

Motivation, Relevance and Contribution

Reported minimum wage (MW) effects on employment are highly ambiguous throughout the literature and range from strongly negative to positive. Unifying explanations for this observed effect heterogeneity are sparse. We exploit multiple age specific MW increases in New Zealand over a period of 13 years and thereby over various economic conditions to identify the interdependence between minimum wages and business cycle (BC) conditions as one cause for such divergence.

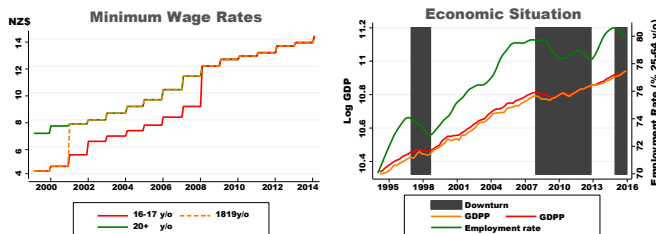
Research Questions:

- (1) Are adverse minimum wage effects determined by economic conditions?
- (2) On which margins can we observe changes with regard to minimum wage increases?

Key Results

- ❖ Observable adverse employment effects during recession, but not during economic growth
- ❖ Employment adjustments emerge mainly due to reduced hiring but not via firing
- ❖ Industries with generally low wages and therefore higher MW-bites are most responsive

Setting and Reform



2001: MW increase for 18-19-year-olds by roughly 70%

- ❖ Significant earnings increase for affected group
- ❖ If any, **positive** employment effect
- ❖ Period of **economic growth**

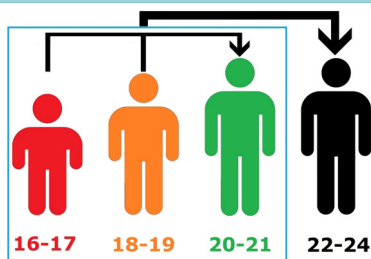
2008: MW increase for 16-17-year-olds by roughly 35%

- ❖ Significant earnings increase for affected group
- ❖ Strong **negative** employment effect
- ❖ Start of a **recession**

Empirical Strategy

- ❖ **Goal:** Estimation of linear probability model for several outcomes: Probability to (i) be employed, (ii) enter firm, (iii) exit firm into unemployment, (iv) change firm, (v) remain in firm, (vi) enrol in education.
- ❖ **Data:** Administrative dataset from Ministry of Education and Inland Revenue Department for all citizens from age 16-24.
- ❖ **Identification** by *Difference-in-Differences* approach: Compare outcomes of affected group and unaffected older group before and after MW change.

$$Y = \sum_a \sum_r \beta_{a,r} * (agegroup_a * reform_r) + X'\beta + u$$



- ❖ **Supplementary:** Reduced-form regression of age specific MW-bite and BC-Indicator interaction.

Empirical Challenges

- ❖ **Announcement effects:** *Agents might react before the reform*
 - ✓ Include age specific announcement period interactions
- ❖ **Spillover effects:** *Older groups might be used as substitutes*
 - ✓ Include age specific reform interactions for unaffected old

X Not fully resolved:

- ❖ **Age specific business cycle effects:** *Young workers might react differently to BC fluctuations*
 - ⇒ Allow for age specific-trends, -seasonality, and -interactions with unemployment rate (UR) of 25-34 year olds
 - ⚡ **Lack of BC-variation pre 2008 to capture full dependency**
 - ⇒ Include an age specific, binary recession interaction term to disentangle MW reform effect w. and w/o. recession
 - ⚡ **Only viable recession dummy after second reform**
 - ⇒ Allow for age specific-interactions with UR of older workers to vary at reform and/or recession thresholds
 - ⚡ **Lack of variation to disentangle effects**

Empirical Results



Change in probability to be employed after reform „x“ compared to 20-21y/o:

Reform	All Industries	High MW-bite Industries
Reform 1		
Age 16-17	0	0
Age 18-19	0	0
Reform 2		
Age 16-17	negative	strongly negative
Age 18-19	0	(negative)

Additional Outcomes

Probability to	Enter Firm	Exit Firm	Enrol in Education
Reform 1	0	0	0
Reform 2	negative	0	positive

Implications

- ❖ **Conclusion:** There doesn't seem to exist a universal MW-effect and analyzing impacts of a MW change in one particular economic environment might not show the whole picture.
- ❖ **Implication:** Given the overall target of the government (e.g. *employment stability vs. temporary output maximization*), the effects have to be anticipated and the MW set accordingly.
 - **Employment stability by a dynamic MW over the BC?**