

Work disability and the Northern Irish Troubles

Declan French
Queen's Management School (CHaRMS)
declan.french@qub.ac.uk

- **Research question : Can the legacy of the Troubles explain high work disability rates in Northern Ireland ?**
- Potential endogeneity and reverse causation issues are addressed using the intensity of conflict-related deaths as instruments.
- Evidence that historic conflict has increased present-day work disability by 9.0 percentage points.
- This effect is mediated through worse mental health.

Overview

Introduction

Intro. (ctd.)

Literature

Data

Results

- From 1969 to 1998, NI experienced a violent ethnopolitical conflict
- Currently NI has high work disability rates in UK and higher rates among middle-aged & older people than RoI
- Extent to which these high rates are attributable to the conflict is disputed

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Percentage of persons reporting day-to-day activities limited a lot

Country	Percent
England & Wales	8.07%
England	7.87%
NI	11.37%
Scotland	9.10%
Wales	11.48%

Source : 2011 Census

210,000 people claiming DLA in Northern Ireland

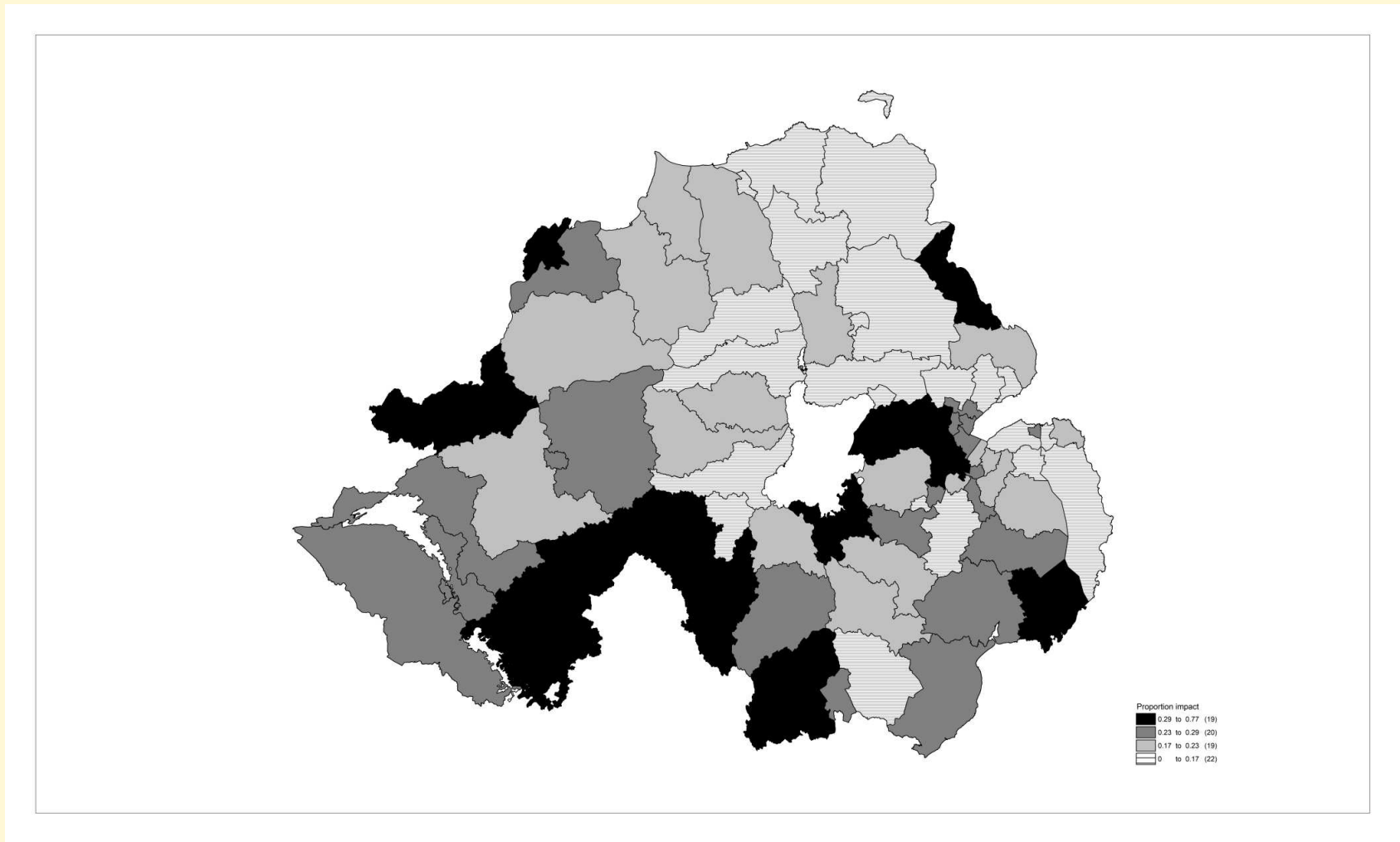
DLA payouts hit record as one in nine claims benefit for those who cannot walk or get around easily

- Conflict reduces human capital
- War exposure reduces earnings (e.g. Blattman and Annan, 2010; Akbulut-Yuksel, 2014)
- War causes disability through psychological conditions, lower cognitive ability and heart disease exposure reduces earnings (e.g. Blattman and Annan, 2010; Akbulut-Yuksel, 2014)
- Literature focuses on war veterans
- Also literature on illness from war experience but not work disablement (e.g. Havari & Peracchi, 2017; Akbulut-Yuksel, 2017)

- Wave 1 of the Northern Ireland Cohort for the Longitudinal Study of Ageing (NICOLA) study (2014-16).
- Health, lifestyles and financial situation & self-completion questionnaire covering the vignettes, experience of the Troubles and mental health.
- Of the 8504 respondents to the main interview, 59% returned a valid self-completion questionnaire.
- The sample in our analysis is further restricted to those between the ages of 50 and 65 who would have been between 4 and 19 years of age at the outbreak of the Troubles in 1969.

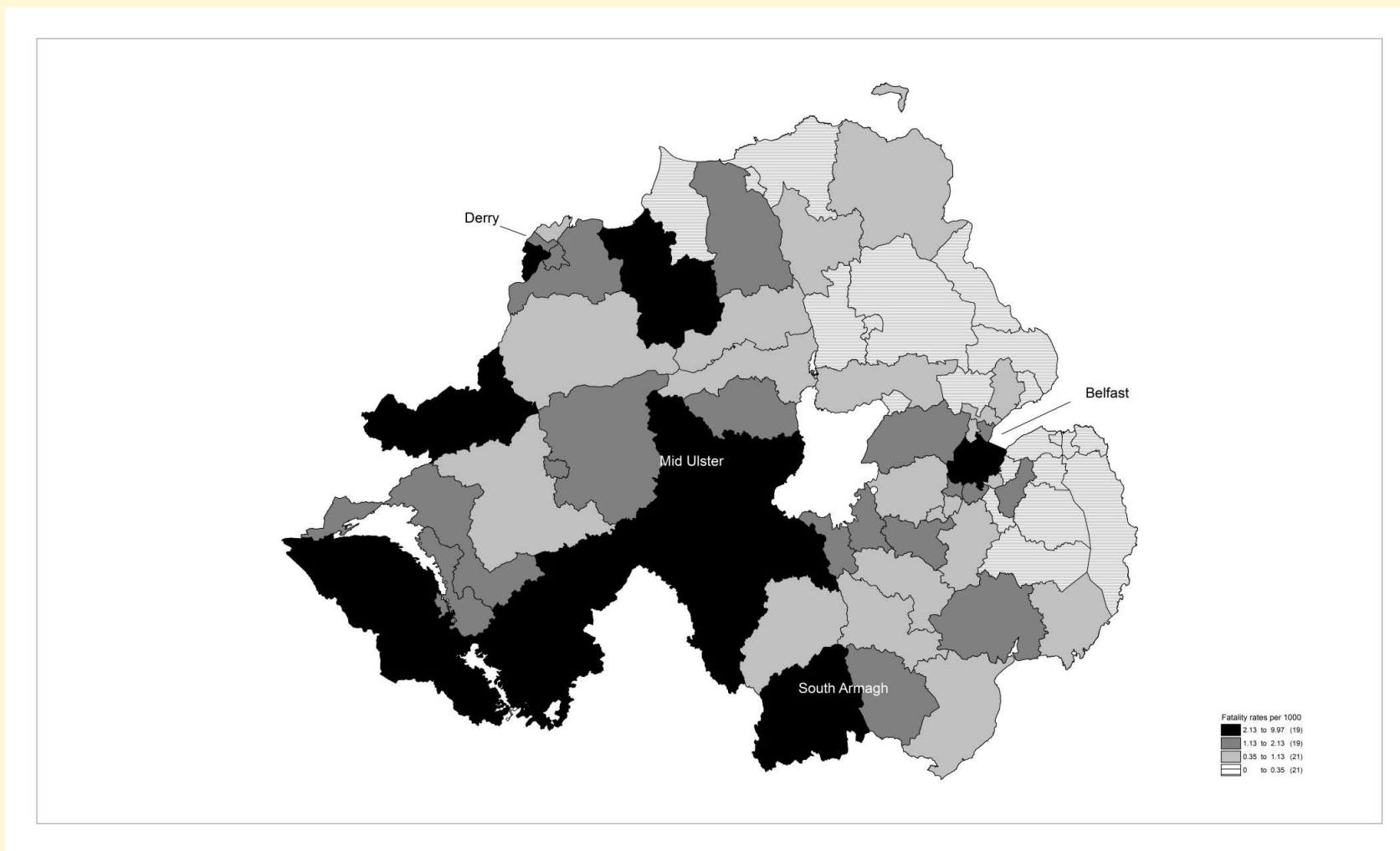
- Main work disability measure - 'None', 'Mild', 'Moderate', 'Severe' or 'Extreme' to 'How much are you limited in the kind or amount of activity or work that you can do due to an impairment or health problem?'.
 - Alternative measures of work disability
 - ◆ Functional limitation - 'Because of a physical or mental health problem, do you have difficulty doing any of the activities : walking 100m, running 1.5k, sitting 2 hours, getting up from a chair, climbing stairs....
 - ◆ Disability benefit receipt - Incapacity Benefit, Employment and Support Allowance, Severe Disablement Allowance or War Disablement Pension.

Proportion of 50-64's reporting 'quite a bit' or 'an extreme amount' of impact of Troubles



'In general, what impact do you think the Troubles have had on your life?'. 'none', 'a little bit' or 'a moderate amount'=0 ;
'quite a bit' or 'an extreme amount' =1.

Fatality rates per 1000 population 1969-1998



Source : Malcolm Sutton's 'Index of deaths from the conflict in Ireland

Selected descriptive statistics

	Mean	s.d.
Work limitation		
- Severe	0.09	0.28
- Extreme	0.03	0.16
Troubles impact	0.22	0.42
Protestant	0.50	0.50
- Troubles impact	0.19	0.39
- Severe/extreme limitation	0.12	0.32
Catholic	0.35	0.48
- Troubles impact	0.30	0.48
- Severe/extreme limitation	0.14	0.34

Proportions of conditions by work limitation severity

Work limitation severity	Heart condition	Chronic condition	Psychiatric morbidity	Pain	Unable to perform IADLs	Functional limitations	Disability Benefit
None	0.16	0.03	0.12	0.26	0.01	0.14	0.02
Mild	0.31	0.14	0.20	0.56	0.05	0.47	0.05
Moderate	0.30	0.27	0.31	0.77	0.20	0.80	0.23
Severe	0.43	0.32	0.37	0.86	0.55	0.94	0.49
Extreme	0.52	0.43	0.44	0.89	0.63	0.94	0.46
Total	0.24	0.12	0.19	0.44	0.10	0.37	0.11

Events experienced in the Troubles

Events experienced in the Troubles	Proportion in sample	Probit regression	
		coeff.	(s.e.)
Friend killed	0.18	0.228**	(0.106)
Relative killed	0.10	0.360***	(0.115)
Was injured	0.06	0.469***	(0.143)
Witness bomb	0.54	0.144*	(0.086)
Witness murder	0.07	0.248*	(0.132)
Witness gunfire	0.42	0.077	(0.093)
Witness riot	0.55	0.312***	(0.097)
Was in prison	0.01	1.025**	(0.448)
House searched	0.14	0.190*	(0.106)
Had to move house	0.09	0.252**	(0.114)
Had to leave job	0.05	0.302*	(0.158)

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Explaining work disability

Dependent variable :	(1) Work limitation	(2) Work limitation	(3) Work limitation	(4) Functional limitation	(5) Disability benefit	(6) Disability benefit*
Troubles impact	0.434*** (0.055)	0.427*** (0.055)	1.326*** (0.436)	0.828** (0.351)	0.275 (0.454)	1.138*** (0.382)
<i>N</i>	2397	2401	2401	2401	2401	2401
Log likelihood	-2778.5	-29508.0	-30758.1	-2754.9	-2017.7	-2081.0
Model	Ordered Probit	HOPIT	Latent HOPIT	Bivariate probit	Bivariate probit	Bivariate probit

Notes : Controlling for age, female, married, education, religion, DEA unemployment rate, DEA long-term unemployment rate, DEA distance to benefit offices.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Effect of Troubles on mediating medical conditions

Condition	prop.	Effect of Troubles on condition	
		coeff.	s.e.
Moderate heart	0.52	-0.037	(0.393)
Severe heart	0.05	0.713	(0.528)
Respiratory	0.13	0.274	(0.471)
Musculoskeletal	0.27	0.478	(0.377)
Cancer	0.06	-0.142	(0.605)
Other	0.11	0.162	(0.548)
Psychiatric morbidity	0.20	0.995**	(0.465)
Severe pain	0.04	0.956*	(0.568)

Notes : Controlling for age, female, married, education, religion, unemployment, DEA unemployment rate, DEA long-term unemployment rate, DEA distance to benefit offices.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Effect of Troubles on work disability mediated by psychiatric morbidity

Work disability measure	Total effect (s.e.) (95% c.i.)	Mediated effect (s.e.) (95% c.i.)	Percent mediated (s.e.) (95% c.i.)
Functional limitation	0.108*** (0.023) (0.061, 0.152)	0.033*** (0.006) (0.022, 0.046)	30.7*** (0.095) (18.3, 54.8)
Disability benefit	0.077*** (0.017) (0.053, 0.122)	0.023*** (0.005) (0.019, 0.039)	29.7*** (0.088) (18.3, 52.4)
Disability benefit*	0.110*** (0.018) (0.075, 0.147)	0.034*** (0.006) (0.022, 0.047)	30.6*** (0.063) (20.3, 45.3)

- Conflict has increased work disability among the civilian population by 9.0 percentage points and this result is robust to a number of alternative work disability measures.
- Cost £2.3 billion in lost earnings and benefits
- Main mediating condition is worse psychological morbidity
- Economic consequences of a return to violence are not only the destruction of infrastructure, loss of life and reduced inward investment reported elsewhere but also a loss of work capability for decades after.

Acknowledgements

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