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Does changing the timing of a yearly individual tax refund change the amount spent vs. saved?

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ABSTRACT

The empirical evidence surrounding whether federal income tax refunds predominantly stimulate consumer spending or saving remains contradictory. This study is an attempt to combine income tax research findings with research on mental accounting and with the effects of estimated tax payments timing. The authors developed and administered an experiment, using college students as subjects, to test whether tax refunds administered as one lump-sum will be saved (vs. spent) more than tax refunds of the same amount refunded monthly through revised income tax withholding tables. The study also explores the types of saving and spending that result from refunds under both timing patterns. A within subjects experiment of student spending was used, and ANOVA results confirm that a refund delivered in monthly amounts (for example, by changing the federal income tax withholding tables) stimulated current spending more than if the same yearly total tax reduction was delivered in one lump-sum. The findings also suggest that the lump-sum distribution conversely will stimulate private saving more than a monthly distribution will. The study also explores other specific savings and spending tendencies, including the payment of credit cards vs. investments in securities, and the amount spent on durable goods vs. monthly expenditures across several monthly and yearly distributions. It is important to know if and how the timing of refunds affects savings and spending tendencies because tax cuts are often debated on the political stage as a means to stimulate spending, and the timing of the refund might change how effectively a tax cut meets that goal.

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1. Introduction

Do tax refunds predominantly stimulate consumer spending or investment? Multiple presidential administrations have cut taxes to stimulate spending; it is important to know how the timing of refunds affects these goals. Per Slemrod and Bakija (2004), the evidence is contradictory. Combining Slemrod's findings with Thaler's (1999) mental accounting research, an experiment is administered to: (a) validate the findings of Shapiro and Slemrod (2003a), (b) test whether lump-sum tax refunds will be invested (vs. spent) more than monthly tax refunds of the same annual amount (e.g. through revised income tax withholding tables) and (c) explore the types of investment and spending that result from refunds under both timing patterns.

2. Literature review

Recent research suggests that spending follows cash flow (Johnson, Parker, & Souleles, 2005; Parker, 1999; Souleles, 1999, 2002). Shapiro and Slemrod (1995) found that almost half the respondents surveyed regarding the 1992 decrease in tax withholding tables expected to spend most of the extra money immediately. That rebate changed the timing of taxes due, not the total tax due; the extra money taken home was due back or reduced a refund with the year-end tax filing. However, the 2001 tax cut took the form of a lump-sum of either $300 or $600; only about one-fourth of those surveyed expected to spend the refund (Shapiro & Slemrod, 2003a, 2003b).

Thaler (1999) asserts that individuals use "mental accounting," possibly explaining seemingly inconsistent behavior. According to this literature, people have different marginal propensities to consume from accounts that are thought of differently (Heath & Soll, 1996; O'Curry, 1997; Read, Loewenstein, & Rabin, 1999; Rizzo & Zeckhauser, 2003). Camerer, Babcock, Loewenstein, and Thaler (1997) find that New York taxi cab drivers target their earnings level per day, and only work until that target is met rather than working a full day on lucrative days, and saving the extra money to use on low revenue days. Epley, Mak, and Idson (2006) concluded that people spent more of a change in income if they perceived that income as a "bonus" rather than as a "rebate". However, their experiments did not vary the timing of the gain, and our experiments do not alter the framing of the source of the gain.

Transaction cost economics suggest that in a free market each transaction may bear a cost, either directly and monetarily or in terms of effort, safeguard or opportunity cost (Williamson, 1979). Buyers and sellers of a common and undifferentiated product (like a savings account) face few market hazards because of the availability of other investment opportunities and safeguards such as a regulated banking industry. However, it may be less effort to make a single lump-sum deposit than a series of 12 deposits, which could create additional costs for the depositor. Where frequent allocations are a material market friction, one could accumulate the incremental portion of the 12 larger deposits and physically move it yearly, keeping the costs to a minimum. That is, while transactions costs may be higher when a refund is received monthly, the costs can be easily mitigated if one is determined to save. Because the lump-sum refund is a small amount, the rate of return among lump-sums is assumed constant, *ceteris paribus*.

3. Hypotheses and research questions

3.1. Will a lump-sum refund be saved?

H_{1A}, confirms Shapiro and Slemrod's (2003a, 2003b) finding that a refund received as a lump-sum will likely be saved (all hypotheses shown in alternative form): Respondents receiving a lump-sum hypothetical tax refund of $300 or $600 will save more (spend less) than those receiving the same amount of a yearly refund, monthly. Savings is defined consistent with Shapiro and Slemrod (2003a, 2003b) as increasing assets and/or decreasing liabilities. Here, short-term savings are included as savings because they immediately increase net worth, however, they stimulate the economy (are spent) before year-end. A separate analysis tests the sensitivity of including short-term savings as spending for Hypotheses 1 and 2. The argument that spending choice is tied to economic perceptions is weakened if percentages continue to change with distribution frequency from 2001 to 2005.