Employment, Wages, and Alcohol in Russia: Simultaneous Estimates

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Motivation

- Alcohol is a part of life and culture
- Russia is one of the leaders in alcohol consumption (WHO)
- Influence of alcohol consumption on labor market in Russia?
- Relationship between alcohol consumption and labor market outcomes is not linear
Background

• Positive influence of moderate alcohol consumption on health was found in the medical literature (Shaper, 1988; Coate, 1993; Linn et al., 1993)
• Whether positive influence of moderate alcohol consumption extends on a labor market?
• Positive association between moderate drinking and labor market outcomes (Hamilton and Hamilton, 1997; Zarkin et al., 1998; MacDonald and Shields, 2001)
• Alcoholism and abusive drinking are negatively connected with income and employment (Mullahy and Sindelar, 1993, 1996; Kenkel and Ribar, 1994)
• Only a few researches in Russia (Tekin, 2002)
Benefits and risks of alcohol consumption

Benefits:
• Lower risk of cardiovascular diseases
• Remove stress
• Give pleasure
• “Networking” function

Risks:
• Decreases in productivity
• Higher probability of other diseases
• Social consequences
Econometric Model

• System of simultaneous equations
• Multivariate probit

• Allows to consider:
  – Endogeneity of alcohol consumption
  – Nonlinear relationship between alcohol consumption and labor market
  – Simultaneous influence of alcohol consumption on various parameters of labor market
  – Selectivity bias

• Maximum simulated likelihood
Data

- **Russia Longitudinal Monitoring Survey (RLMS)** - representative household-based survey

- Data from the last four rounds from 2004 to 2007

- Excellent data source. Contains detailed information on labor force behavior and alcohol consumption

- Final sample consists of 7179 men (46 %) and 8268 women (54 %)
Distribution of drinking

Average daily ethanol consumption:
- 27 ml for males
- 6 ml for females
## Results

<table>
<thead>
<tr>
<th></th>
<th>Drinking status</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Employment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drinker</td>
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<td>1.2151</td>
<td>1.073</td>
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<tr>
<td>Heavy drinker</td>
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<tr>
<td><strong>Wage</strong></td>
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<tr>
<td>Heavy drinker</td>
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<td>-0.3616</td>
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<tr>
<td><strong>Hours of work</strong></td>
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<tr>
<td>Drinker</td>
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<tr>
<td>Heavy drinker</td>
<td></td>
<td>-0.0669</td>
<td>-0.0077</td>
</tr>
</tbody>
</table>
Estimation results

- Moderate drinking increases probability of employment
- Excessive drinkers have lower probability of employment
- Moderate drinkers have higher wages and work more hours
- Heavy drinking removes this positive effect.
- Factors of drinking and heavy drinking are different
Conclusions

• U-shape relationship between alcohol consumption and labor market

• Moderate drinking positively influences on labor market outcomes

• Importance of endogeneity of alcohol consumption