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Asymmetric responses to income changes: The payroll tax increase versus tax refund in 2013

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HIGHLIGHTS

- We examine individuals' spending responses to the 2013 US payroll tax increase and tax refunds received in 2013.
- Taxpayers respond asymmetrically to tax increases versus tax refunds.
- The asymmetry is persistent across race, gender, and measures of financial constraints.

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ABSTRACT

We examine low-to-middle income individuals' responses to the 2013 payroll tax increase and their 2012 tax refund and find that consumption *declines* 90 cents per dollar lost to the tax increase, and *rises* 60 cents per additional tax refund dollar.

1. Introduction

The legislated tax changes in the United States from 2001 through 2012, used to test the implications of the permanent income hypothesis (PIH), *lowered* individuals' taxes and raised their income (e.g., Johnson et al., 2006; Shapiro and Slemrod, 2003, 2009; Sahm et al., 2012). In January 2013, the payroll tax *increased* from its lowered rate of 4.2% during 2011 and 2012, as part of the temporary fiscal stimulus to boost income, to its previous level of 6.2%. A relevant question is whether individuals respond differently to tax-induced income losses and gains.

This paper examines individuals' responses to tax-induced income losses versus gains using surveys posed to a group of mid- to low-income taxpayers in Boston, Massachusetts. The data were collected between January and April 2013 as part of the Boston Earned Income Tax Credit (EITC) Coalition's free tax preparation service.[1] Participants were asked about their planned response to the 2013 payroll tax increase as well as what they would do with their calculated tax refund in 2013 (if any).

According to the PIH, agents respond symmetrically to increases and decreases in disposable income in the absence of credit constraints and expectation surprises. If agents face credit constraints, the consumption response to anticipated income gains is expected to be greater than to anticipated income losses (Jappelli and Pistaferri, 2010). Yet, if an income decrease is unanticipated, as may be the case with the payroll tax increase,[2] credit constraints may cause a greater consumption response to an income loss compared with a consumption response to a given income gain. Even in the absence of credit constraints, income expectations matter for consumption: a taxpayer who expected the lower payroll tax rates to be permanent would cut back spending more in response to the

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[1] Anyone using the tax preparation site was offered the opportunity to participate in the survey and free credit counseling.

[2] Most people in our sample were not aware of the increase in the payroll tax rate, consistent with the idea that the change in the payroll taxes was unanticipated for the individuals surveyed.

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Effective January 1, 2013, payroll taxes increased by 2% (from 4.2% to 6.2%). This increase affects all taxpayers in the United States (if you are self-employed, this changes the taxes you pay quarterly). The tax increase means that for the same pay from your employer, the amount you take home after taxes is lower.

What is the biggest change you made or plan to make to adjust to the reduction in your take-home pay due to the tax increase?

☐ Reduce spending ☐ Reduce savings ☐ Borrow more/Use more credit ☐ Other: ________

If you plan to make other changes in addition to the one above, what is the **next biggest change** you made or plan to make to adjust to the reduction in your take-home pay due to the tax increase?

☐ Reduce spending ☐ Reduce savings ☐ Borrow more/Use more credit ☐ Other: ________
☐ No change

If you are planning to make more than one change due to the tax increase, how would you describe the combination of changes you will make to adjust to lower take-home pay?

____% of the adjustment is by **reducing monthly spending**,
____% of the adjustment is by **reducing monthly savings**,
____% of the adjustment is by **borrowing more (which may include increasing your credit card balance)**

Fig. 1. Questions regarding the response to payroll tax increase.

Are you getting a refund this year? ☐ Yes ☐ No
If you are getting a refund (answered YES above):

How much is your total refund (federal and state refunds together)? $________

How are you going to spend your refund?
If you have already put some of your refund in a savings bond, please include this in the savings amount below.

☐ Savings: $________ ☐ Paying bills: $________
☐ Buying stuff (including groceries): $________ ☐ Paying debt (including old taxes):
☐ Paying for school/child expenses: $________ ☐ Other (Specify________________):
☐ Vacation: $________

Fig. 2. Questions regarding an individual's tax refund.[3]

(surprising) tax rate increase compared with one who expected the tax cut to be temporary.

The results show a 30% point difference in individuals' marginal propensities to consume (MPC) out of these two tax-related income fluctuations. Taxpayers are much more likely to reduce spending in response to the payroll tax increase than they are to increase spending based on their anticipated tax refund. This asymmetry in spending behavior is particularly noticeable for individuals whose saving behavior out of the tax refund is inconsistent over time. The gap in MPCs is also robust to financial constraint controls, contrary to what the PIH would predict even with unanticipated income changes, as well as proxies for expectations and individuals' demographic and behavioral characteristics.

This study adds to the literature (especially Graziani et al., 2013 and Livingston et al., 2013) in directly testing whether financial frictions explain the differential responses to tax-induced income fluctuations. The study also focuses on low- and middle-income taxpayers whose spending plans are probably impacted the most due to their relative limited ability to smooth consumption. In addition, since we compare planned spending responses to two events occurring in early 2013 – the 2013 payroll tax increase and 2012 tax refund received in 2013 – the underlying macroeconomic and household conditions are roughly the same. Households' responses are also not memory-based, in contrast to existing studies.

2. Data collection and sample

This study uses data obtained from survey taxpayers at a free-tax-preparation site run by the EITC coalition in Boston in 2013. Participants were asked about their financial standing, behavioral traits, reaction to the 2013 payroll tax increase, and, if applicable, plans for allocating their newly calculated tax refund. Furthermore, participants were offered free credit counseling, which included examining their credit report. We also have information on individuals' demographic characteristics, tax filing status, as well as supplemental information collected by the coalition.

We focus on two main survey questions: (1) how an individual intends to respond to the payroll tax increase, and (2) how an individual plans to allocate his/her tax refund—(see Figs. 1 and 2).[4]

[3] Taxpayers at this and other similar tax preparation locations are offered the opportunity to save through saving bonds. This is a general policy and not part of the survey design or any other experiment.

[4] Other survey questions of interest are available online in the appendix of Bracha and Cooper (2013) available at: http://www.bostonfed.org/economic/ppb/2013/ppb134.htm. Note that Graziani et al. (2013) obtain similar results using very different survey instruments; hence, the results are not driven by the survey methodology.