THE RELATIONSHIP BETWEEN OBESITY AND EARNINGS IN QUEBEC: A SPATIAL-PANEL ANALYSIS

Presented by:

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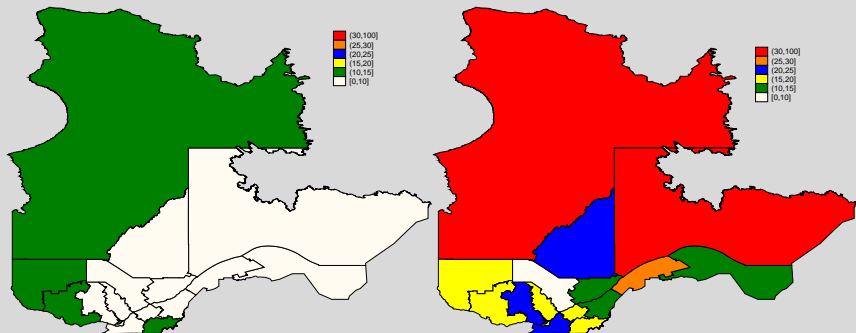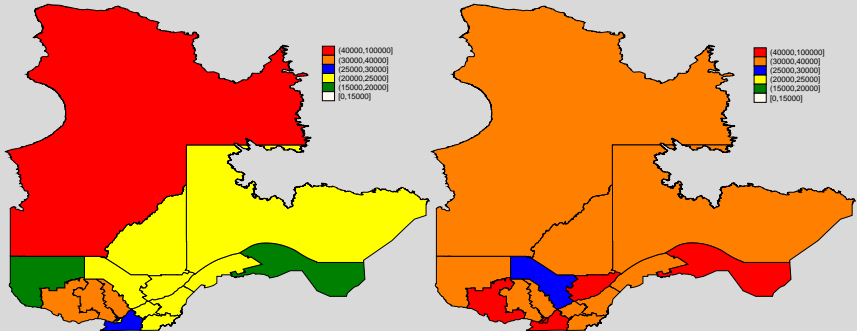
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Obesity in Quebec between 1994 and 1995   Obesity in Quebec between 2010 and 2011

Source: The author's calculations

Income in Quebec between 1998 and 1999   Income in Quebec between 2010 and 2011

Source: The author's calculations

Research question
Is obesity the source of discrimination among the continuously employed in Québec?

Literature Review

Article	Data source	Results
Register & Williams (2011)	Sample survey(NLSCY82)	Reduce to 12% only for women
Baum & Ford (2004)	Sample survey(NLSCY88)	Reduction between 10%-24% for women and 8% for men

Data

Sources of Data

- To carry out this study, we need longitudinal and geo-located data.
- 2000-2011 National Population Health Survey (NPHS).

Variables
Income
BMI
Age
Level of education
Language
Sex

Model

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$$
\begin{aligned}
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\text{General model}: \ y &= \lambda(I_T \otimes W)y + X\beta + u; \\
u &= (\iota_T \otimes I_N)\mu + \epsilon; \\
\epsilon &= \rho(I_T \otimes W)\epsilon + \nu; \\
\nu_t &= \psi\nu_{t-1} + e_t.
\end{aligned}
$$

Moran's test

Variables	p-value
Obesicycle4	0,012*
Obesicycle9	0,006**
Incpercy4	0,008**
Incpercy9	0,023*

$*p < .05 \; **p < .01$

Result

Variables	SAR	SEM	SARAR	GENERAL
Lamda	0.532255***		0.699832***	0.704533***
Rho		0.653770***	(-0.597376)***	(-0.600266)***
Psi				0.146112***
Phi	0.759046***	0.741358***	0.754788***	0.672812***
BMI	0.03316231**	0.03223352**	0.03150412**	0.03195089**
BMISQ	(-0.00034635)*	(-0.00032087).	(-0.00034142).	(-0.00035106)*
sexfemale:BMI	(-0.02341485)*	(-0.02430641)**	(-0.02227376)**	(-0.02158166)**
Age	0.09877225***	0.09705775***	0.09747079***	0.09813159***
Agesq	(-0.00104079)***	(-0.00105313)***	(-0.00104655)***	(-0.00105930)***
Sexfemale	0.44920315*	0.47475144*	0.41672964.	0.39916830.
Hileducplus	0.25420805**	0.25323213**	0.24221427**	0.24852373**
Hileduchigh	0.45386380***	0.44076868***	0.44187049***	0.44556599***
Englishspeak	0.07783662*	0.07018095*	0.08111562*	0.08306018*

Source: The author's calculations

Conclusion

- Obesity is not discriminated against in the population. But
- Relative to men, women are slightly penalized by obesity.
- Relative to men, women earn less.
- There is a strong spatial dependence in earnings Quebec.

THANK YOU FOR
YOUR KIND ATTENTION.