Employer mandates and health insurance reform

Health Economics
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Introduction

- Tax code encourages firms to provide health insurance to workers
- Therefore, employers are the primary source of health insurance for the non-elderly, non-indigent
- Also the primary reason for such a high uninsurance rate
- Reform proposals tend to be centered around expanding insurance through employers

Tradeoffs

- The government sometimes mandates employers provide a particular benefit
- Sometimes the government taxes the firm and then provides the benefit to all
- When is one more preferred than another? Do we get less distortions from one program than another?

Language

- Legislation tends to suggest that firms are the ones paying for the mandate
  – Firms need to pay their “fair share”
- Ex: MA enacted “pay or play” in 2006. That portion of act was called “Fair Share Contribution.”
- Important question is one of incidence – who pays for the mandate?
Current context

• Should the government
  – Mandate firms provide health insurance
    • Tie the benefit to employment
    • Only benefit those that work
  – Should it tax current workers and provide the benefit directly to all
• Similar but distinct distortions in both cases

Examples

• Many examples of government mandates – firms required to provide some benefit to workers – a benefit tied to employment
• Three key examples
  – Unemployment insurance
  – Workers compensation
  – Social security

Example: Unemployment insurance

• All states required to pay for unemployment insurance (UI) for workers
• Workers receive UI if they are fired/laid off
• Do not receive benefits if they quit
• Premium is a function of
  – Earnings
  – Benefit level
  – Firm’s previous history of job turnover

• Premiums are collected from firms
• Benefits are provided by state UI programs
• Program taxes firms, then provides workers with a benefit
Raise taxes to pay for some Government-provided benefit

• Suppose that the govt. will provide some benefit TO ALL – not just to workers

• Benefit is not contingent on employment

• The funds for this program must come from somewhere

• For simplicity, let’s assume it will come from a payroll tax collected from firms
  – Fixed costs per hour of employment
  – Increase in the hourly costs of labor

• Example: Medicare primarily financed by payroll tax, available to all aged 65 and above

• D1 is the original demand for labor before the payroll tax
  – At W1 firms willing to hire H1 hours

• Remember, Y axis is the wage transacted between firms and employees

• Impose a payroll tax of $t/hour

• For every hour hired
  – Firms pays wage to worker
  – Additional $t to government

• Under the payroll tax, how much are firms willing to hire?

• To hire H1 hours, wage must fall to W1-t
  – Firms is only willing to pay a total of W1 per hour if it hires H1 workers
  – Firms pays W1-t to workers
  – Addition t to the govt.
  – Total of W1

• Payroll tax shifts down the demand for labor by amount equal to the tax
• Market equilibrium before tax
  – W1, H1
• Payroll tax shifts down the demand for labor by an amount equal to the tax
• Market clearing wage falls to W2, employment falls to H2
• The payroll tax to fund health insurance has distorted the labor market

Tax incidence – who pays for the tax?

• Notice two things
  – Wage received by workers has fallen from W1 to W2. Workers are paying for the coverage in the form of lower wages
  – Wage paid by the firm has increased
    • Wage transacted between firm/worker fallen from W1 to W2
    • Total compensation is W2 + t, so, cost has increased from W1 to W2+t.
• Old friend dead weight loss has appeared again
  • Because labor demand had declined, consumer’s surplus has shrunk
    – Old CS = Area above line W1d and below demand
    – New CS = Area above line W2a and below demand

• Because supply has fallen, there is a change in producers surplus
  – Old PS = area below line W1d and above supply
  – New PS = area below W2c and above supply

• Total surplus has fallen by
  – Area facdg

• Some of that area is captured by the government in the form of taxes
  • $H2(t) = \text{area} \ (\text{facg})$
  • Firms pay area (fabh)
  • Workers pay area (hbcg)
  • An area is lost (adg) -- dead weight loss of taxation
Employer mandate

- Employers must provide health insurance to workers
- Suppose that the cost of the program is $t per hour to the firm
- The mandate has the same impact as a per unit payroll tax
  - To hire H1 hours, firm is willing to pay W1
  - With a tax, the only way they would hire H1 is if wages fell to W1-t
What might that tax be?

- Example: cost of health insurance
- Average workers works 2000 hours/year
  - 50 weeks, 40 hours/week
- Assume health insurance costs $5000/person per year and people work 2000 hours/year
- Roughly $2.5/hour of work

What about labor supply?

- Height of supply curve represents what people would supply to labor market at prevailing wage
- Position of labor supply curve is a function of job attributes
  - When the job 'improves', people will supply more at any prevailing wage
  - As quality of job declines, they supply less
- Original supply curve is S1
  - At wage W1, workers willing to supply H1
- With employer mandate, firms now provide health insurance
- Workers value the insurance, so at any hours, they are willing to take less in wages for the same job
- Supply curve shifts down by a distance equal to the benefit (S1 + V)
Put some more structure

- Monetize the benefits that workers place on the new mandate
- Workers value at an amount equal to $V$ per hour
- Supply curve shifts down by an amount just equal to the value
  - Before mandate: willing to supply $H_1$ at $W_1$
  - After: willing to supply $H_1$ at $W_1 - V$
    - Receive $W_1 - V$ from job
    - Receive $V$ from new mandated benefit or $W_1$ in total

Three cases

- Case 1: $V = 0$
  - Workers do not value mandate at all
- Case 2: $V < T$
  - Workers value the mandate less than they pay in taxes
- Case 3: $V = T$
  - Workers value the mandate at what it costs them in taxes
What we are going to do

- Consider what is more efficient: govt mandate firms provide or govt tax and then provide
- E1 is initial equilibrium
- E2 is equilibrium under govt tax/provision
- E3 is equilibrium under employer mandate

Case 1

- Labor demand
  - Under tax will shift down by the amount of the tax
  - Under mandate, will shift down by the amount of the implicit tax
- Labor supply:
  - Will not change in either situation because workers do not value E1 original equilibrium

What would be the equilibrium if the govt taxed firms and directly provided the benefit?
- Would be the same – firm has an increased cost of employment, labor supply stays the same
- In this case, govt mandate and govt provision is the same
Case 2: $V < t$

- Demand curve falls by $t$
- Supply curve falls by $v$

- Without mandates, Equilibrium E1. H1 hours, workers required W1 in wage.
- With mandates, equilibrium E3. Quality of the job improves, so supply curve falls, new hours/wages are H3/W3
- What is the equilibrium if the govt taxes and provides the benefits directly? E2
- Govt mandates look superior in this case
Case 2: Govt mandate

- Workers
  - Get hourly wage of $W_1$
  - Receive benefit of $v$
  - Get job worth $W_1 + v$ per hour
- Firms
  - Pay hourly wage of $W_1$
  - Pay tax of $t$ per hour
  - Have hourly costs of $W_1 + t$

Case 3: $V = t$

- Demand curve shifts down by $t$
- Supply curve shifts down by $v$
• Workers
  – Receive $W_1 - t$ in an hourly wage
  – Receive $t$ in benefits
  – Receive $W_1 - t + t = W_1$ in hourly benefits

• Firms
  – Pay $W_1 - t$ in hourly wage
  – Pay $t$ in benefits
  – Pay $W_1$ in total compensation per hour

When workers value the benefit

• Mandates are superior to govt tax/provision
• Why: when tie benefits to the job, the labor market distortions of govt tax/provision are reduced/eliminated because of a supply response
• Key result: if workers value benefits – they pay for the mandated benefits in the form of lower wages --

Example

• Supply: $W_s = 40 + (1/3)L$
• Demand: $W_d = 190 - (2/3)L$
• $W$ is daily wage, $L$ is number of workers willing to work a full day
• Market equilibrium:
  – $W_s = W_d$
  – $40 + (1/3)L = 190 - (2/3)L$
  – $150 = L$
  – $W = 40 + (1/3)(150) = 90$

• Case 1: Suppose a mandates increases costs by $30/day. Workers do not value the benefit. What is the market outcome?
• Demand for workers will fall by a vertical distance of the tax or $30$
• Nothing will happen to supply
• $W_d - t = 190 - (2/3)L - 30 = 160 - (2/3)L$
• $W_d - t = W_s$
• $160 - \frac{2}{3}L = 40 + \frac{1}{3}L$
• $L = 120$,
• $W_s = 40 + \frac{1}{3}L = 50 + \frac{1}{3}120 = 80$
• $L$ has fallen by 30 units
• Wage received by workers has fallen by $10$ (from $90$ to $80$)

• Cost per day for firms hiring workers has increased by $20$
  – Old wage is $90$
  – New cost is $80$ wage + $30 = $110$ cost per day in benefits

Case 3
• Suppose workers value the benefit at $30$/day ($V=30$)
• Labor supply curve will shift down by an amount equal to the benefit
• $W_d - t$ is still $160 - (2/3)L$
• Supply is now $W_s - v = 40 + (1/3)L - 30$
• $W_s - V = 10 + (1/3)L$

• New market equilibrium
• $W_d - t = W_s - v$
• $160 - \frac{2}{3}L = 10 + \frac{1}{3}L$
• $L = 150$
• $W_d = 60$
• Workers receive a job that is valued at $90/day
  – $60 in wages
  – $30 in benefits
• Firms are paying $90 per day in employment
  – $60 in wages
  – $30 in benefits

Gruber

• Prior to 78, few plans covered childbirth
• 1975-79, 23 states passed laws mandating coverage for childbirth
• 1978 Pregnancy Discrim Act, prohibited any differential treatment of pregnancy in employment relationship
• State/Fed law increased cost of health insurance by expanding benefits

• Research question: who pays for the additional benefit?
• Readily-identifiable beneficiaries:
  – Families w/ worker/spouse in childbearing age
• Easily identifiable group who receive no benefit
  – Single men
  – Older couples past childbearing age

• Efficiency of group mandates assumes cost shifting via wage
• Some limits
  – Anti-discrim laws
  – Min wage
  – Work practices (unions) that make pay uniform
• If you cannot shift costs, may change incentive to hire the group receiving the benefit
Experimental Design

• Difference-in-difference-in-difference
• 1st difference in difference
  – Treatment states before and after intervention
  – Sample includes people likely impacted by the law (married women)
• 2nd difference in difference
  – Treatment states before and after intervention
  – Samples include people not likely impacted (single males and older women)

Two potential experiments

• Experiment 1
  – Treatment: states that adopted laws
  – Control: those that did nothing
• Experiment 2:
  – Treatment: Federal law
  – Control: states that had a statute in place

Data: May CPS – used to identify insurance status (Now is done in March)
Problem: Prior to 1978, not all states identified
  – some in state groups
Three large states with laws: IL, NJ, NY
All other states from same region that can be identified prior to 1978 are in control

Controls:
  – IL (OH and IN)
  – NY and NJ (MA, CT and NC)
<table>
<thead>
<tr>
<th>Coverage</th>
<th>Demographic group</th>
<th>Annual cost (1990 dollars)</th>
<th>Annual cost (1997 dollars)</th>
<th>Cost as percentage of 1997 weekly earnings</th>
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</thead>
<tbody>
<tr>
<td>Family</td>
<td>20–29 year-old females</td>
<td>$364</td>
<td>$360</td>
<td>4.6</td>
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<tr>
<td>Family</td>
<td>30–39 year-old females</td>
<td>$756</td>
<td>$777</td>
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<tr>
<td>Individual</td>
<td>20–29 year-old females</td>
<td>$324</td>
<td>$119</td>
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<tr>
<td>Individual</td>
<td>30–39 year-old females</td>
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<td>$92</td>
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<tr>
<td>Family</td>
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<tr>
<td>Family</td>
<td>30–39 year-old males</td>
<td>$756</td>
<td>$777</td>
<td>1.7</td>
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</tbody>
</table>

DDD, Mean Log Hourly Wage

<table>
<thead>
<tr>
<th>Treatment: Mar. Reform</th>
<th>Women 20-40 No ref.</th>
<th>Before</th>
<th>After</th>
<th>Δ</th>
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</thead>
<tbody>
<tr>
<td>Reform</td>
<td>1.547</td>
<td>1.513</td>
<td>-0.034</td>
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<tr>
<td>No ref.</td>
<td>1.369</td>
<td>1.397</td>
<td>0.028</td>
<td></td>
</tr>
<tr>
<td>ΔΔ</td>
<td>-0.062</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Control: older women and single males Reform | No ref. | 1.759 | 1.748 | -0.011 |
| ΔΔ | -0.008 |
| ΔΔΔ | -0.054 |

Burkhauser/Simon

- Previous two slides
  - Maternity benefits are 4-5% of weekly wages for married women < 40
  - Wages of this group fell by 5-6%
- What does this imply about efficiency of labor market?

- Standard prediction: pay or play will reduce wages of newly insured
- Implicit tax on business of $2-$3/hour
- Problem: uninsured concentrated in low wage jobs and wages cannot fall below minimum level
- What will happen for these workers?
Current minimum wage

- Min wages set at the federal level
  - $7.25 effective July 24, 2009
- States can raise but not lower
  - WA $8.55
  - OR $8.40
  - VT $8.06
  - IL/DC $8.25
  - CA $8.00

<table>
<thead>
<tr>
<th>Wages</th>
<th>% of workers</th>
<th>% uninsured</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0-$4.99</td>
<td>1.86</td>
<td>4.15</td>
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<tr>
<td>$5.0-$7.24</td>
<td>8.58</td>
<td>19.62</td>
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<tr>
<td>$7.25-$10.24</td>
<td>19.61</td>
<td>36.49</td>
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<tr>
<td>$10.25-$14.99</td>
<td>25.50</td>
<td>24.04</td>
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<td>$15+</td>
<td>44.45</td>
<td>15.70</td>
</tr>
<tr>
<td>100.00</td>
<td>100.00</td>
<td>100.00</td>
</tr>
</tbody>
</table>
### Results

- 386K employees without insurance will lose their job as a result of pay or play initiative.
- 363K workers employees with insurance from spouse but without EPHI will lose job.
- 11 million will gain insurance, cost is roughly 750,000 greater unemployed (0.75 per pt rise in unemployment rate).
- What are the two key assumption?

### Two groups

(25+ employee size)

- If wages are currently below $7.25, pay-or-play, none of the mandate will be captured in the form of lower wages.
- If wages are $7.25 to $10.25, some of the pay or play mandate cannot be captured in the form of lower wages (assume $3.00/hour cost).