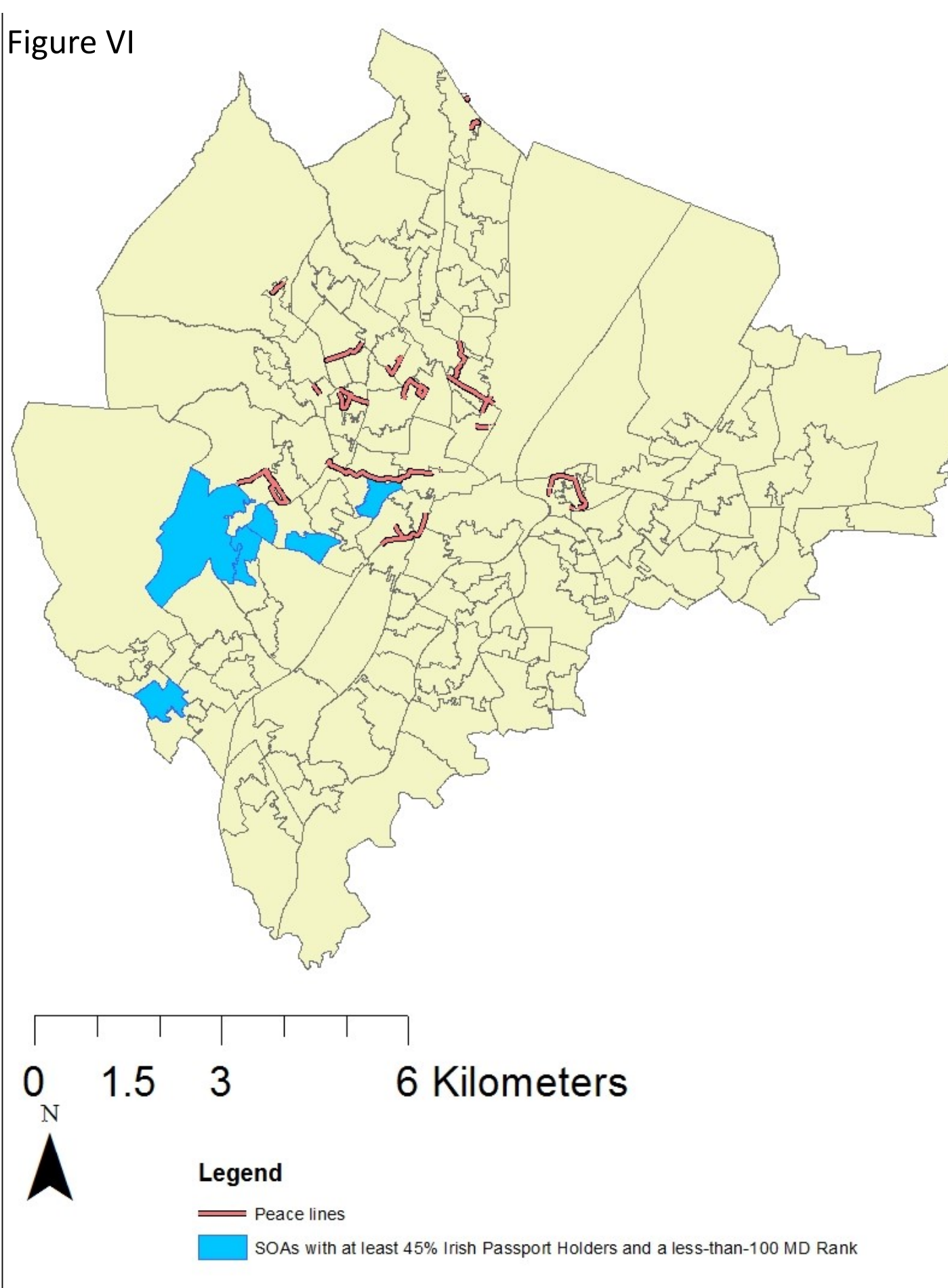
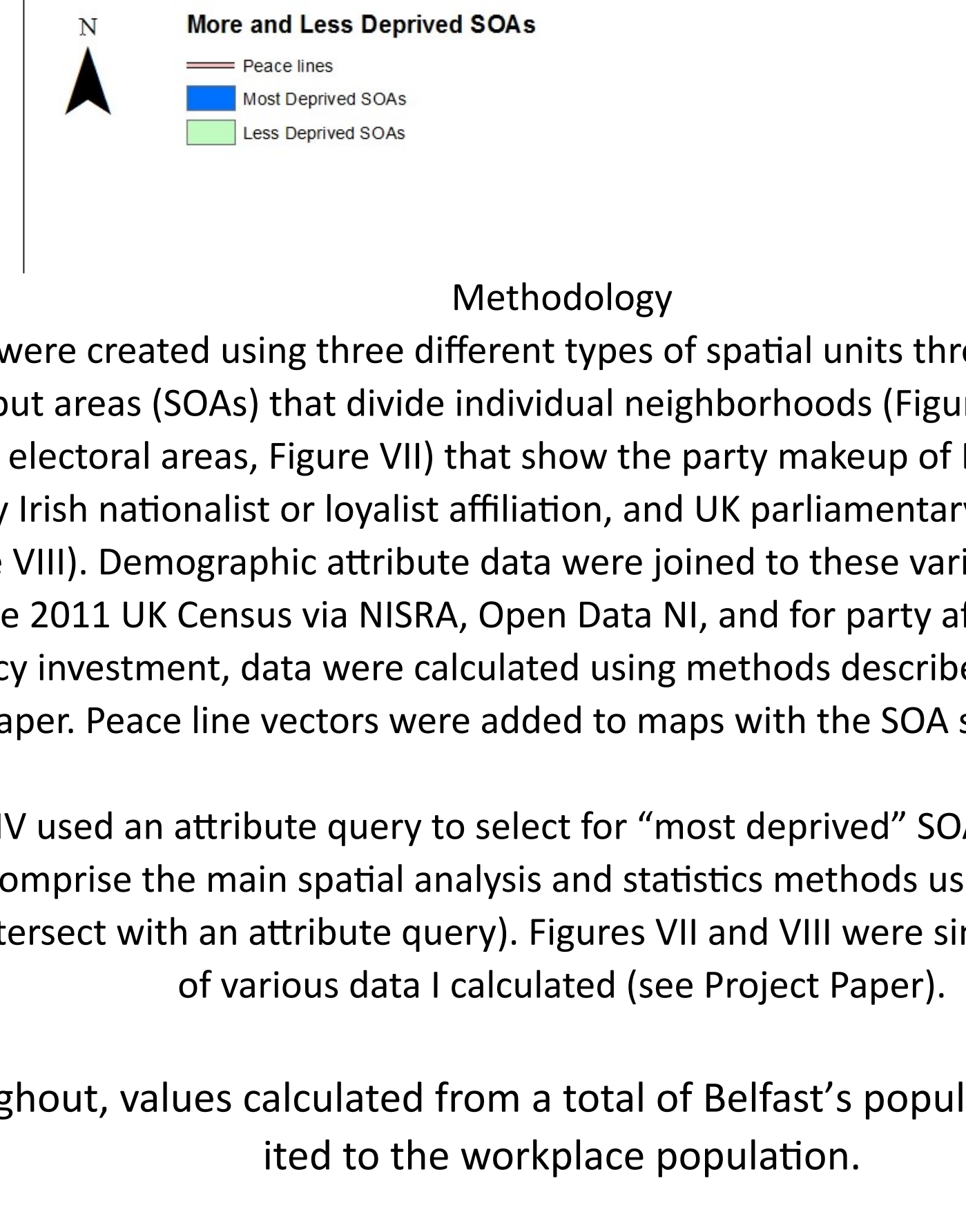
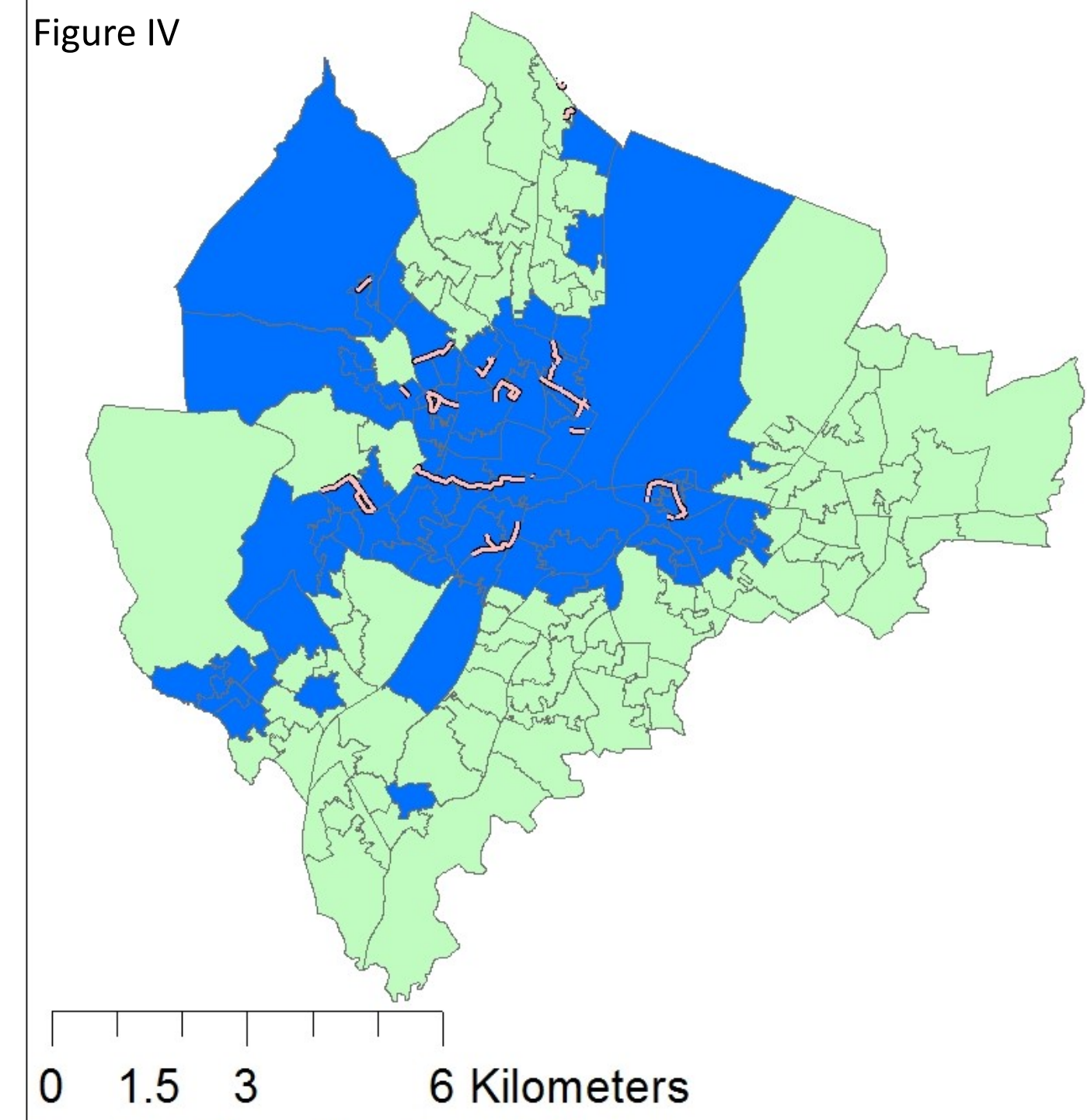
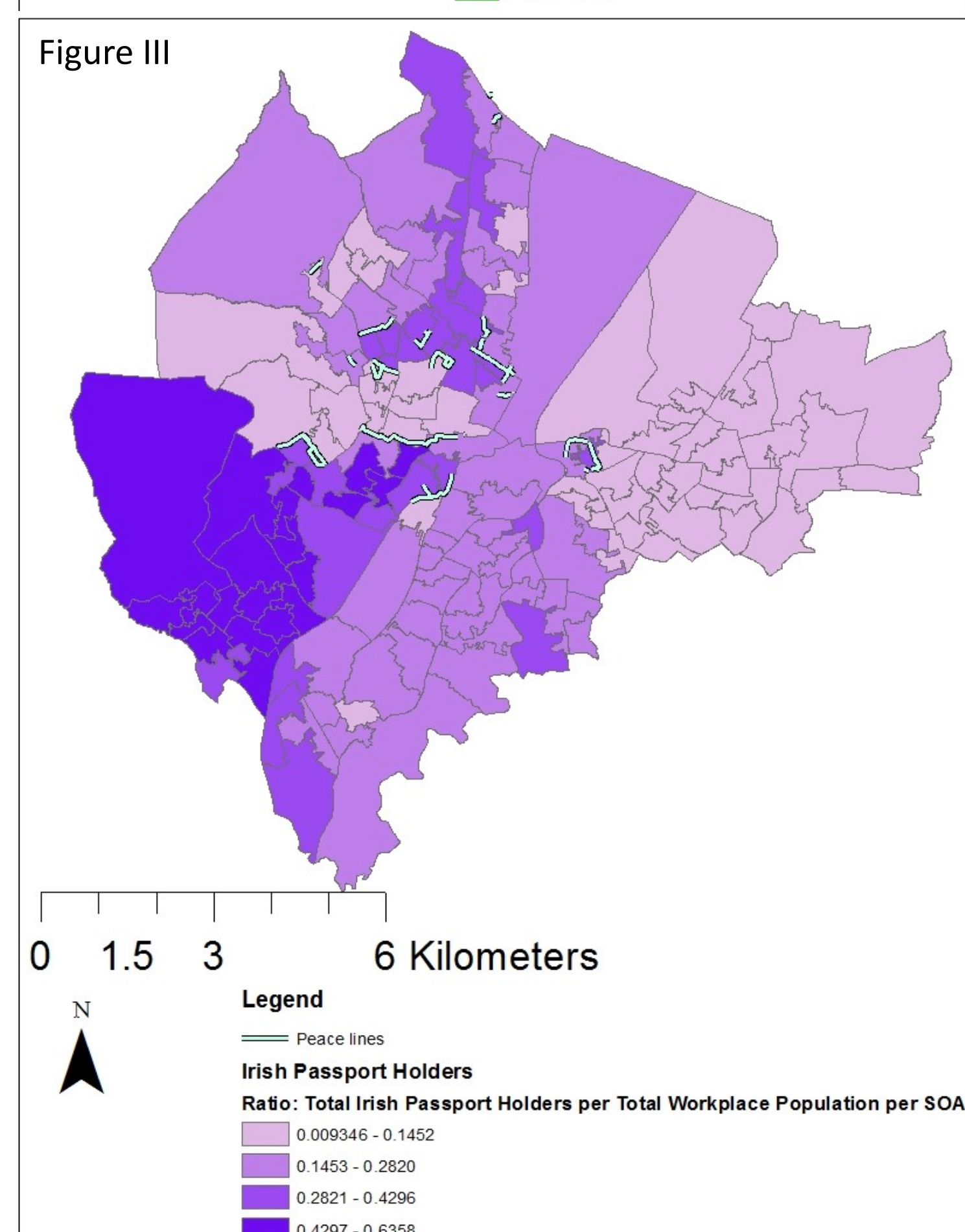
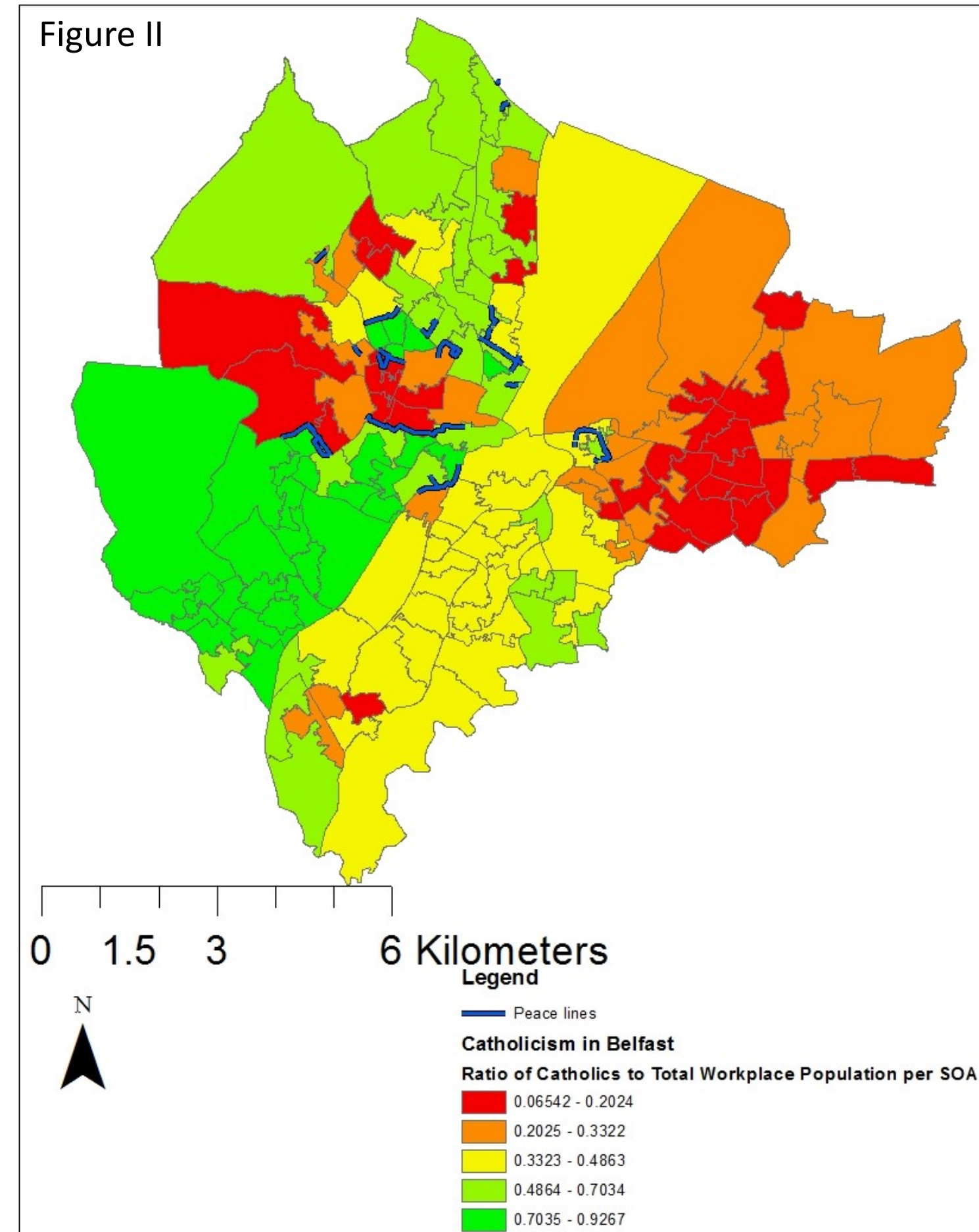
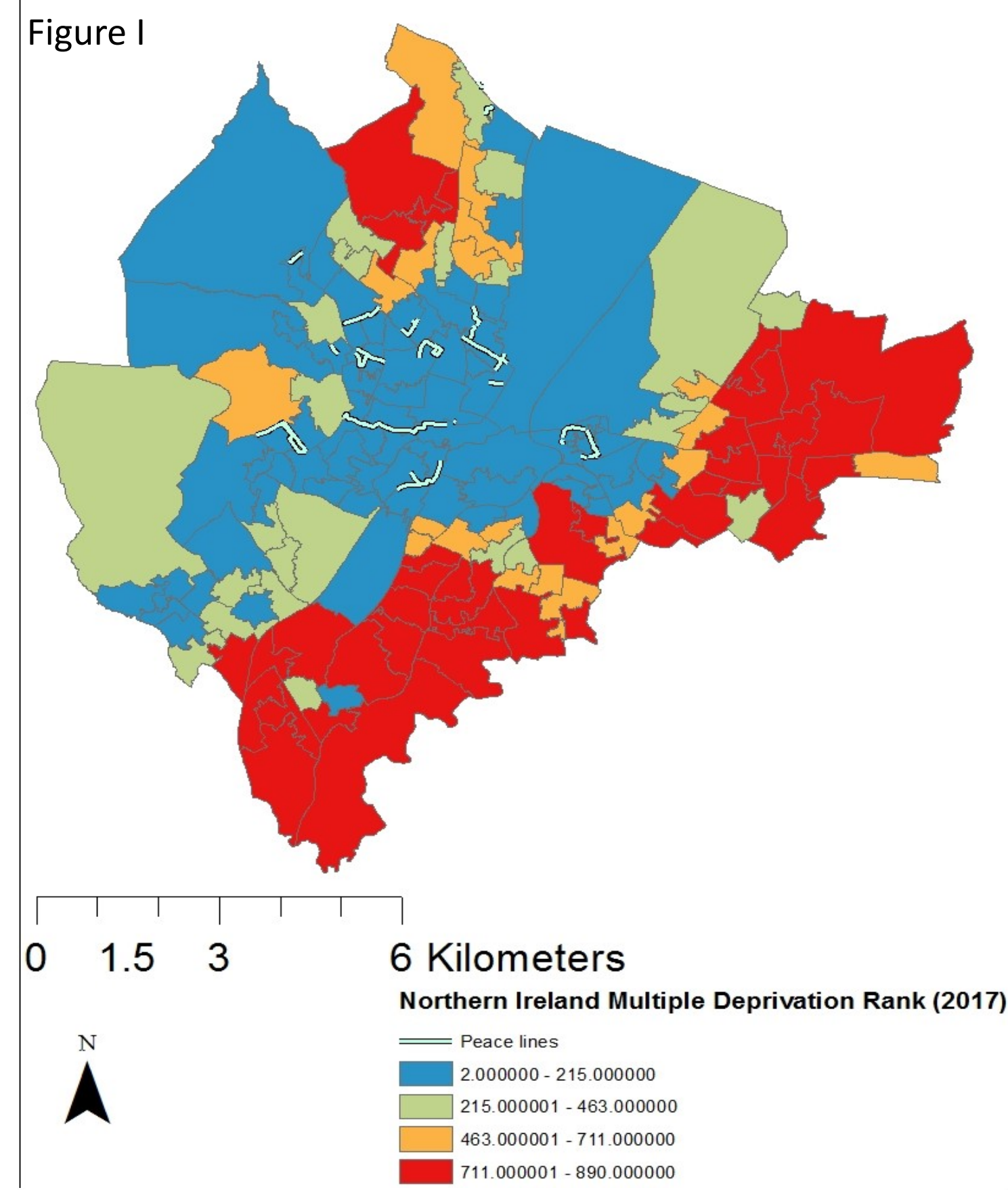
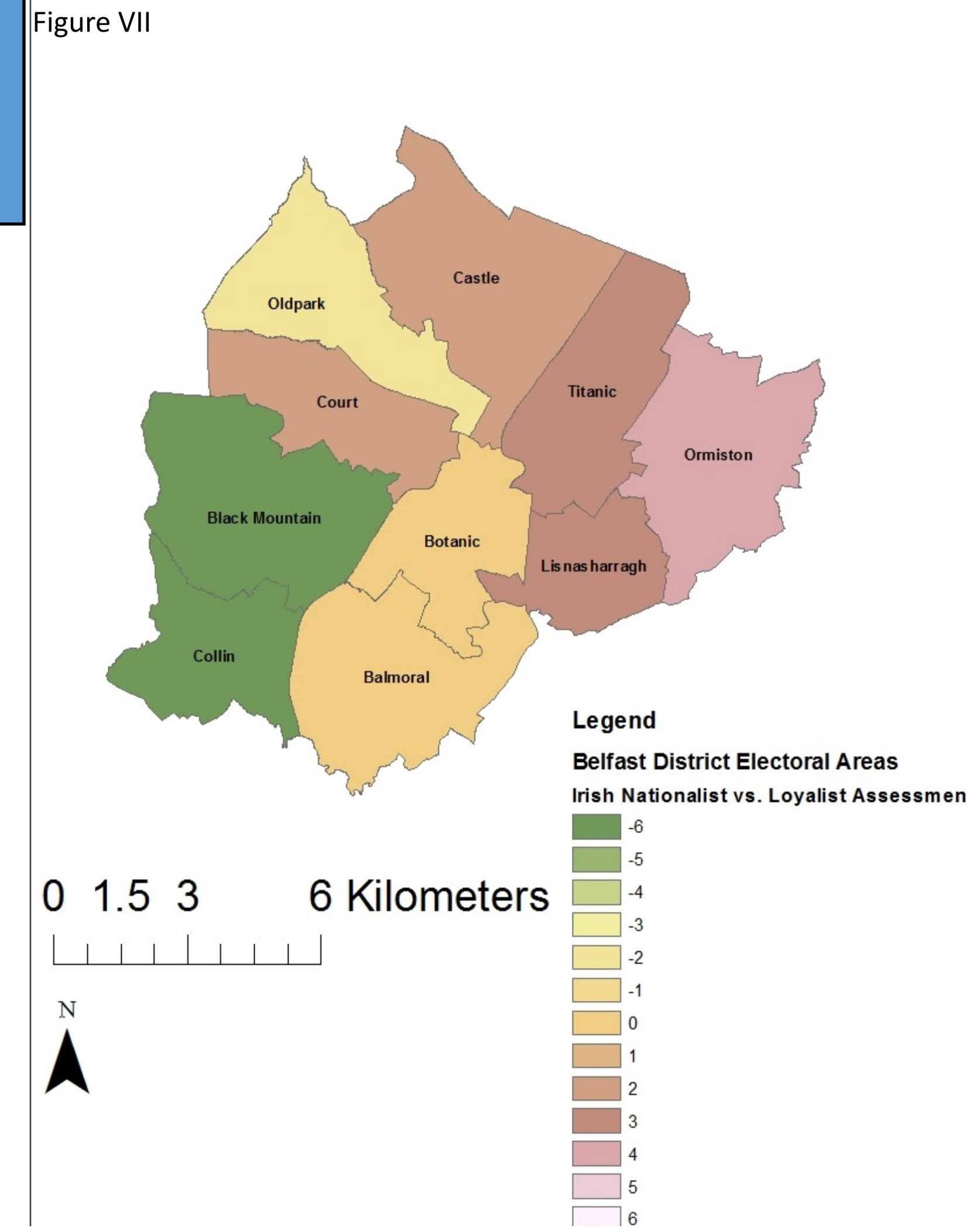
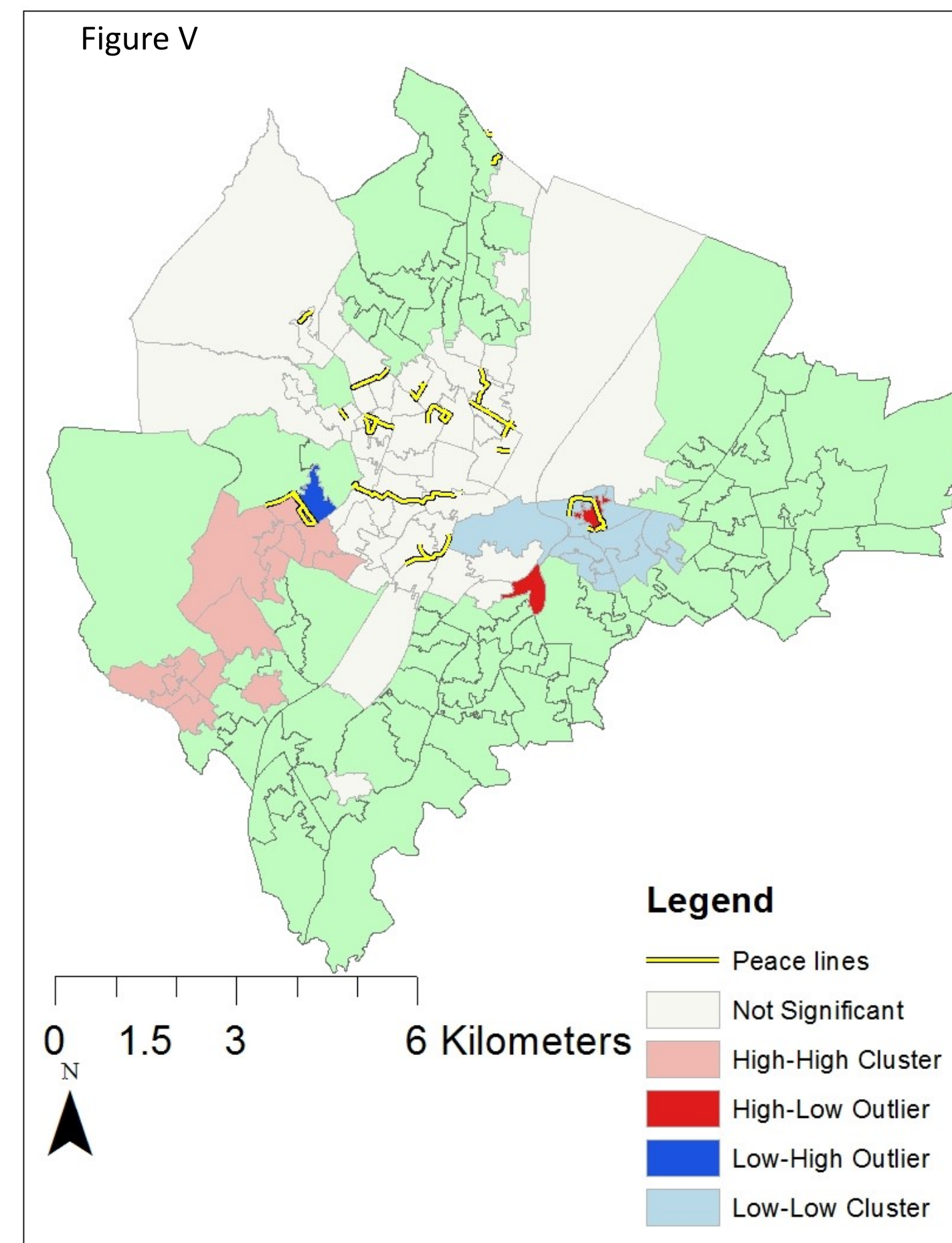


Local and National Perspectives: Mapping Deprivation, Demographics, and Opportunities in Belfast, NI (UK)



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Projection: D-TM 65, TM 65 Irish Grid

Introduction
For nearly 20 years, Belfast has been emerging from The Troubles as a city still divided on religious and political lines. Furthermore, its status as a constituent country of the UK signifies its relative deprivation compared to England, Scotland, and Wales—especially for Catholic minorities. What are the opportunities for improving welfare in Belfast, especially given economic uncertainty rising from Brexit in 2019.



Limitations
Parliamentary constituency shapefiles were only available from 2008, while the census data is from 2011 and the council makeup data 2017. Belfast DEAs from 2012 also do not conform to the regular boundaries of the SOAs. Parliamentary constituencies were expected to be a bit more liberal in this aspect, regardless of the year drawn. The difference in years may have posed issues in calculations.

Sources:
UK Census 2011 (via NISRA, www.ninis2.nisra.gov.uk/public/Home.aspx)
NISRA (www.nisra.gov.uk/support/geography)
Open Data NI
www.belfastcity.gov.uk/council/Yourcouncil/yourcouncil.aspx
www.investni.com/features/invest-ni-performance-2016-2017.html

Results
As expected, the more Catholic areas of Belfast have a higher proportion of the population in deprivation as well as holding Irish passports. The Belfast Council Data show the variance in voting patterns across the city, with even heavily Catholic areas in the NW having a variety of parties for their DEA.
Furthermore, HH and LL clustering of Catholic residents is, as expected, around peacelines, save the one HL cluster southeast of the city center. This SOA may be interesting to watch in terms of future socioeconomic outcomes as well as for internal peacekeeping. Other SOAs with no correlation some Catholic populations are useful to keep in mind so Catholics are not further disenfranchised.
Absolute investment is also shown to be unequal across the four Belfast, and unfortunately, this corresponds with the distribution of Catholics in Belfast. Additionally, not only could areas like this use more investment all around, but Figure VI shows policymakers SOAs in the predominantly Catholic West that have at least 45% of the workplace population with Irish passports, potentially giving those citizens EU citizenship that could play into economic decision-making.

Methodology
Maps were created using three different types of spatial units throughout—super output areas (SOAs) that divide individual neighborhoods (Figures I-VI), DEAs (district electoral areas, Figure VII) that show the party makeup of Belfast City Council by Irish nationalist or loyalist affiliation, and UK parliamentary constituency (Figure VIII). Demographic attribute data were joined to these various spatial units from the 2011 UK Census via NISRA, Open Data NI, and for party affiliation and constituency investment, data were calculated using methods described in detail in the paper. Peace line vectors were added to maps with the SOA spatial unit.

Figure IV used an attribute query to select for “most deprived” SOAs, and Figures V and VI comprise the main spatial analysis and statistics methods used (Local Moran's I and Intersect with an attribute query). Figures VII and VIII were simply symbologies of various data I calculated (see Project Paper).

Throughout, values calculated from a total of Belfast's population were limited to the workplace population.