Tax Credits and Household Vehicle Spending

Leslie McGranahan
Senior Economist and Research Advisor Federal Reserve Bank of Chicago

This presentation represents my own views and not the views of the Federal Reserve Bank of Chicago, or of the Federal Reserve System.
What Are Tax Credits

• Earned Income Tax Credit (EITC)
  – Refundable tax credit
    • Administered by the IRS / through the tax code
    • Paid out as part of annual tax refund in year subsequent to year of eligibility
  – Since 1975
  – Matches earnings of low income families
  – More generous to families with (more) kids

• Additional Child Tax Credit
  – Refunds a portion of unused Child Tax Credit to low income households
  – Refundability since 2001. (CTC enacted in 1997)
Growing Importance of Refundable Tax Credits

Federal Spending on Means Tested Non-Medical Programs (2016$)
Unique Timing of Tax Credits

Share of Annual Spending
By Month, 2016

- SNAP
- TANF
- Housing Assistance
- ACTC
- EITC
Huge Spike in Income

Monthly Income, February EITC Recipient

- **Average Recipient**
  (Annual Inc. $18k, Ref. EITC $2.4K)

- **At Minimum Income for Maximum Credit**
  (3 kids, Ann. Income $16K, Est Ref. EITC $5.4k)
What Do People Do With Tax Credit Refunds?

• Questionnaires
  – pay bills and loans (#1)
  – improve access to transportation
  – purchase consumer durables
  – Purchase non-durables
  – establish savings and build assets
  – engage in leisure activities
  – make human capital investments
What Do People Do With Refunds?

More than half of Americans plan to be financially responsible with their tax refund this year.

- 27% Pay off debt (loans, credit cards, etc.)
- 25% Put in savings
- 9% Put toward a vacation
- 5% Make a major purchase (car, home, etc.)
- 4% Splurge on a purchase (TV, shoes, etc.)
- 30% I do not receive a tax refund

Courtesy of GOBankingRates.com
What Happens to Debt?

• Previous Research
  – Total debt seems to go up.
  – Past due debt falls
  – Credit card debt and car debt increase
  – Why?

• This paper
  • Deeper dive at cars
  • Why cars?
COME WITH YOUR W-2 AND LEAVE WITH YOUR NEW CAR.

LET US DO YOUR TAXES!
BRING IN YOUR W-2, LEAVE WITH A NEW CAR!
CAR PROS WILL FILE YOUR TAXES FOR YOU AND GIVE YOU YOUR REFUND TOWARD A NEW CAR!

TAX RETURNED
How You Can Use Your Income Tax Refund to Get a New Car
75% OF TAX RETURNS | 100 MILLION
Result in refunds averaging around $2,651 in 2013

HERE'S HOW:
1. GET THE CHECK FROM Uncle Sam
2. GET THE CHECK FROM A Car Dealer

WHAT IF YOU APPLIED PART OF ALL OF THE MONEY TO THE PURCHASE OF A NEW VEHICLE?

WHO PAY THEIR TAXES?

AMOUNTnard TAX RETURN IN YOUR

PAY YOUR BALANCE
IF YOU

Do you owe tax?

TAX TIME
GET MORE FOR YOUR REFUND!

SHOULD I USE MY TAX RETURN?
Two Data Sets

• **New York Fed Consumer Credit Panel / Equifax (CCP)**
  – Quarterly random sample of information from credit reports. Aggregate to zip code
  – Zip code level EITC/ACTC from IRS
  – Is the first quarter different?

• Consumer Expenditure Survey
  – Monthly data on consumer spending
  – Imputed EITC based on income and family information
  – Is February different?
Change in Vehicle Debt, by Age of Debt

New Debt Issued in Quarter

Change in Old Debt

- Change in Debt Relative to Q3
- Graphs for Q1, Q2, Q3, Q4 with High Tax Credit
- Scale for change in debt from -10 to 30
Change in Vehicle Debt, By Payment Status

Debt that is paid as due

Debt that is past due
Spending relative to October

New Car Purchases

Used Cars and Trucks
Spending Relative to October

Maintenance and Repairs

Vehicle Insurance
Conclusions

• What do households do?
  – Buy more cars, especially used cars
  – Pay off past due car debt
  – Spend more on maintenance and repairs

• What does this mean?
  – Cars are crucial for work
    • Low income families need cars.
    • ¾ of Americans commute to work alone in a car
      – 91% commute by car in Northeast Ohio, 88% in Cuyahoga (FRB-Cleveland)
  – But are these good loans?
    • Buy Here Pay Here Dealers
# CCP Results

## High Tax Credit Zip Code Dummies

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<thead>
<tr>
<th>VARIABLES</th>
<th>(1)</th>
<th>(2)</th>
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<th>(4)</th>
<th>(5)</th>
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<td>Q1 x High Tax Credit</td>
<td>32.25***</td>
<td>30.77***</td>
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<td>R-squared</td>
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Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1
## CCP Results

### Estimated Tax Credit Amounts

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>(1) Car Debt Balance (Additional/Old)</th>
<th>(2) Debt for Additional Cars</th>
<th>(3) Debt for Pre-Existing Cars</th>
<th>(4) Car Debt Balance (Payment Status)</th>
<th>(5) Debt that is Current</th>
<th>(6) Debt that is Past Due</th>
<th>(7) Number of Additional Cars</th>
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<tbody>
<tr>
<td>Per Capita Estimated Quarterly Tax Credit</td>
<td>0.0364</td>
<td>0.119***</td>
<td>-0.0830***</td>
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## CEX Results - Discrete

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>New Cars and Trucks</th>
<th>Used Cars and Trucks</th>
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<th>Vehicle Insurance</th>
<th>Registration s/License</th>
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