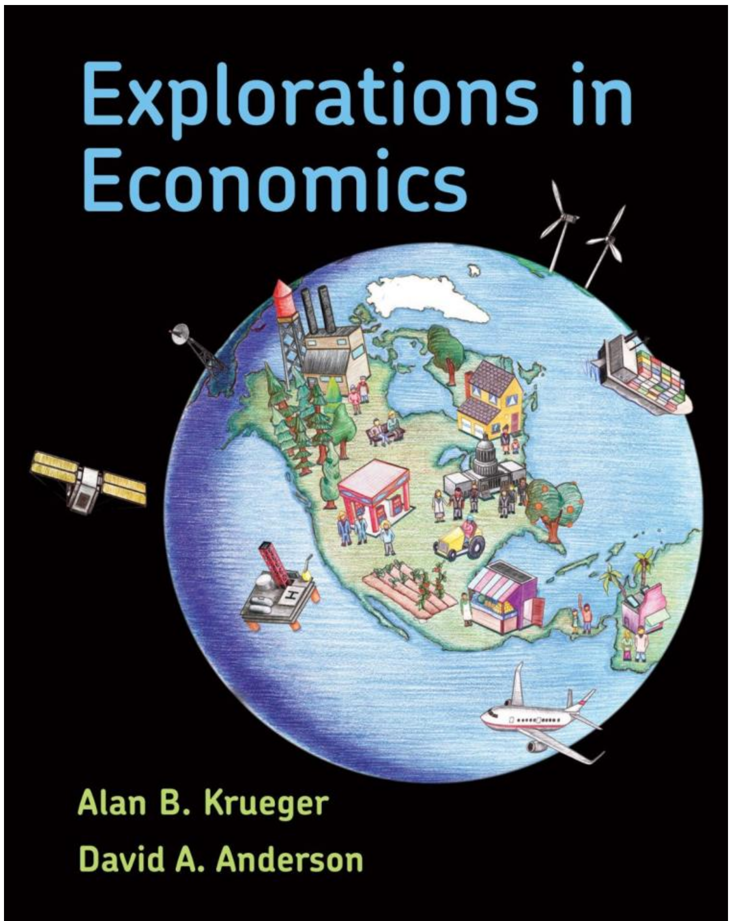
Financial Literacy Education: An Economist's Perspective



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ExplorationsinEconomics.com

MODULE 9

Behavioral Economics: Decision Making in Practice

KEY IDEA: Recognizing six common decision-making mistakes can help you make better choices.

OBJECTIVES

- **To explain why decision making is often less than fully rational.**
- **To identify common decision-making mistakes.**
- **To present guidelines for avoiding irrational behavior.**

Nobody's Perfect

Economists typically assume that people make rational decisions. Models based on this assumption yield many useful insights into how the economy works. For example, at least 30 U.S. cities have considered a tax on soda. Economists can use models to estimate how an increase in the cost of soda would affect the quantity demanded. In response to the higher cost of soda, some people might buy an irrationally low quantity, and others might mistakenly buy too much for their own good. But as long as the response of consumers resembles rational behavior on average, the predictions of economic models built on the assumption of rationality will hold true.

Sometimes our emotions get in the way of rational decision making.

Nonetheless, it is important to acknowledge irrational behavior. After all, we are all human! We care about things like fairness, we get impatient, and we are influenced by the way things are presented to us. These are among the many things that get in the way of rational decision making. In this module you will see how economists use ideas from the study of psychology to achieve a better understanding of the decision-making process. You will also learn how to avoid the pitfalls of irrational behavior as you make your own decisions.

WHAT IS BEHAVIORAL ECONOMICS?

Behavioral economics is the branch of economics that uses ideas about decision making from psychology to explain economic behavior.

Rational decisions help people move toward their goals and get more satisfaction out of life. However, people do not always make rational decisions. Sometimes we make mistakes and take actions that are not in our best interests. The field of psychology has much to say about how people make decisions—and mistakes—and economists have applied ideas from psychology to improve their own studies of decision-making behavior. The branch of economics that merges psychology into explanations of economic behavior is called **behavioral economics**. Lessons from behavioral economics can help you understand and avoid some common mistakes that people make.

Why do people make irrational decisions? One explanation is that as human beings, emotions sometimes cloud our judgment about costs and benefits. For example, suppose you are going to a movie. You decide in advance that you will not buy popcorn, because the cost of popcorn is greater than the benefit you expect to receive from it. Perhaps you realize that the opportunity cost of buying popcorn is that you can't use that money to buy Junior Mints, which you prefer. Or maybe you realize that eating popcorn would make you thirsty and that you would want to buy an expensive soft drink as well. But after entering the theater, the smell of popcorn overtakes you, causing a momentary lapse of judgment. You forget about the costs and benefits and buy the popcorn. That is an irrational decision. You haven't changed your mind about the costs and benefits—you're just not taking them into account.

As a student of economics and as a decision maker, it's important for you to recognize the behaviors that call rationality into question. In the next section we'll look at six common mistakes in decision making.

DID YOU GET IT?
What is the difference between a rational decision and an irrational decision?

MISTAKES PEOPLE MAKE

In some circumstances, mistakes are predictable. People tend to stray from rational decision making in six common ways:

1. Allowing the presentation or *framing* of options to affect decisions
2. Letting sunk costs matter
3. Being too impatient
4. Making errors due to overconfidence
5. Avoiding change even when things could be better
6. Devoting time and energy to punish people who treat them unfairly even when it is not in the punisher's self-interest

Let's examine each of these types of mistakes more closely.

Mistake 1: Letting Framing Affect Decisions

We have seen that rational decision making involves comparing benefits and costs. Yet sometimes people let the way choices are presented, or *framed*, affect their decision. For example, when choosing among similar items, shoppers are more likely to select an item that is made out to be a good deal, even if it isn't. Suppose two stores sell jackets that are equally attractive to you. One jacket is priced at $80 every day. The other is advertised as a $160 jacket that is on sale for $80. Which one would you prefer to buy? If you'd lean toward the jacket that is $80 on sale, framing affects your decisions. You're not alone. Because shoppers love to feel like they're getting a deal, promotions claiming "sales" and "special prices" are far more common than true bargains. If it were just prices and not framing that mattered, stores would stick with signs indicating the prices of goods without emphasizing "price cuts," "clearance

Sometimes it's not a bargain but just a matter of how the price is framed.

Keeping It Simple: Financial Literacy and Rules of Thumb

By Alejandro Drexler, Greg Fischer and Antoinette Schoar

American Economic Journal: Applied Economics, 6(2) 2014, pp. 1-31.

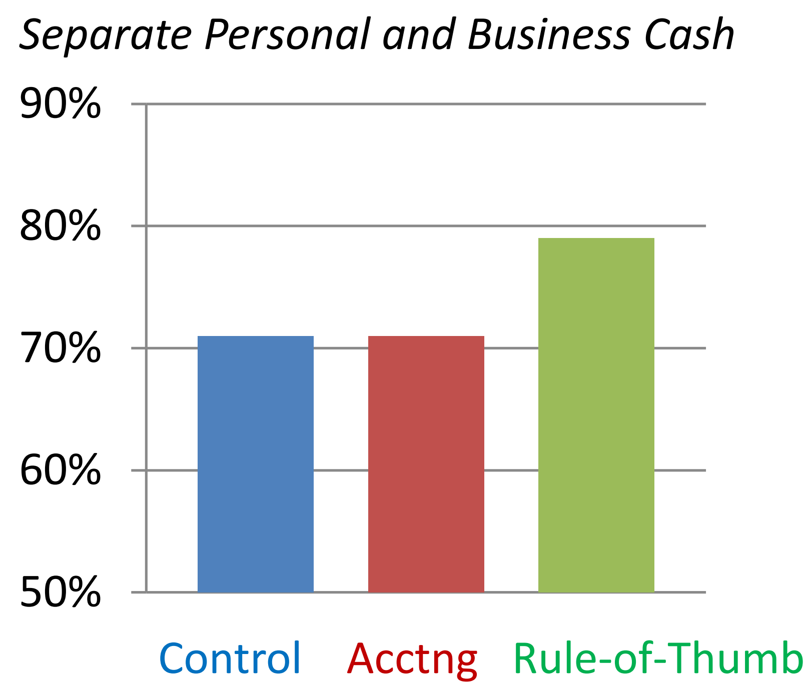
Design of Experiment

- 1,193 small business owners in Dominican Republic randomly assigned to 3 groups
- Control group, standard accounting training course, rule-of-thumb training course

- Accounting training taught basics of double entry accounting, working capital management, investment decisions, etc.
- Rule-of-thumb training taught heuristics/routines without comprehensive explanation of accounting. For example: keep personal and business money in two separate draws, and only transfer with explicit IOU note, and count each drawer at end of month.

"Overall, it appears that the micro-entrepreneurs in our study were more likely to implement what they learned in the rule-of-thumb training."
-- Drexler, et al.

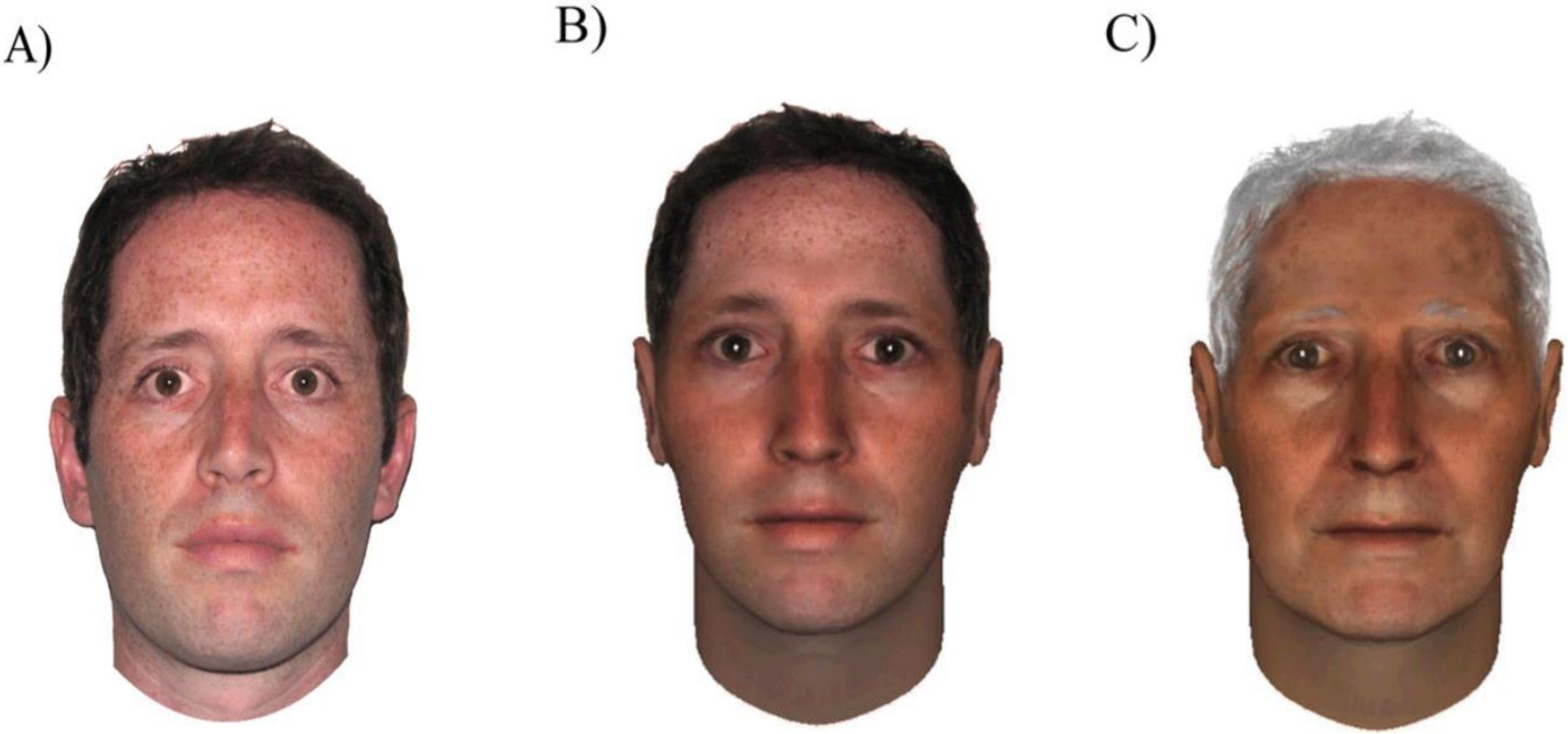
- Rule-of-thumb group had better improvement in financial practices, objective reporting, saving and revenue.
- Greater gains for those in rule-of-thumb group who had lower skills or poor initial financial practices.



"INCREASING SAVING BEHAVIOR THROUGH AGE-PROGRESSED RENDERINGS OF THE FUTURE SELF"

Hal Hershfield, Daniel Goldstein, William Sharpe, et al.

Journal of Marketing Research, Nov. 2011.



Actual Photo Avatar Aged Avatar

Please use the scale below to indicate your preferred retirement allocation

Current Annual Income XX%

Retirement Income XX%

Next

Please use the scale below to indicate your preferred retirement allocation

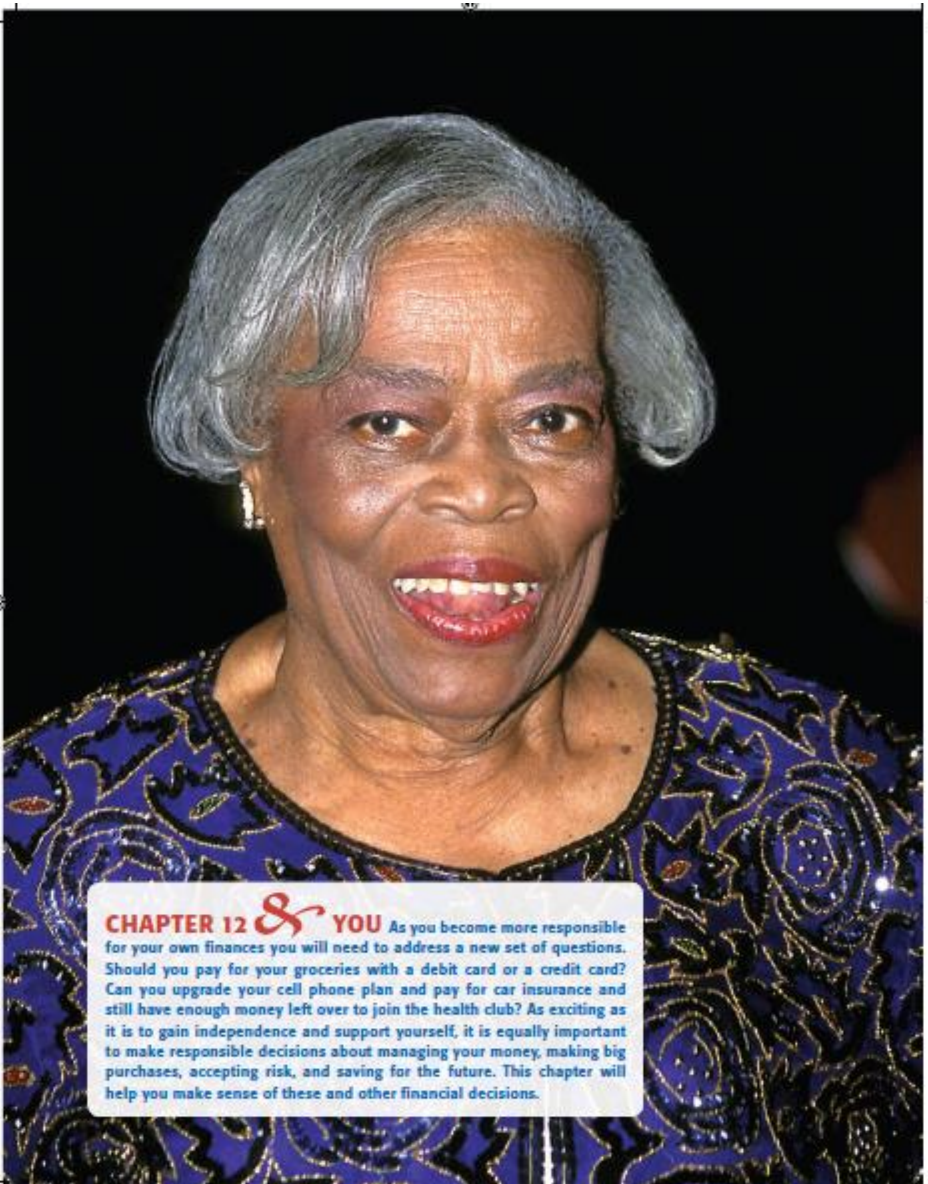
Current Annual Income XX%

Retirement Income XX%

Next

Results

- Participants who were exposed to their future selves in a virtual reality procedure allocated more than twice as much money toward their retirement account (M = \$172; SD = \$214) than did participants who were only exposed to their current selves (M = \$80; SD = \$130); *p-value* = .035



CHAPTER 12 & YOU As you become more responsible for your own finances you will need to address a new set of questions. Should you pay for your groceries with a debit card or a credit card? Can you upgrade your cell phone plan and pay for car insurance and still have enough money left over to join the health club? As exciting as it is to gain independence and support yourself, it is equally important to make responsible decisions about managing your money, making big purchases, accepting risk, and saving for the future. This chapter will help you make sense of these and other financial decisions.

CHAPTER 12

Personal Finance: Managing Your Money

A TALE OF TWO BUDGETS

For 70 years, Oseola McCarty made her living washing and ironing other people's clothing in Hattiesburg, Mississippi. Ms. McCarty did not earn much money, but she started saving every week when she was young. She budgeted her money wisely and lived well within her means, never even buying a car or an air conditioner. Ms. McCarty made national news in 1995 when she decided to donate $150,000 of her life savings to the University of Southern Mississippi to help needy students. "I'm giving it away," she said, "so that the children won't have to work so hard, like I did." The fact that Ms. McCarty amassed so much money and generously gave it away inspired many others, and she was honored with the Presidential Citizens Medal.

By contrast, William "Bud" Post III died penniless in 2006. He had won $16.2 million in the Pennsylvania lottery in 1988. Born in Erie, Pennsylvania, Mr. Post had been poor most of his life. He drifted from job skills to budget your *time* by writing down how you plan to spend your time on homework, chores, and after-school activities.

DID YOU GET IT?
What is a budget?

CREATING YOUR OWN BUDGET

Making a budget is essentially an exercise of listing income from all sources, listing expenses of all sorts, and making adjustments as needed so that the expenses do not exceed the income. Success with a budget requires accuracy. If your income isn't as large as planned, or your expenses are larger than expected, things can get ugly. That makes careful budget planning important.

As you prepare your budget, note that the amount of income specified in your employment contract is not the amount you will have to spend. You must adjust for the taxes that will be taken out of that income before you can spend it. The amount you earn before taxes are deducted is called your **gross income**. The income you are left with after subtracting taxes is called your **net income** or *disposable income* or *after-tax income*. If you work as an employee for a firm, a large portion of your income taxes will most likely be deducted from your pay automatically. You might also have to pay additional income taxes in April of each year, depending on your situation and income level.

Your **gross income** is the total amount of money you make.

Your **net income** is the income that you are left with after paying taxes.

Once you have a good idea of your net income for a given period—say, a month—write it down and identify its source as in the top section of Table 35.1. If possible, do this using a spreadsheet software program such as Microsoft Excel that will facilitate number crunching. Then make a list of every expense you expect to incur. You can estimate monthly expenditures on each item, including clothing, food, your cell phone, insurance, entertainment, gasoline, gifts, and so on, as in the bottom section of Table 35.1. Once you have a complete list, compare the total amount you expect to spend to your net income. If you will spend more money than you make with the existing budget, you will need to adjust your spending plans or look for additional sources of income, such as working overtime or taking a second job.

TABLE 35.1 -- budge...

	A	B	C
1	**MONTHLY BUDGET**		
2	**Net Income**		
3	Wages and Tips	1,760	
4	Interest Income	25	
5	Gifts Received	50	
6	Other	70	
7	**Total Net Income**	1,905	
8			
9	**Expenses**		**Type**
10	Housing -- Rent	650	fixed
11	Auto		
12	Car Payment	200	fixed
13	Gasoline	80	variable
14	Insurance	70	fixed
15	Maintenance	45	variable
16	Debt		
17	Credit Cards	50	fixed
18	Student Loans	100	fixed
19	Food	340	variable
20	Entertainment	80	variable
21	Travel	100	variable
22	Cell Phone	60	fixed
23	Gifts Given	50	variable
24	**Total Expenses**	1,825	
25	**Savings**	80	
26	**Savings as Percent of Income**	4.2%	

In reviewing your budget, it is useful to distinguish between expenses that normally stay the same every month and those that vary from one month to the next. Your rent, car payment, and insurance payment are examples of **fixed expenses** because they remain about the same unless you move or buy a new car. Expenditures on gasoline, food, and entertainment represent **variable expenses** because they can change frequently at your discretion. By recognizing the difference, you will know how to cut costs quickly (decrease variable expenses) and which cuts—when possible—will generate the longest-lasting savings (cuts in fixed expenses).

Given our unlimited wants and limited earnings, planned expenditures tend to exceed net income in the early stages of budget making. If that happens to you, and if working more isn't what you have in mind, then it's time to eliminate some planned expenditures. That's the hard part, but it doesn't have to be that hard. With the list of expenses in front of you, it becomes easier to identify the least painful cuts. If it would be difficult to change some types of consumption, such as eating out, think outside of the pizza box and you may find better solutions. Over time you can reduce your fixed expenses and have a long-term effect on your budget. Consider ways to cut down on fixed expenses—switching to a cheaper cell phone plan, driving a less expensive car, or renting a more modest apartment.

The more of your debt that you pay off now, the lower your interest payments will be in the future. Delaying big-ticket purchases also saves you money. Try getting a few more months out of your old refrigerator, dryer, and phone before replacing them. Drive your used car another year or two before trading up. Make that trip to Europe next year and vacation closer to home this year. These are all ways to stay ahead in the money game. The box below summarizes the steps to making a budget.

Fixed expenses are expenses that remain about the same from month to month.

Four Steps to Making a Monthly Budget

1. Identify your monthly net income from every source.
2. Create a list of your fixed and variable monthly expenses.
3. Compare the totals of monthly income and expenses.
4. If expenses exceed income, look for unnecessary spending and missed opportunities to increase your income.

DID YOU GET IT?
How does gross income differ from net income? What are two fixed expenses and two variable expenses that your family paid last month?

Variable expenses can change frequently at your discretion.

SAVING

Many people spend all their income each month. That's understandable for someone just starting out. The large expenses of establishing a home and paying off school and car loans far exceed most starting incomes. But it is important to establish a pattern of saving for your future, and the sooner the better. If you can set aside just a few dollars each week even in the beginning, it will help you form the essential habit of saving.

Why save? There are two main reasons. First, you will want to have some money tucked away in a *rainy day fund*

Paying Cash

To buy a car with "cash" doesn't mean that you bring a big bag of money to the dealer to pay for the car. It means that, rather than borrowing money to buy the car, you pay with a check or some other form of direct payment. Paying cash for something as expensive as a car is difficult for most people, and especially for young people starting out on their own. However, if you are able to pay with cash, there are advantages. If you limit yourself to cash, you will have a clear boundary on exactly how much you can spend. The ability to pay cash is a good indication that you can afford the price of the car.

Paying with cash also simplifies the transaction because there's no need to fill out all the paperwork for a loan and go through the loan-approval process. Unless you get a particularly good deal on a loan, the fees and interest on it are likely to exceed the interest you would lose by removing your own money from the bank to pay for the car. And paying cash gives you immediate *title to* (ownership of) the car. In contrast, while you are paying off a car loan, the lender will place a *lien* on the title that prevents you from taking full ownership until you have paid off the loan.

IDENTITY THEFT

Identity theft is any crime involving the wrongful acquisition and use of another person's personal information. The information is used without the knowledge of the victim to commit fraud and other crimes. For example, a thief could use your information to open a checking account in your name and then bounce a series of checks—with you getting the blame. Your Social Security number, bank account number, and credit card number can all be used by imposters for their personal gain. Recovering from identity theft and restoring your credibility with lenders can take years and an unfortunate amount of your money.

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How to Protect Yourself from Identity Theft

Identity theft is a complex crime that goes far beyond stealing your wallet or purse. Thieves find identity information in many places, including electronic files, mailboxes, and trash cans. Proper care on your part will go a long way to reduce the risks. Here are some suggestions:

- Make a habit of shredding documents containing sensitive information before throwing them away. Thieves are known to sort through trash hoping to find preapproved credit card applications, credit card bills, bank statements, and numbers used for identification.
- Keep your Social Security card at home in a safe place; never carry it in your wallet. Never include your Social Security number on a check, and only give it out if absolutely necessary.
- When choosing a password, make it hard to guess. Do not choose your birth date, name, telephone number, "password," or "123456."
- Do not give out personal information on the phone or Internet unless you are certain with whom you are doing business. Criminals often try to trick people into revealing valuable information by sending e-mails that appear to be from banks, people in trouble, employers, or the IRS. Do not click on links in e-mails from unknown sources and use up-to-date antivirus software to protect your computer.
- When using an ATM, be careful to enter your password in such a way that no one else can see it. By shielding the keypad with one hand while entering numbers with the other you can deter potential thieves from looking over your shoulder or photographing you from a distance to acquire your access code.
- Thieves can overhear your phone conversations, so never give out your credit card number on the phone in a public place.

- While away on vacation, have your mail held at the post office so that bills are not stolen from your mailbox.

DID YOU GET IT?
What are two ways to reduce the risk of identity theft?

Check Your Bills and Credit Report

Whether bills and financial statements arrive in the mail or online, it is important to check them carefully for accuracy. Check bills for unexpected amounts or items you did not purchase. Tell the sender if your bill does not arrive. And watch for bills from companies that you don't do business with. They may be fake companies trying to get your money, or they may be legitimate companies collecting for purchases made by someone who has stolen your identity.

Shredding keeps sensitive information out of the hands of thieves.

Be suspicious if you are denied credit unexpectedly, which is another clue that someone is acting as you. The law requires each of the three major consumer reporting companies—Equifax, TransUnion, and Experian—to give you a free copy of your *credit report* each year if you request it. Your **credit report** shows all the credit-card accounts and

A **credit report** shows all the credit card accounts and loans you have, the balances, and whether your bills are paid on time.

ECONOMICS IN ACTION

Identity Theft Is Now a Federal Offense

In one pivotal case of identity theft, the criminal incurred more than $100,000 of credit card debt, obtained a federal home loan, and bought homes, motorcycles, and handguns in the victim's name. But that's not all: the criminal also called his victim to taunt him, saying that he could continue to pose as the victim for as long as he wanted because identity theft was not a federal crime at that time. While the victim and his wife spent more than four years and $15,000 of their own money to restore their credit and reputation, the criminal served a brief sentence for making a false statement to buy a firearm. The criminal made no restitution to his victim for any of the harm he caused. This case, and others like it, prompted Congress in 1998 to pass the Identity Theft and Assumption Deterrence Act. This act makes it a federal crime to "knowingly transfer or use, without lawful authority, a means of identification of another person with the intent to commit, or to aid or abet, any unlawful activity that constitutes a violation of Federal law, or that constitutes a felony under any applicable State or local law."

YOUR TURN
What steps do your parents take to protect themselves from identity theft?

Personal Finance Handbook

Personal finance is how you use the principles of finance to manage your money. It covers a range of topics, like earning, budgeting, saving, investing, managing debt, paying taxes, and dealing with financial risks.

We make financial decisions every day. Some of them are small, like which groceries to buy. Some of them are big, like whether to buy a home or how to invest for retirement. Understanding the basics of personal finance will allow you to make wise decisions now and in the future.

You've probably heard the saying "Money doesn't buy happiness." While that's true, how you handle your personal finances can make a huge difference in your quality of life. By managing your money carefully, you'll be more in control and have the freedom to achieve your financial dreams.

SECTION 6

Borrow without Sorrow

WEB TOOL

Peer-to-peer or social lending connects people who want to lend money with people who want to borrow. Sites like prosper .com and lendingclub .com allow you to get an unsecured loan directly from an individual investor instead of from an institution.

It can be easy to get into financial trouble if you take a loan or make credit card charges that you can't repay. That's why it's important to know how to use debt responsibly and make wise choices that are best for your financial future.

WHAT TO KNOW ABOUT DEBT

Before you apply for credit or take on any amount of debt, ask yourself some important questions:

- Do I really need this?
- Can I wait until I save enough cash to pay for it?
- What's the total cost of the credit, including interest and fees?
- Can I afford the monthly payments?

There are many different kinds of

When you take an installment loan, your monthly payment will depend on three factors:

1. **Principal amount.** The less you borrow, the lower your monthly payment will be.
2. **Interest rate.** The lower the rate, the lower your monthly payment will be.
3. **Loan term.** The longer the term, the lower your monthly payment will be—however, this generally results in paying more total interest.

Common Types of Installment Loans

Installment loans give consumers money to buy many different products and services, like cars, homes, or a college education.

How to Build Your Credit

It may be difficult to get approved for a credit card before you've established a good credit history. However, everyone over age 18 can get a secured credit card, which can help you build credit for the first time—as long as it reports payment transactions to the credit agencies. With a secured credit card, you must make a refundable upfront deposit (as little as $200) that serves as your credit limit.

FINANCIAL FACT

To find out your credit score, you can purchase it from the credit bureau websites, buy your FICO Score at myfico.com, or get several scores for free at creditkarma.com.

Not having excellent credit means you could pay an additional $127,493.41 in interest—on top of the original loan amount of $150,000.

Did you know that having poor credit scores can cost you even if you don't want a loan or credit card? Here are five ways that having poor credit affects your personal finances:

1. **Paying high insurance premiums.** You'll be quoted higher rates from insurance companies because consumers with poor credit are also deemed to be high insurance risks.
2. **Paying high security deposits.**

HOW TO ESTABLISH CREDIT

The information in your credit report has a ripple effect throughout your entire financial life. How can you get started building good credit? Knowing how credit scores are calculated can help you improve them.

Each credit scoring model values the information in your credit report differently and uses a unique score range. The popular FICO Score uses a scale from 300 to 850 and values the following five factors:

1. **Payment history** (35%). Making payments for bills and credit accounts on time.
2. **Credit utilization** (30%). Having lower amounts of debt relative to your available credit limits on credit cards and lines of credit.
3. **Length of credit history** (15%). Having credit accounts for a longer period of time.
4. **Type of credit used** (10%). Having a mix of credit types, including loans and credit cards.

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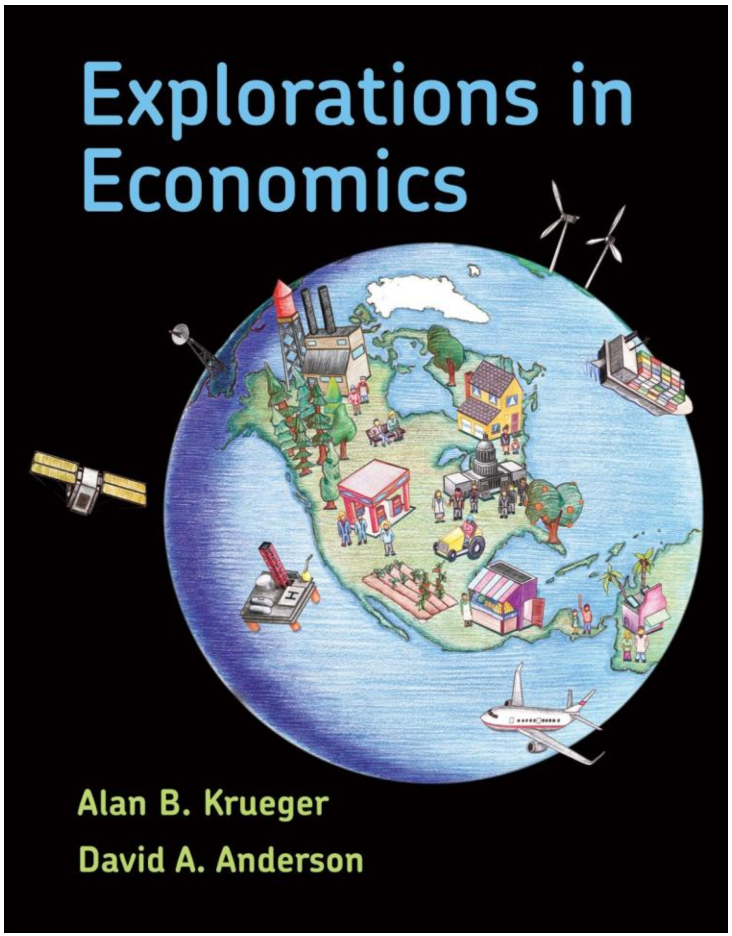

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