Time Series Analysis: Cash Welfare Guarantee and Hours Worked Among Single Mothers

**Time series analysis:** Analysis of two series over time.
When Is Time Series Analysis Useful? Cigarette Prices and Youth Smoking

- Sharp, simultaneous changes in prices and smoking rates in 1993 and 1998–onward
- Known causes: price war, tobacco settlements
Cross-Sectional Regression Analysis: Labor Supply and TANF Benefit

![Graph showing labor supply and TANF benefit relationship]

- Labor supply (hours of work per year)
- TANF benefit (per year)
- Regression line
- Slope = -0.2

Points A and B on the graph indicate different levels of TANF benefit and labor supply hours.
Example with Real-World Data: Labor Supply and TANF Benefits

![Graph showing the relationship between TANF benefits and labor supply. The graph includes a regression line with a slope of -127.](image)
## 3.3 Benefits and Labor Supply in Arkansas and Louisiana

<table>
<thead>
<tr>
<th></th>
<th>1996</th>
<th>1998</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Arkansas</strong></td>
<td></td>
<td></td>
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<tr>
<td>Benefit guarantee ($)</td>
<td>5,000</td>
<td>4,000</td>
<td>−1,000</td>
</tr>
<tr>
<td>Hours worked</td>
<td>1,000</td>
<td>1,200</td>
<td>200</td>
</tr>
<tr>
<td><strong>Louisiana</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benefit guarantee ($)</td>
<td>5,000</td>
<td>5,000</td>
<td>0</td>
</tr>
<tr>
<td>Hours worked</td>
<td>1,050</td>
<td>1,100</td>
<td>50</td>
</tr>
</tbody>
</table>
Figure 2. Proportion with Positive Earnings for Nonwinners, Winners, and Big Winners

Note: Solid line = nonwinners; dashed line = winners; dotted line = big winners.

All Unmarried Females