Credit cards that give cash back prompt consumers to spend more and accrue more debt, according to researchers at the Federal Reserve Bank of Chicago.

The initiation of a 1% cash rewards program yielded, on average, a $25 reward each month — and an increase in spending by $68 a month and in credit-card debt of $115 a month, the economists say in a paper to be presented at the American Economic Association meetings next week. That debts grew faster than spending likely means people reduced their monthly payments more than they increased spending.

Credit card companies have long enticed users with an array of rewards programs, from airplane miles to hotel rooms and cash back. In 2005, some six billion reward offers were mailed out by the industry, the Chicago Fed economists say. Even small rewards can prompt people to spend more. In many cases rewards entice people whose cards were dormant to start spending, the study found. About 11% of those who hadn’t use their credit cards in the previous three months made purchases of at least $50 in the first month of the program.

The three economists looked at 12,000 credit card accounts at a financial institution whose identity they don’t disclose over a two-year period ended June 2002. Some of the customers were offered cash-back rewards; others weren’t.

That debts grew faster than spending among those offered cash rewards likely means people reduced their monthly payments more than they increased spending.

The extra debt could mean two things: People spent more overall or they shifted spending to their cash-back rewards card from some other card in their purse or wallet. Sumit Agarwal, one of the co-authors, says the study found both. That means that, for a lot of people, the benefit of a cash back reward is negated by increased overall spending and debt.

“The right thing for people to do is to move all of their debt and spending from some other card but we actually see them taking on additional debt,” he said.

Mr. Agarwal and his co-authors, Sujit Chakravorti and Anna Lunn, also found that reducing the interest rate on credit-card balances also prompts consumers to increase their spending on the card. But the data suggest that “many cardholders transferred balances or spending from other credit cards” — presumably higher-interest rate cards — “to this one at the beginning of the promotion.”

For banks and other card issues, small rewards programs work as intended, the researchers conclude. “Our analysis suggests that in an extremely competitive credit-card-issuing market, rewards are another tool, along with lower interest rates, to steal customers from competitors.”