

## Does Raising the Minimum Wage Help the Poor?

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## The new federal minimum wage

- On 26 October, the Australian Fair Pay Commission raised the federal minimum wage to \$13.50/hour or \$512 per week (increase takes effect on 1 December).
- The weekly amount is about 58% of median full-time weekly earnings, and the hourly amount is about 68% of the median hourly wage. In the OECD, only France has a higher minimum wage.
- The increase was generally regarded as generous, though it was only designed to keep the minimum wage constant in real terms:

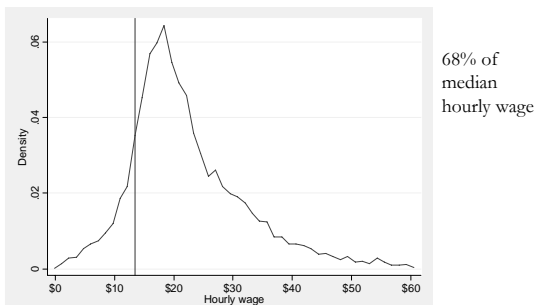
*"the increase to \$511.86, or by 5.65%, compensates for the estimated increase in the consumer price index during the 18 months to the end of December"*

- Ian Harper, *The Australian*, 30 October

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## The new federal minimum wage



Source: Author's calculations, based on 2004 HILDA wages +8%. Red line denotes new federal minimum wage of \$13.47.

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## Effects of minimum wage rises

- Whether a minimum wage rise helps the poor mostly depends on 3 questions:
  - (a) What is the impact on employment?
  - (b) What is the impact on hourly wages?
  - (c) Are minimum wage workers in low-income or high-income households?

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## Minimum wages and employment

- Australian estimates of the elasticity of labour demand with respect to the minimum wage are generally negative, but cover a wide range.
  - -2.0 to -5.0 (Daley et al 1998)
  - -0.55 (Lewis 2005)
  - -0.29 for all, -1.0 for youths (Leigh 2003, 2004)
  - -0.2 (Harding & Harding 2004)
  - -0.05 to -0.28 (Mangan and Johnston 1999, teens only)
  - not significant, but elasticities range from -1.6 to -23.1 (Junankar, Waite and Bellchamber 2000)

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## Minimum wages and employment

- Webster (2003) surveys estimates of the *own-wage elasticity of labour demand* in Australia, and finds estimates ranging from -0.15 to -1.0.
- Note that for minimum wage workers, elasticity of labour demand with respect to the minimum wage and own-wage elasticity of labour demand are the same.

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## Minimum wages and employment

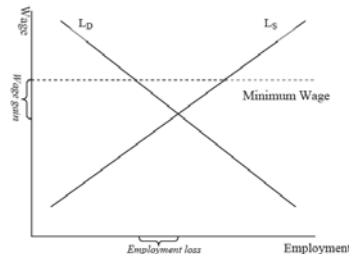
- Neumark & Wascher (2006) survey international evidence on minimum wages and employment over the past 15 years.
- They present summary tables for 86 estimates.
  - 2/3rds are negative
  - fewer than 10 are positive
- They high 19 “preferred” studies. Of these, 18/19 point to negative employment effects.

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## Minimum wages and hourly wages

- Under a model of homogenous labour, the answer is trivial.
- There is only one wage, so everyone gets a wage rise, by the full amount of the minimum wage increase.



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## Minimum wages and hourly wages

- But a model in which everyone always earns their marginal product has a quite different prediction.
- Under this model, when the minimum wage goes up, no-one gets a wage rise.



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## Minimum wages and hourly wages

- These two models are gross oversimplifications of reality.
- But empirical evidence is surprisingly hard to find.
- I know of no Australian study that has estimated the impact of minimum wage rises on hourly wages. The AFPC did not commission any research on the topic.

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## Minimum wages and hourly wages

- A natural strategy would be to identify minimum wage workers before an increase, and follow them to see what happens to their wages after the minimum wage goes up.
- But the Australian Labour Force Survey:
  - does not ask about wages
  - does not make the microdata for all surveys available to researchers
- Using variation across US states, Neumark, Schweitzer and Wascher (2004), estimate that the elasticity of hourly wages with respect to the minimum wage is 0.4-0.8

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## Minimum wages and family incomes

- For those with positive wages, the correlation between hourly wages and disposable household income is 0.20
- What is the right group to compare minimum-wage workers with?
  - all adults?
  - all working-age adults?
  - all adults in an employed household?

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### Minimum wages and family incomes



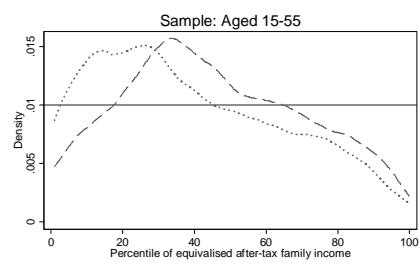
The typical minimum wage worker is at the 51st percentile.

Dotted line – subminimum wage workers  
Dashed line – minimum wage workers  
Source: Leigh (2005)

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### Minimum wages and family incomes



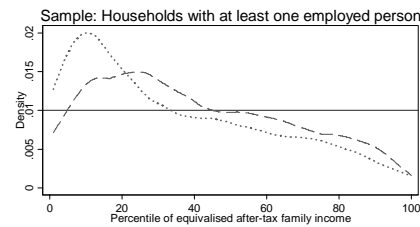
The typical minimum wage worker is at the 43rd percentile.

Dotted line – subminimum wage workers  
Dashed line – minimum wage workers  
Source: Leigh (2005)

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### Minimum wages and family incomes



The typical minimum wage worker is at the 36th percentile.

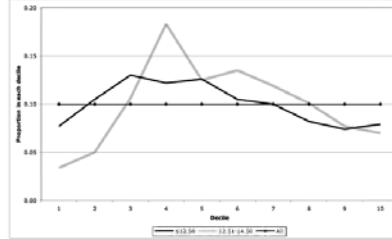
Dotted line – subminimum wage workers  
Dashed line – minimum wage workers  
Source: Leigh (2005)

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### Minimum wages and family incomes

Figure 3B: Aged 21+ equivalent household disposable income



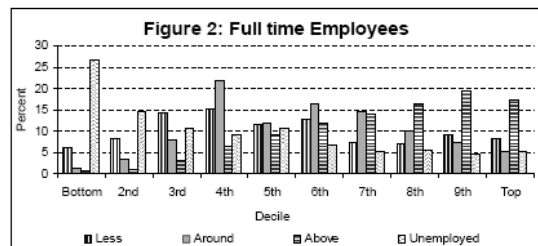
Source: HILDA Wave 4.

Source: Healy & Richardson (2006)

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### Minimum wages and family incomes

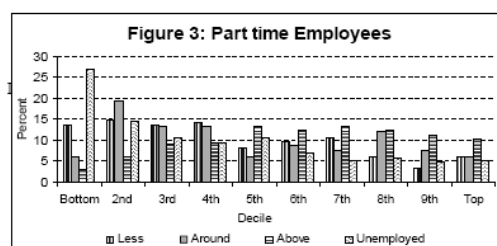


Source: McGuinness, Freebairn & Mavromaras (2006)

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### Minimum wages and family incomes



Source: McGuinness, Freebairn & Mavromaras (2006)

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## Minimum wages and family incomes

- Clear evidence across datasets and researchers that the typical minimum wage worker is in a middle-income household.
- In most specifications, there are more minimum wage workers in the richest 20% of households than in the poorest 20% of households.

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## Minimum wages and inequality

- From Australian minimum wage research:
  - we know a little about employment effects
  - we know almost nothing about hourly wage effects
  - we know quite a bit about who earns minimum wages
- Using reasonable bounds on employment and hourly wage elasticities with good information on the distribution of minimum wage workers across households, I can simulate the impact of a minimum wage rise on inequality and poverty.

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## Minimum wages and inequality

Table 4: How does the minimum wage affect inequality?  
Simulated 10 percent minimum wage rise under various elasticity assumptions

	(1)	(2)	(3)
	Individuals' Hourly Wages	Individuals' Weekly Earnings	Equivalized Pre-Tax Family Income
<b>Panel A: Gini Coefficient</b>			
Status Quo	0.250	0.338	0.376
(i) $\epsilon(\text{Hourly Wage})=1$ & $\epsilon(\text{LD})=0$	0.239	0.330	0.374
(ii) $\epsilon(\text{Hourly Wage})=0$ & $\epsilon(\text{LD})=-1$	0.247	0.349	0.381
(iii) $\epsilon(\text{Hourly Wage})=1$ & $\epsilon(\text{LD})=-1$	0.237	0.342	0.379

Source: Leigh (2005)

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## Minimum wages and inequality

- On most reasonable bounds for employment and hourly wage elasticities, a minimum wage increase will not lower family income inequality much, and may increase it.
- Some similar evidence from the US: Neumark, Schweitzer and Wascher (2005) find that state minimum wage rises increase poverty.
- But my calculations ignore welfare, and the US has a famously ungenerous welfare state – so it may well be the case that Australian minimum wage rises do not increase inequality.

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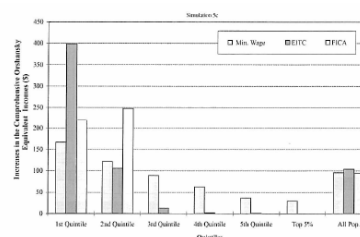
## Minimum wages and inequality

- Are there better ways of helping people in low-income households than a minimum wage increase?
- Formby, Bishop & Kim (2005) model three policy changes in the US:
  - a) a \$1/hour rise in the federal minimum wage
  - b) an equal cost increase in the Earned Income Tax Credit
  - c) an equal cost payroll tax for workers in low-income households
- Of these three policies, they find that the EITC does the most to reduce inequality.

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## Minimum wages and inequality



Min. Wage = \$1/hour increase in minimum wage  
EITC = equal cost increase in EITC  
FICA = equal cost payroll tax cut for poor families

Source: Formby, Bishop & Kim, *Minimum Wages and Poverty: An Evaluation of Policy Alternatives* (2005)

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## Minimum wages and inequality

“The minimum wage is a blunt instrument for reducing overall poverty, however, because many minimum-wage earners are not in poverty and because many of those in poverty are not connected to the labor market. We calculate that the 90-cent increase in the minimum wage between 1989 and 1991 transferred roughly \$5.5 billion to low-wage workers.... an amount that is smaller than most other federal antipoverty programs, and that can have only limited effects on the overall income distribution.”

- Card and Krueger, *Myth and Measurement* (1995)

## Further Details

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- Blog: <http://andrewleigh.com>
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### ■ Available research papers:

- “Does Raising the Minimum Wage Help the Poor?”
- “Employment Effects of Minimum Wages: Evidence from a Quasi-Experiment”
- “Minimum Wages and Employment: Reply”

### ■ AFPC decision and research:

- <http://www.fairpay.gov.au>