The Essential MILTON FRIEDMAN

by Steven Landsburg

FRASER INSTITUTE

The Essential Milton Friedman

by Steven E. Landsburg

Fraser Institute
www.fraserinstitute.org
2019

Copyright © 2019 by the Fraser Institute. All rights reserved. No part of this book may be reproduced in any manner whatsoever without written permission except in the case of brief quotations embodied in critical articles and reviews.

The author of this publication has worked independently and opinions expressed by him are, therefore, his own, and do not necessarily reflect the opinions of the Fraser Institute or its supporters, directors, or staff. This publication in no way implies that the Fraser Institute, its directors, or staff are in favour of, or oppose the passage of, any bill; or that they support or oppose any particular political party or candidate.

Printed and bound in Canada

Cover design and artwork
Bill C. Ray

ISBN 978-0-88975-542-0

Contents

Introduction / 1

1. The Permanent Income Hypothesis / 3
2. Money, Prices, and Inflation / 9
3. Monetary Policy / 13
4. Monetary History / 17
5. Unemployment / 23
6. Chicago Price Theory / 29
7. Capitalism and Freedom / 36
8. Policy Analysis / 41
9. Activism / 45
10. Civil Discourse / 53

Notes on the chapters including further readings / 59

Publishing information / 65

About the author / 66

Publisher's acknowledgments / 66

Supporting the Fraser Institute / 67

Purpose, funding, and independence / 67

About the Fraser Institute / 68

Editorial Advisory Board / 69

Introduction

When economists are called "influential," it usually means they've changed the way other economists think. By that standard, Milton Friedman was one of the most influential economists of all time. He revolutionized the way economists think about consumption, about money, about stabilization policy, and about unemployment. He demonstrated the power of committing oneself to a few simple assumptions about human behaviour and then relentlessly pursuing their logical implications. He developed and taught new ways of interpreting data, testing his theories by their ability to explain multiple disparate phenomena. His successes were spectacular and his techniques were widely emulated.

In several cases, Friedman's methods inspired the creation of entire new subfields including the economic analysis of law, the quantitative approach to economic history, the economics of crime and punishment, the economics of family relationships, and the economic approach to finance—leading to multiple Nobel prizes for Friedman's acolytes.

But Friedman's influence extended beyond economists. To the public at large, he was the world's foremost advocate for economic and personal freedom. Through his writings and his media appearances, he educated millions about how markets work and how governments often fail. He restored the respectability of classical liberal notions that had fallen into disfavour, and he did so not by artful propaganda but by conveying a deep and lasting understanding of the ideas themselves.

And he influenced policymakers. In the United States, he helped to end the military draft, to broaden educational choice, and to change the regulatory climate. Worldwide, almost all central banks now follow policies that are grounded in Friedman's insights and recommendations (updated, of course, for the changed world we now live in), and have thereby made the world a richer

and more stable place, largely delivered from the sort of disastrous policy errors that were once routine. When the Soviet Union collapsed, Friedman's writings inspired the design of new institutions in several former Communist countries, and those that adopted this course were rewarded with prosperity and freedom.

After an early flirtation with statistics (where he developed the "Friedman Test" to interpret disagreements among judges in, say, a skating competition), Friedman moved on to study economics, writing a 1946 doctoral dissertation on, among other things, the effects of occupational licensing, a subject to which he frequently returned. The next year, he accepted a job at the University of Chicago, where he did most of his groundbreaking academic work on consumption behaviour, monetary theory, and monetary history, and served as the undisputed intellectual leader of the economics department for 30 years. In 1976, he was awarded the Nobel Prize.

The public became acquainted with Friedman through his 1962 bestseller *Capitalism and Freedom* and his subsequent series of approximately 300 columns in Newsweek Magazine, along with his increasing presence as an advisor to policymakers. After his retirement in 1977, Friedman moved to the Hoover Institution at Stanford University and, in collaboration with his wife Rose and the television producer Robert Chitester, created the television series *Free to Choose* and an accompanying book by the same title. Both the TV series and the book drew huge audiences and cemented Friedman's worldwide celebrity. Several Eastern European leaders specifically cited *Free to Choose* as a major inspiration for their new economic policies after the fall of the Soviet Union.

It would take several large volumes to do justice to Friedman's extraordinary contributions to economic theory, economic practice, economic policy, and economic literacy. The few brief chapters that follow will give an overview of what those volumes might contain.

Chapter 1

The Permanent Income Hypothesis

Suppose you believe your economy is in the doldrums because people are somehow not spending enough. How do you get them to open up their pocketbooks?

Start by perusing some data. You'll quickly discover that spending is highly correlated with income. It's well documented that if, in any given year, Alice out-earns Bob by a dollar, then on average she'll outspend him by at least 90 cents.[1]

Aha! Problem solved! If you want people to spend more, you should start by raising their incomes. Encourage your government to hire Alice and raise her salary by a dollar. She'll spend an extra 90 cents or so—and that's only the beginning. If she spends that 90 cents at the butcher shop or the hair salon or the craft brewery, then the butcher or the beautician or the brewer earns an extra 90 cents and probably spends about 90 percent of that, which raises yet someone else's income, and off we go. When all is said and done, one dollar of additional government spending can raise total spending (and total income) by $10 or more.

That's the story of the so-called "Keynesian multiplier." Once upon a time, pretty much all economists considered it a cornerstone of policymaking.

Here's the problem:

Income is indeed highly correlated with spending. But *correlation is not causation*. When Alice out-earns Bob by a dollar, she typically outspends him

[1] I'm using 90 cents as an illustration here and throughout the chapter. There is room for some quibbling about whether the correct number is a little lower or a little higher, but that doesn't matter here.

by 90 cents. But her current earning is not the cause of that spending. Instead, she outspends him (in most cases) because *she expects to continue to out-earn him* for many years to come.

As a general rule, people calibrate their spending not to their *current* incomes but to their *permanent* incomes—that is, to something like their expected lifetime earnings.[2]

Now if Alice gets a $1 yearly raise from her private employer, she's likely to believe—correctly!—that the raise is probably permanent. That's why she spends more, and that's why the data show that higher incomes usually go hand-in-hand with higher spending. But if, instead, Alice gets a $1 yearly raise from a government that has decided to temporarily ramp up spending, she'll probably want to squirrel most of that dollar away against the day when her salary returns to normal. The cycle of spending we called the Keynesian multiplier never gets off the ground.

Okay, then. Maybe the cure is for the government to hire Alice and *permanently* raise her salary by $1 a year. That sounds good until you start thinking about where the government is going to *get* that dollar every year:

- The government could raise Bob's taxes by a dollar a year. But then just as Alice's spending goes up, Bob's goes down. If you want to increase total spending, this gets you nowhere.
- The government could borrow a dollar from Bob every year. But eventually Bob is going to want to be paid back, at which point the government is going to have to raise Charlie's taxes to get the money. At that point, Charlie starts spending less. Worse yet, if Charlie follows the news, he's likely to realize today that the government is running up debt, that future taxes are likely to rise, and that his own permanent income has therefore a taken a hit, which means he'll reduce his spending immediately.

There, then, is the rub. If you want Alice to spend more, you have to increase her *permanent* income, not just her current income. But the government can't increase Alice's permanent income without decreasing Bob's

---

[2] I like to tell my college students that this is why economics majors often own cars while philosophy majors don't, even though their current incomes are pretty much identical. The economics majors expect to be employed someday.

or Charlie's permanent income by the same amount, which dooms the entire project to failure.[3]

That's one consequence of Milton Friedman's *permanent income hypothesis*. More precisely, Friedman hypothesized that:

- When your permanent income rises by, say, $100 a year, you'll typically increase your annual spending by something very close to $100.[4]
- When your non-permanent income rises or falls by $100 in a given year (because of an unexpected bonus at work, a lost wallet, a winning scratch-off ticket, or an illness) then you'll typically make only a small adjustment in your current spending.

If Alice out-earns Bob by $100 a year, then (for an average Alice and an average Bob) it's usually because her permanent income exceeds his by about $90 and her non-permanent income exceeds his by $10. Therefore, since only her permanent income affects her spending, she outspends him by about $90.[5]

Therefore it's very easy for an economist to notice that when Alice out-earns Bob by $100, she outspends him by $90—while remaining entirely oblivious to what lies behind the numbers. In particular, that economist can easily make the mistake of believing that a $100 increase in *non*-permanent income can lead to a $90 increase in spending. But that inference, which underlies the entire theory of the Keynesian multiplier, is wrong.

This makes a great deal of sense when you think about it. If Alice and Bob each earn $1,000 a week, their permanent incomes are identical. But if she gets paid on Fridays and he gets paid on Wednesdays, then her Friday income is $1,000 and his Friday income is $0. If spending really depended on (daily) income, we'd expect every Friday to see Alice eating steak and Bob eating crumbs (and the reverse on Wednesday). It's only because spending actually depends on *permanent* income that they in fact both live about equally well each day.

---

[3] There are occasional exceptions. Conceivably the government could build a highway that reduces transportation costs by so much that everyone's permanent income—even after factoring in the taxes they pay to build the highway—goes up. Unfortunately, most government projects are not that productive.

[4] Exactly *how* close depends on a variety of factors including the interest rate and how much you've already got in the bank. But for illustration, I'll suppose going forward that you increase your spending by the full $100.

[5] The $90 figure is for illustration, though the real-world number is probably not too far from this.

The permanent income hypothesis also settles a nagging riddle that had been troubling economists for a long time. If Alice earns $20,000 more than her neighbour Bob, she typically outspends him by about $18,000. But if Alice earns $20,000 more than her grandfather did at her age, she typically outspends him by almost the full $20,000. (We see this in real-world data.) Whence the discrepancy?

Answer: When Alice out-earns Bob, it's often partly because she's having an unusually good year. Unusually good years don't generally repeat themselves. So if she out-earns Bob by $20,000, she might expect to out-earn him by only about $18,000 going forward, and increases her spending by almost that amount.

But when Alice out-earns her grandfather, it's likely to be because times have changed. That's a permanent condition. She expects to continue out-earning him by about the same amount forever, and spends accordingly.

So the permanent income hypothesis explains a lot. There remains the question of whether it's true. Friedman proposed several tests. For example: farmers' income is heavily dependent on market and weather conditions (this was especially true in Friedman's time, when farmers didn't routinely hedge their bets through futures markets). Factory workers' income is far more predictable. So an upward spike in Frank the farmer's income is likely to be mostly temporary, whereas an upward spike in Mary the machinist's income is likely to be mostly permanent (maybe she got promoted!). Therefore we should (on average of course) see machinists with income spikes increasing their spending by more than farmers with income spikes. Real world data confirm this prediction.

Friedman carried out a great many such tests, comparing not just farmers versus machinists, but Swedes versus Englishmen, black Americans versus white Americans, young people versus old people, and more. The results in each case are consistent with the permanent income hypothesis. So while Friedman acknowledged that no single test can constitute a slam-dunk proof, he argued that the weight of all these tests taken together comes pretty close to being definitive.[6] Essentially all economists now agree.

---

[6] This sort of empirical strategy was a Friedman trademark. Instead of relying on traditional tests of statistical significance, Friedman generally preferred to judge his hypotheses by their ability to

In fact, essentially all economists now view the permanent income hypothesis or some close variant as so nearly self-evident that it's hard to imagine a time when it needed to be discovered.[7] But there was such a time. Prior to Friedman, a series of excellent economists, including Rose Director (later Rose Director Friedman), Dorothy Brady, and the remarkable Margaret Reid, developed indispensable techniques for the analysis and interpretation of household expenditure data, and Friedman always graciously acknowledged his debt to those pioneers. But he was the first to envision the permanent income economic theories, the first to confront the hypothesis with a meticulous analysis of the data, the first to tease out its policy implications, and the first to place it in a proper historical context by explaining how it complements, expands, and sometimes supplants the work of his predecessors. When the Nobel Prize committee listed the achievements for which Friedman was selected, the permanent income hypothesis was first on the list.

explain a great many diverse observations. Friedman, who made his mark as a theoretical statistician before he switched to economics, was acutely aware of the shortcomings of the traditional tests.

7 As is always the case with good science, subsequent researchers have proposed and made good arguments for variations on Friedman's theme, but essentially all modern research on consumption behaviour has its roots in his approach.

Chapter 2

Money, Prices, and Inflation

The Nobel Prize-winning economist Robert Solow once observed that "Everything reminds Milton of the money supply."[8] It's certainly true that Milton Friedman had a lifelong fascination with the money supply, leading to insights that profoundly changed both academic thought and practical policymaking.

Actually, Friedman's analysis begins on the other side of the market—the demand for money—as opposed to the supply. To the casual reader, the idea of studying the "demand for money" might sound absurd. Don't we all want as much money as we can possibly get? Isn't that all there is to say on the matter?

The answer is: Of course not. We'd all like as much *wealth* as we can possibly get, but wealth is not the same thing as money. Bill Gates is surely wealthier than I am, and I'm sure he's got a bigger house and bigger stock portfolio, but I'm not sure which of us has more *money*, by which I mean the coloured pieces of paper in our wallets plus our bank balances.[9]

Like the average North American, I hold, very roughly, about 10 weeks' income in the form of money. (Most of this is in the form of bank balances which I can access by writing checks or using my debit card.) With a little juggling—selling off some other assets, making withdrawals from long term savings accounts, taking out bank loans, or hoarding more cash—I could have quite a bit more. But I'm content with the money I've got.

Why 10 weeks' income, and not 8 or 12? Because I like to be prepared so I can make unanticipated purchases, from a hamburger on the way home from

---

[8] Solow went on to observe that "Everything reminds me of sex, but I try to keep it out of my papers."

[9] There is room to quibble about exactly where to draw the line between bank balances that do and do not count as money. Checking account balances should surely count; balances in certificates of deposit that can't be withdrawn on short notice without a penalty probably shouldn't. The basic idea is that money is an asset that you can use quite easily to make purchases on a moment's notice.

work to an emergency plumbing repair. If my gutter guy starts taking credit cards, I might decide to hold less money. If I hear that street crime is on the rise, I might decide to hold less cash, and hence less money in total. If my bank starts offering a higher interest rate on certificates of deposit, I might want to take advantage of that by giving up some of my money. But unless *something* changes, I'm likely to go on wanting to hold about 10 weeks' income in the form of money.

With that out of the way, we can turn our attention to the *supply* of money. Money is supplied by the banking system and the monetary authorities (e.g., the Federal Reserve System in the United States, the Bank of Canada in Canada, and the Bank of England in the UK) in complicated ways, the details of which don't much matter here. So let's imagine a simple world where, as of a particular Monday morning, the populace collectively holds a total of $1 million. The government, which has been planning all along to buy $1 million worth of paper clips on Monday afternoon, makes the decision to pay for those paper clips with newly printed money (as opposed to using, say, tax revenue or borrowed funds).

What should we expect to happen? As of Monday afternoon, the people who sell paper clips are holding more money than they held this morning. In fact, the total money supply has doubled, so if we average this over the entire population, the average person (call her Alice) is now holding twice as much as she held this morning.[10] But *that's more than she wants*. If she wanted this much money, she would have arranged for it in the first place (perhaps by depositing a bit more of her paycheque into her chequing account instead of her retirement account).

So Alice has a problem: How is she going to get rid of this excess money? Discarding it seems like an exceptionally bad idea. Maybe she turns to her neighbour Bob and talks him into borrowing one of her dollars. But then *Bob* has an extra dollar to get rid of. Maybe she goes to the bank and buys a certificate of deposit. But then her banker, Carol, has more money than she wants in her vault. No matter where the money goes, the average person still has twice as much money as he or she did this morning and is still trying to get rid of it.

---

10 "Holding more money" can mean having more cash in your pocket, or it can mean having a larger chequing account balance.

The other way to get rid of money is to spend it. So sooner or later, Alice (or someone) decides to buy an extra hamburger or an extra haircut or a more expensive sweater—or maybe she schedules a gutter repair she'd been planning to put off till next year. This bids up the prices of hamburgers, haircuts, sweaters, and home maintenance by, say, 10 percent. Because prices are higher, people are now willing to hold 10 percent more money than they held this morning. Unfortunately, the amount of money floating around has gone up not by 10 percent but by 100 percent. So the process continues until prices are bid up by fully 100 percent. Now people want to hold all the excess money and the process comes to a halt.[11] The bottom line:

If you double (or triple or quadruple) the money supply, prices will double (or triple or quadruple).

The process might take a while, and some interesting stuff can happen along the way. (We'll have much more to say about this in the next few chapters.)

A little reflection reveals a somewhat deeper moral:

A jump in the general level of prices (as opposed to an increase in the price of one specific good or another) is *always* caused by people trying to get rid of money.

Why might people want to get rid of money? We've listed some reasons already—a wider acceptance of credit cards, an increase in street crime, a rise in the interest rate, or an increase in the supply of money, leaving people with more than they want to hold.

That's a good analysis of a rare phenomenon: A one-time jump in the price level. A far more common phenomenon is *inflation*, a steady and sustained rise in the price level over a substantial period of time.

---

[11] In brief: People try to get rid of money by buying things, which drives up prices until people are willing to hold the extra money after all. You might wonder why we can't tell a different story: Maybe people try to get rid of money by lending it, which drives down interest rates until people are willing to hold the extra money after all. (Remember that when the interest rate is low, alternatives to money—like certificates of deposit—are less attractive.) The problem with that story is that it runs afoul of economic theory, which tells us that the interest rate must be fully determined by the supply and demand for current and future goods and services, leaving no room for it to be affected by changes in the supply and demand for money.

What causes inflation? Our moral generalizes: Inflation is always caused by people trying to get rid of money, not all at once, but steadily over a substantial period of time.

And why might that happen? In principle, it could happen if there is a steady increase in the acceptance of credit cards, a steady increase in street crime, or a steady rise in the interest rate. But each of these factors seems quite inadequate to explain the rates of inflation, and the long periods of inflation, that we see in the real world. That leaves just one culprit: A steady increase in the supply of money.

This is the analysis that led to Milton Friedman's famous declaration that "inflation is always and everywhere a monetary phenomenon."

Prior to Friedman, this was controversial. In those dark days, one frequently heard talk of "cost-push inflation," in which, say, increasing wage demands from workers lead to rising prices for consumer goods, leading to increasing wage demands from workers, and so on around the vicious circle. Friedman insisted—and successfully convinced most economists—that this superficially plausible story makes no sense. One way or another, the quantity of money demanded has to equal the quantity of money supplied. Prices must adjust until that equilibrium is reached. This leaves no room for anything else to affect the price level.

The next obvious question is: Why should we care about the price level and inflation in the first place, and what outcomes should the monetary authorities be aiming for? That's where Friedman turned his attention next, and so shall we.

Chapter 3

Monetary Policy

Now that we've talked about how the price level is determined, let's double back and ask why we should care about the price level in the first place. If the money supply doubles, and all prices (including wages) double in response, has anything important really changed?

Probably not. Instead of costing $5, a hamburger now costs $10. Alice has to work just as many hours to earn that $10 hamburger today as she worked to earn a $5 hamburger yesterday. Instead of carrying $25 in her pocket (enough to buy five hamburgers), she'll carry $50—still enough to buy five hamburgers. Instead of keeping $1,000 in her chequing account, she'll keep $2,000—the same fraction of her income that she's always kept.

You might worry about the effect on borrowers and lenders: If Alice initially owes Bob $10 (the price of two hamburgers), then after the price level doubles, she gets to pay him back with a debased $10 that buys only one hamburger. That makes her richer and him poorer. But that's an issue only if Alice and Bob fail to anticipate the price change. If Bob knows he lives in a world where prices sometimes jump, he can always insist on loan contracts with automatic adjustment clauses, so that Alice is always required to repay enough dollars to buy two hamburgers, whatever that number of dollars might be.

And even if Bob's foresight fails him, so that he fails to include that clause and takes a big loss when the price level doubles, it's not the kind of loss economists usually worry too much about. That's because Bob's loss is Alice's gain, so that *overall* the populace (which includes both Alice and Bob) is no better or worse off than before.

So a one-time jump in the price level is, at least to a very good approximation, nothing to worry about. You might be tempted to conclude that

inflation is nothing to worry about either. After all, inflation is just an ongoing series of jumps in the price level, right?

Not so! Let's think this through from the beginning again.

On Monday morning, Alice the average citizen is holding 10 weeks' income in her purse and her checking account.

On Monday at noon, the money supply doubles, and now Alice holds 20 weeks' income.[12] But she only wants to hold 10 weeks' income, and therefore tries to get rid of money by buying things. Eventually prices are bid up to twice this morning's level, and Alice now happily holds her share of the new money, which is equal to 10 weeks' income—her goal all along.

Now tweak the story: On Monday at noon, the government doubles the money supply *and announces plans to double it again every day at noon*. As a result, Alice decides that, going forward, she wants to hold only *8* weeks' income, not 10. Why? Because she now expects an ongoing inflation—which means she expects the money in her pocket and her checking account to lose value overnight. That prospect makes holding money less attractive.

So on Monday afternoon, Alice (along with many others) tries to get rid of money by buying things. Eventually, prices get bid up to twice this morning's level, leaving Alice holding 10 weeks' income, *which is still more than she wants*. Therefore she continues trying to buy things, driving prices up *still further*. If the money supply doubles on Monday, with further increases expected to follow on Tuesday, Wednesday, Thursday and Friday, then the price level must *more* than double on Monday.

More succinctly: *At some point during the onset of an inflation, the price level must rise faster than the money supply*. Friedman called this phenomenon *overshooting*, which might have been an unfortunate vocabulary choice because it seems to suggest that someone has made a mistake or missed a target. Nothing of the sort is true; Alice *wants* to reduce the real value of her money holdings—the number of hamburgers her pocket change can buy and the number of home repairs her checking account balance can cover—and by the end of the day she's done exactly that.

---

[12] Where did the extra money come from? Maybe she sold a whole lot of paper clips to the government. Or maybe she sold her used couch to Bob, who was looking to get rid of money after he sold a bunch of paper clips.

Unfortunately, Alice's life just got a little worse. Instead of having enough cash in her pocket to buy five hamburgers, she's got enough to buy four, which will be an annoyance on the occasional day when she has a gargantuan appetite. Instead of having 10 weeks' income in her checking account, she has 8—which means she'll occasionally have to delay a purchase to avoid an overdraft. That loss to Alice is not offset by any gain to anyone else—and that's the kind of loss economists care about.

It might be a pretty small loss, but a great many others are of course suffering in a similar way, and some more than others. Bob, who runs a small shop, notices that in these new inflationary times, the cash in his register is losing value as it sits idle, so instead of keeping 20 hamburgers' worth of cash in the register as he's always done, he now keeps only (say) 16 hamburgers' worth. Now he runs low on change a little more often, aggravating a few extra customers.

If that still sounds small, it's because it *is* small, at least when the rate of inflation is low. At higher rates of inflation, people hold so little money that their lives are substantially disrupted. The economist John Maynard Keynes was in Germany during the inflation of the 1920s, when prices were rising so rapidly that a beer purchased at midnight was substantially more expensive than a beer purchased at 9 p.m. When he thought he would want three beers over the course of the evening, he bought them all as early as possible and drank them slowly (note that Keynes, like Alice, was trying to get rid of money by buying things). All his life, Keynes remembered Germany as a place where he'd drunk a lot of warm beer.

For a more extreme example, consider the Hungarian inflation following World War II, when prices, on average, were multiplying by a factor of about 100 every month. Imagine a cup of coffee that costs 10 cents on January 1, $10 on February 1, $1,000 on March 1, $100,000 on April 1, $10 million on May 1, $1 billion on June 1, $100 billion on July 1, and $10 trillion on August 1. Wages were adjusted, and workers were paid, three times a day. Of course it was imperative to spend your paycheck immediately before it lost almost its entire value, which means that in a typical family you had one spouse working and the other running back and forth from the workplace to the shops, collecting the checks, spending the money, and rushing back to the workplace in time for the next check.

So, like many things, inflation in small doses is a little bit bad and inflation in higher doses is extremely bad. But why put up with any badness you don't have to put up with? It seems like the best scenario is no inflation at all—and the recipe to accomplish that scenario is zero growth in the money supply.

In fact, why not go even further? If Alice enjoys holding 10 weeks' income in the form of money, perhaps she'd be even happier holding 12 weeks' income. Maybe she could use a little nudge in that direction! We could provide that nudge with a *negative* inflation rate (also called *deflation*), which causes the money in Alice's pocket to grow over time in value, thus encouraging her to hold more of it.

Hold on a minute! If holding a little extra money makes Alice a little happier, why does she need a nudge? The answer is that when Alice chooses to hold more money—and hence to spend *less* money—she's helping to keep the price level down, which benefits not just her but Bob, Carol, David, Evelyn, and countless others. And if they in turn hold more money, then Alice shares in the benefits. As a result, everyone can be better off if everyone gets a little nudge. So Friedman was led to contemplate a negative inflation rate, driven by a steady *reduction* in the money supply. (The government could, for example, collect some taxes in cash and burn 10 percent of the proceeds.)

On the other hand, money supply growth has some advantages. If the government pays for paper clips with newly minted money, then it doesn't have to pay for paper clips by taxing (say) coffee, and that's good for everyone who buys or sells coffee. After weighing this and other factors, Friedman in the end endorsed a small but positive inflation rate on the order of about 2 percent a year, but, believing that 2 percent a year was likely to be politically infeasible, declared himself perfectly willing to settle for as much as 5 percent.[13]

But we've been ignoring yet another set of issues. In our story, the money supply increases, then Alice and Bob try to spend the extra money, then prices go up. In the long run, that really is all that matters. But in the short run, the price adjustments take place in fits and starts, which can have important consequences. We'll turn to those next.

---

[13] The US inflation rate peaked at almost 14 percent in 1980 and at nearly 13 percent in Canada in 1981. Friedman might have been both surprised and pleased to learn that over the past decade, the inflation rate has rarely risen above 2 percent—largely because the authorities have taken Friedman's prescriptions to heart.

Chapter 4

Monetary History

The *quantity theory of money*—that is, the circle of ideas surrounding the notion that prices tend to move in tandem with the money supply—has a long history going back to the astronomer Nicolaus Copernicus in the fifteenth century. After the onset of the Great Depression in the early 1930s, the new generation of "Keynesian" economists largely rejected the quantity theory, arguing that often, people don't have strong stable preferences about how much money they hold.[14] Therefore, said the Keynesians, when the authorities inject new money into the system, people might simply hold it, without bidding up prices.

Throughout the 1930s and 1940s, a smattering of economists, notably Henry Simons and Lloyd Mints at the University of Chicago, tended the fires of the quantity theory. When Milton Friedman joined the fray in the 1950s, he sometimes painted himself as simply the recipient of the torch passed by his illustrious predecessors. But it's widely acknowledged that Friedman's version of the quantity theory was in fact highly original, far subtler, more insightful, and better designed for empirical testing.

The evidence for the quantity theory is largely to be found in the meticulous 800-page *Monetary History of the United States, 1857–1960*, written by Friedman and his co-author Anna Schwartz. The product of 15 years' work by the two authors and their countless research assistants, the *Monetary History* was instantly recognized as a modern classic and a work of monumental importance. In fact, the adjective "monumental" occurs repeatedly in dozens

[14] I've put the word *Keynesian* in quotes, using it to describe the views of those economists who called themselves Keynesians, without venturing into the delicate territory of how closely their views did or did not conform to those of John Maynard Keynes himself.

of reviews of the book, in phrases like "monumental consistency," "monumental coherence," and "monumental ingenuity."

The empirical findings and scrupulous data analysis in the *Monetary History* came as an earthquake to the Keynesian belief structure that then dominated the economics profession. Here are some of the highlights:

- Over the 100-year period ending in 1960, there was remarkable stability in the amount of real purchasing power (e.g. "10 weeks' income") that people want to hold in the form of money. The demand for real purchasing power does change over the course of that century, but mostly gradually and predictably. For example, when permanent incomes rise by 1 percent, the real purchasing power that people want to hold tends to rise predictably by about 1.8 percent. By contrast, when nonpermanent incomes rise, there is little change in the amount of money people want to hold. This is consistent with a theory that says that people hold money in order to buy things, and that (as we saw in chapter one) they want to buy more things only when their permanent incomes rise. This regularity in the data contrasts with the Keynesian view that the demand for money is erratic and inherently unpredictable.
- Because of that stability in demand, changes in the money supply do in fact lead to changes in the price level as predicted by the quantity theory. If you produce more money than people want, they'll try to get rid of the excess and prices will rise. The Keynesians had largely denied this; Friedman and Schwartz demonstrated that the evidence up to that time was on the side of the quantity theory.
- When new money is injected into the system, it takes a while for prices to rise. Alice sells a paper clip to the government and thereby acquires a newly printed $5 bill, wants to get rid of it, tries to buy things, and bids up prices—but the process takes time, sometimes as long as two years. In the interim, especially if there happens to be a recession in progress, Alice's increased demand for goods encourages businesses to produce more goods. (In the absence of a recession, businesses are likely to be near their peak capacities to begin with,

so instead of increased production, you tend to get an accelerated increase in prices.)

- Therefore, an increase in the money supply typically leads to an increase in economic activity (sometimes after a lag of many months), followed by a rise in prices and a return to the old level of activity (typically after a lag of many more months). Once again, this runs counter to the old Keynesian belief that new money is often simply held, and so has little effect on either prices or economic activity.

So you might think that in recessionary times, it would be a good idea to create additional money and get the economy moving again. Unfortunately, those long and variable lags make it essentially impossible to exploit this avenue: By the time your monetary shock starts to bear fruit, the recession is likely to be over, in which case all you've accomplished is a spurt of inflation.

From this, Friedman argued that changing the money supply is largely ineffective (and even counter-productive) as a weapon against short-run problems like recessions, and therefore it's best for policymakers to focus on the long run. And in the long run, as we've seen in the preceding two chapters, the quantity theory of money argues for a low and steady rate of money supply growth. As many economists do, let's call that the "Friedman rule."

What happens when the Friedman rule is violated? We found out in the 1930s, during the disaster we remember as the Great Depression—with unemployment rates ranging between 25 and 35 percent through much of the world, incomes falling dramatically, and, in many places, entire industries (including mining, logging, and construction) shutting down almost completely. Why? Friedman and Schwartz laid the blame squarely at the feet of the monetary authorities who allowed the US money supply to fall by almost one third. This, they argued persuasively, turned a moderately severe recession into a tragedy.

Amazingly enough, *nobody knew this* before Friedman and Schwartz came along. The Keynesians (this time including Keynes) believed that the money supply had been largely stable throughout the 1930s, and offered this as evidence that a stable money supply is impotent against economic catastrophe. Money was being created, according to the Keynesians, and people were simply holding it.

That was simply false. What certainly happened was that the money supply was allowed to shrink dramatically, largely due to bank failures that the authorities did little to prevent or to counteract. (Remember that "money" includes checking account balances, most of which are created by banks, as when your banker gives you a $10,000 loan by entering a few keystrokes in a computer—or, in the 1930s, a few pen strokes in a ledger—that creates a checking account with a $10,000 balance. When banks fail, those balances disappear.)

When money disappears, people try to acquire more of it (in the exact reverse of what happens when new money is created and people try to get rid of it). They do this by *not buying things*. In the long run, the only effect is a fall in prices. But in the short run, the effect is a reduction in economic activity. When that reduction in economic activity comes in the midst of an existing recession, and when it leads to additional bank failures and further reductions in the money supply, the disastrous short run can go on for many years.

So for economic policy, the key takeaway is that this history should not be allowed to repeat itself. Academicians and policymakers have taken this very much to heart.

Thanks largely to the policies that Friedman and Schwartz inspired, North America entered a 70-year period of unprecedented economic stability, with many believing that the frequent severe recessions of the past were never to repeat themselves. In 2002, Federal Reserve chairman Ben Bernanke, speaking at Friedman's 90th birthday celebration, addressed the great economist directly and said:

> Let me end my talk by abusing slightly my status as an official representative of the Federal Reserve. I would like to say to Milton and Anna: Regarding the Great Depression. You're right, we did it. We're very sorry. But thanks to you, we won't do it again.

Alas, that optimism faced a serious challenge in 2008, when another series of bank failures in a time of recession threatened to trigger a disaster comparable to that of the 1930s. In fact, the initial stages of the 2008 recession were every bit as severe and ominous as those of the Great Depression. But true to Bernanke's promise, the authorities took an active role to shore up the

money supply. Although the ensuing recession was painful, it lasted only half as long as the Depression, and (as measured by the fall in output from peak to trough) was only one third as severe. Economists generally agree that the lessons learned from the *Monetary History* played a critical role in preventing the recurrence of a true 1930s-style catastrophe.

There is, of course, a great deal of controversy about whether the Federal Reserve governors did too little or too much in 2008, and about whether they did those things in the best possible way, or in one of the worst possible ways, or somewhere in between. But they clearly understood that it was their mission not to repeat the mistakes of the Depression, and they were able to fulfill that mission because Milton Friedman and Anna Schwartz had done the hard work of discovering, documenting, and explaining to the world what those mistakes had been.

A Postscript

The monetary environment has changed a lot since 1963. For one thing, it's become a lot harder to decide what counts as "money." In 1963, it could take a week to withdraw funds from your savings account. Today, you might make the same withdrawal with a keystroke. Was your savings account a form of money in 1963? Is it today? What about Bitcoins? Or home equity lines of credit? These and other innovations have not only made it harder to define money in the first place; they also appear—by offering so many alternatives to money—to have made the demand for money less stable than it was in Friedman's day.

The regulatory environment has also changed. In 1963, it was illegal to pay interest on checking accounts. Many states disallowed branch banking, so that a given bank could have only one physical location, which you had to visit in order to make a withdrawal. As regulations have eased, people have found new ways to use money, contributing to additional fluctuations in demand.

As a result, the long-run and short-run relationships between money, prices, and economic activity are not as they were in 1963. Most strikingly, the money supply has risen dramatically since the 2008 crisis, but prices have not responded as the old quantity theory would predict.[15]

[15] This accords with Keynes's prediction that the quantity theory is particularly likely to fail at a time (such as the years following 2008) when interest rates are very low.

Thus, while many of Friedman's *goals* are well enshrined, many of his preferred *methods* have been superceded. For example, Friedman's goal of slow, steady, and predictable inflation has been widely accepted by monetary authorities around the world. But Friedman's method—slow, steady, and predictable growth in the money supply—has not. That method made sense in Friedman's day, when money demand appeared to be highly stable. It makes less sense in the age of automated bill payments and cryptocurrencies, when the demand for money has become more erratic and the supply of money has become more difficult to control. Therefore today's authorities tend to aim for low steady inflation by controlling not the money supply, but short-term interest rates, with the target interest rate continuously adjusted in response to observed economic conditions.[16] And, far more than Friedman ever envisioned, they attempt to manipulate the *demand* for money.[17]

The superficial reading is that by taking their eyes off the money supply, the authorities have rejected Friedman. The deeper reading is that by doing whatever is necessary to control the growth of the price level—keeping it gradual, steady, and predictable—they've been revealed as Friedmanites to the core. They've digested the main message that at least by and large, money matters profoundly for prices in the long run and for economic activity in the short run. Nobody fully appreciated this before Friedman (some might have suspected it, but the statistical analysis to support those suspicions was unavailable). Everybody gets it now, and that knowledge has saved us from more than one catastrophe over the past several decades.

---

16 Such policies are generally called Taylor Rules.

17 Most importantly: Just as you have a checking account at your bank, your bank has a checking account at the Federal Reserve. By adjusting the interest rate on that checking account, the Federal Reserve can influence your banker's demand for money.

Chapter 5

Unemployment

In 1958, the economist William Phillips noticed a striking correlation: Times of high inflation are times of low unemployment, and vice versa. Over the next decade, the correlation held strong.

The lesson most economists drew was that policymakers face a trade-off: You can have less unemployment, provided you're willing to tolerate (and even engineer) a bit more inflation.

Milton Friedman, almost a lone voice in the wilderness, begged to differ. Not for the first time in his career, it fell to Friedman to remind the world that correlation is not the same as causation.

In December 1967, having just completed his term as president of the American Economic Association, Milton Friedman gave a farewell address that radically reshaped modern macroeconomics by reinterpreting the Phillips correlation. He told, in essence, this story:

Suppose you're a carpenter, currently unemployed because your best job offer is $500 a week, and you think you'd rather keep searching for something better. Of course if all prices and wages were to double, you'd be offered $1,000 a week, but you still wouldn't take it, because the *real* value of your job offer is unchanged.

But let's tweak the story a little: Prices double overnight while you're asleep. In the morning, you're awakened by a phone call from an employer offering you $1,000 a week. You're delighted, because you're *not yet aware* that all prices have risen. You accept the job. After a few days, you visit the grocery store, discover the cruel truth that this week's $1,000 goes no farther than last week's $500, and submit your resignation.

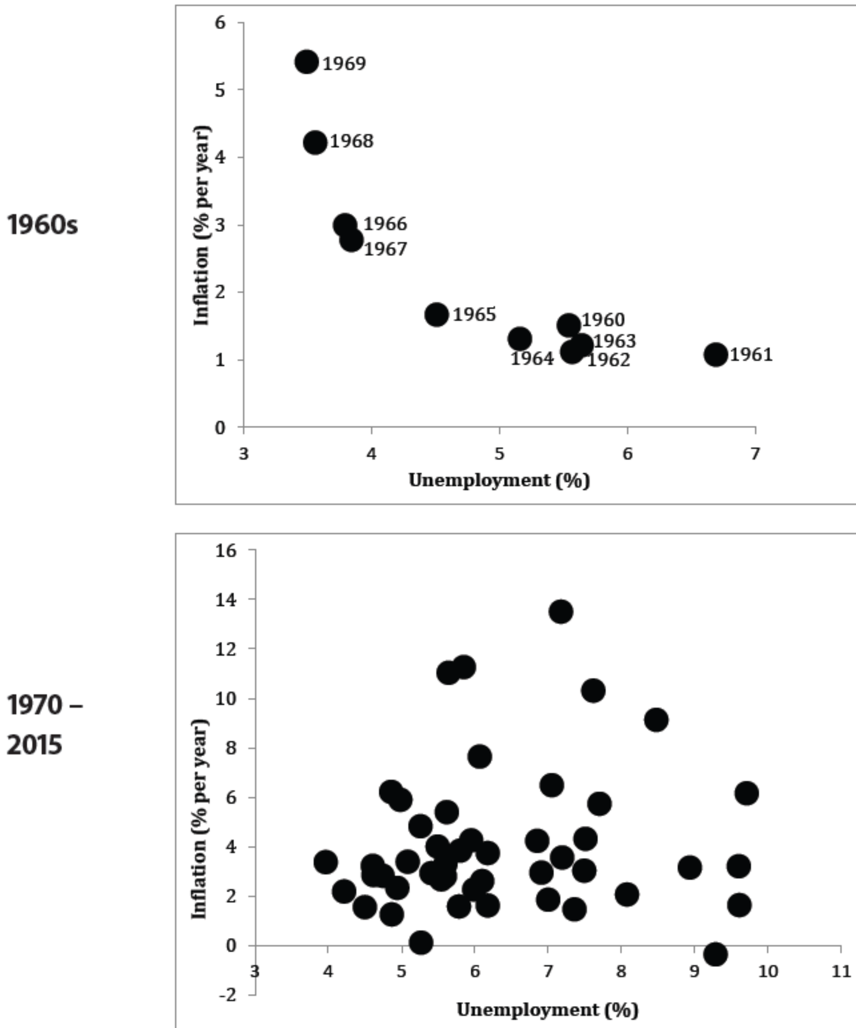
Obviously that story is highly stylized, but it's not too hard to imagine a realistic version in which prices are rising, workers are not fully aware of the changes, and wage offers start to look better than they really are, fooling some people into taking jobs they don't really want, at least until they figure out they've been fooled.

The same story works on the employer's side: You're a bicycle manufacturer, selling bicycles for $200 each. If all prices and all wages double, you'll go on as before, selling them for $400 each. Unless, of course, the doubling happens while you sleep, and you are awakened the next morning by the news that the price of bicycles has doubled, leading you to believe that the demand for bicycles must have mushroomed, and in turn leading you to expand your plant and hire more metalworkers, at least for a while. Eventually, of course, you'll realize that your plant expansion was ill-advised and you might not be needing those extra workers very long.

If anything like this story is accurate, the morals are these:

- *Expected* changes in inflation have no effect on employment.
- An unexpected increase in inflation can cause a temporary increase in employment—but not a permanent one.
- When there is a series of unexpected increases in inflation, economists (including economists named Phillips) might notice that these increases are correlated with employment, but might fail to realize that the correlation will survive only as long as the inflation continues to be unexpected.
- A policymaker who nevertheless wants to use inflation to reduce unemployment has to engineer an inflation that is *higher than expected*. This is hard to accomplish for very long. If prices rise by 10 percent in each of January, February, and March, people are going to expect them to rise by 10 percent in April as well. So if I want to keep unemployment down, I might need to engineer a 12 percent inflation rate in April, and then 14 percent in May—leading people to expect a 16 percent rate in June. Now I've got to unexpectedly go for 18 percent in June, and this way lies madness.
- In that sense, using inflation to ease unemployment is a lot like using narcotics to ease pain. The more you use today to make yourself feel

Figure 1: inflation and unemployment rates in the United States



The graphs show the inflation and unemployment rates in the United States by year, first for the 1960s and then for the years 1970–2015. (Points in the second graph are not labeled by year, only because there is no room for the labels.) At the end of the 1960s, Milton Friedman and Edmund Phelps essentially stood alone in predicting that the correlation in the left-hand graph would break down. The right-hand graph clearly illustrates the accuracy of that prediction.

good, the more you've got to use tomorrow just to stay on an even keel.

- Even the temporary reductions in unemployment caused by unexpected inflation are *not good things*. I do you no favour if I reduce unemployment by fooling you into taking a job you wouldn't have wanted without the deception.

Based on a story like this one, Friedman made his famous forecast that any attempt to exploit the Phillips correlation by keeping inflation high for a sustained period would surely fail—contrary to what pretty much everyone else believed at the time.[18] As the 1970s unfolded, with inflation and unemployment both on the rise, Friedman's prediction proved to be spectacularly accurate (see exhibit 1). Before long, essentially all economists had come around to Friedman's view that *expected* inflation is powerless to fight unemployment.

One key lesson that economists and policymakers took to heart was that *it makes no sense* to ask, for example, "What will happen to employment if we increase the money supply this year by 5 percent?" The answer could be anything at all, depending on what people expect. If prices rise by 5 percent when people are expecting 10 percent, they tend to be surprised by how low their wage offers are, and a lot of them turn down jobs as a result. If prices rise by 5 percent when people are expecting 2 percent, you might get a boom in employment.

Instead, the right conclusion is that a coherent monetary policy must be a long-run policy—one that takes into account how each year's changes affects the following years' expectations. Moreover, it's highly desirable for the authorities to *manage* expectations, by making clear commitments to policy rules, and developing a reputation for transparency.

Friedman went on to hypothesize that there is a *natural rate of unemployment* arising from the fact that we live in a changing and uncertain world, where there will always be some people who prefer to be temporarily unemployed in order to search for a better job or go back to school or deal with family emergencies. Any attempt to use inflation to drive unemployment below that natural rate is doomed to fail, at least in the long run, and is probably not

[18] One striking exception was Edmund Phelps, another Nobel-Prize-winner-to-be, who was simultaneously constructing a narrative very similar to Friedman's.

doing anyone any favours even during the brief interval in which it appears to succeed.[19] This *natural rate hypothesis* is now one of the central tenets of macroeconomics.

The implications of the natural rate hypothesis go far beyond monetary theory. In 1976, the US Congress passed the Humphrey-Hawkins Full Employment Bill, authorizing the government to create as many jobs as necessary to keep the unemployment rate below 3 percent. The problem with this is that in order to hire people, the government must pay them. In order to pay them, it must either raise taxes or increase borrowing. Either way, there is less income in private hands. Alice's taxes rise, so she decides not to buy a swimming pool. Bob lends to the government, so he has less to spend on restaurant meals. Carl lends to the government instead of putting money in the bank, which therefore rejects a loan application from Donna, who cancels her business expansion. One way or another, private employment must fall.[20]

Government hiring is not a recipe for increasing employment; it's a recipe for increasing government employment at the expense of reducing private employment. Trying to legislate the natural rate of unemployment is like trying to legislate the force of gravity. The laws of nature are oblivious to the laws of men.

When Friedman said as much in a *Newsweek* column, Senator Hubert Humphrey, the principal sponsor of the Humphrey-Hawkins legislation, responded that Friedman had misunderstood him; the goal of this legislation was not to substitute government employment for private employment, it was to increase government employment *without* affecting private employment. Humphrey had, in other words, missed the point entirely.

Why, then, do such laws get passed? Here is Friedman's answer: "People hired by government know who is their benefactor. People who lose their jobs or fail to get them because of the government program do not know that that is the source of their problem. The good effects are visible. The bad effects are

---

[19] The natural rate can change, and will if someone finds a better way to match workers to jobs or if training programs become more effective. Friedman's point is that you can't change the natural rate of unemployment by changing the money supply.

[20] In his writings and speeches, Friedman returned often to the theme that the effects of taxation and the effects of government borrowing are pretty much interchangeable. Either way, resources are transferred from the private sector to the public sector, and that's most of what matters.

invisible. The good effects generate votes. The bad effects generate discontent, which is as likely to be directed at private business as at the government. The great political challenge is to overcome this bias, which has been taking us down the slippery slope to ever bigger government and to the destruction of a free society."

Although the ideas in Friedman's presidential farewell address were new and in many ways radical, they tended to reinforce many of the policy positions he'd been advocating all along. First, monetary policy should be focused on the long run, because it can do very little good in the short run. (It can, however, do great *harm* in the short run, as it did in the Great Depression, and that of course should be avoided.) Second, there are also powerful limits to what monetary policy can do in the long run—in the long run it can't affect employment, and for similar reasons, it can't affect the production of goods and services. Therefore monetary policy should be geared to the one thing it *can* accomplish in the long run—a price level that grows gradually and predictably, so that people can form accurate expectations and make appropriate plans.

This circle of ideas—both the underlying story about the Phillips correlation and its implications for policy—has been immensely influential. Nowadays, monetary authorities around the world see low and predictable inflation as a primary goal, accept that monetary policy cannot affect output and employment in the long run, and see the management of expectations as a critical part of their jobs.

There's been a bit of evolution in how economists view unemployment. Pretty much everyone now agrees—and this is largely Friedman's doing—that there is a natural rate of unemployment, and that it's a fool's errand to aim for anything lower. But nowadays there's a bit more concern with *avoiding* policies that might inadvertently push unemployment *above* its natural rate, and this too has had some effect on monetary practice. But the broad themes of monetary theory and monetary policy are instantly recognizable as those that Milton Friedman laid out in 1967, and as a world apart from everything that came before.

Chapter 6

Chicago Price Theory

From his arrival at the University of Chicago in 1946 until his retirement in 1977, Milton Friedman did more than anyone to set the intellectual agenda of the Chicago economics department. Though Friedman was primarily known as a monetary economist, the subject he chose to teach was *price theory*, or *microeconomics*. Microeconomics was a required first-year graduate-level course and it shaped the thinking of generations of students, giving them an extraordinarily rich set of tools for analyzing problems in all areas of economics.

What exactly is microeconomics, and what was unique about the Chicago variety? It might be best to answer that question with some examples. In the 1950s, Friedman's counterpart at MIT was the enormously influential future Nobelist Paul Samuelson, who also taught microeconomics. Here are a few sample questions pulled almost at random from Samuelson's final exams and problem sets:

- Write a 45-minute essay explaining what Hicks does in Books I and II of Value and Capital, relating the parts to each other.
- In 45 minutes, state the fundamental problems of bilateral monopoly, duopoly and/or game theory. What solutions have been advanced? Appraise them.
- In 45 minutes, discuss the principal theories relative to capital and interest. Appraise.

At around the same time, Friedman at Chicago was posing exam questions like these:

- Will a specific tax of, say, $1 per cup of coffee raise the price of coffee by more or less than an equivalent tax equal to a specified percentage of the price?[21]
- True or false: Technological improvements in the production of rayon, nylon, and other synthetic fabrics have tended to raise the price of meat.
- If soybean farmers receive a subsidy of a fixed number of dollars per acre, will the yield per acre rise or fall?
- It's been alleged that the Kodak company's highly profitable film business allows it to undercut its competitors' prices in the market for cameras. Under what circumstances would it make sense for Kodak to behave in this way?

Perhaps you've stopped to ponder one or more of Friedman's questions. I'm guessing that unless you're a professional economist, you weren't tempted to ponder any of Samuelson's. To Friedman, economics was always about the sort of real-world problems that might be asked by a homemaker planning a budget, a business owner formulating a pricing strategy, a policymaker formulating a tax plan, or a citizen reading the news. Theories were interesting when they made concrete predictions that could be tested. Should General Motors instruct its subsidiaries to buy parts where they can get them the cheapest, or to favour other GM subsidiaries? What would happen if every licensed cab driver were issued a second license and permitted to sell it to the highest bidder? If the Alcoa Corporation has a worldwide monopoly on freshly mined aluminum, does it matter (for aluminum prices) whether they have a monopoly on second-hand aluminum as well?[22] What would happen if the publishing industry were subject to the same sort of regulations faced by television broadcasters?

It might appear that the answers to such questions could be anything at all, depending on a great deal of information that isn't given. But Friedman

[21] Here an *equivalent tax* is a tax designed to raise the same amount of revenue for the government.

[22] This was in reference to a then-current antitrust case against the aluminum industry, where the court had accepted the argument that it does not matter; the answer that Friedman was looking for was that it might matter very much or not at all depending on a great many external factors, which a successful student would at least partially list and analyze.

taught the skill of arguing to a conclusion by focusing on the implications of rational choice and incentive-driven behavior, making auxiliary assumptions as necessary, and keeping careful track of how the conclusion might change if those assumptions prove to be incorrect.

Over time, well-trained Chicago students graduated, got jobs, and disseminated these skills to their own students, so that Chicago Price Theory became a standard part of the curriculum in economics departments worldwide.

In Friedman's hands, Chicago Price Theory was not only a powerful and innovative subject in its own right, but the key to *all* of economics. Outside Chicago, subjects like macroeconomics and monetary theory were often treated as quite separate from price theory. But in Friedman's Chicago, price theory was at the center of everything, including Friedman's own work in monetary theory. Indeed, one thing that strongly distinguishes Friedman from his contemporaries is that his monetary theories depend crucially on a close analysis of why people hold money in the first place—an analysis that in turn depends crucially on the deft application of the tools of price theory.

Because Chicago Price Theory demands concrete answers to concrete questions (as opposed to 45-minute ruminative essays), it invites a lot of argument. Being at Chicago meant constantly being drawn into arguments between very smart people who defended opposing answers to some of those Friedman-style exam questions. Those arguments (among the graduate students and among the faculty) were huge learning experiences, where the participants unraveled each other's' logic, and, more often than not, came away understanding how different assumptions had led to different conclusions, and how those assumptions might be put to the test.

This culture of argument was carefully cultivated by Friedman and his colleague George Stigler, another future Nobelist who shares credit with Friedman for the edifice of Chicago Price Theory. The remarkable thing about those arguments is that, after hours or weeks or sometimes months of back-and-forth, they tended to get settled, and from those settlements came great ideas.

A legendary instance occurred in 1958 when Professor Ronald Coase, then teaching at the University of Virginia, visited Chicago to present a paper on the theory of *externalities*—costs imposed on others without their consent.

There's an externality, for example, when I have to breathe your second-hand smoke. As a result, you tend to smoke more than I'd like you to, and more than would be justified by an impartial cost-benefit analysis.[23] The solution, according to all the textbooks in 1958, was to tax the harmful activity—in this case smoking—so that there would be less of it.

Professor Coase's radical take on the matter was that just as your smoking harms me, my complaining about it (and convincing my government to tax it) harms *you*. So if the textbook logic were correct, we'd have to tax you for smoking, tax me for making that tax necessary, tax *you* for making *that* tax necessary, and thereby descend into madness. Professor Coase therefore proposed an entirely novel analysis of the externality problem, the details of which are fascinating but, alas, off-topic here.[24]

Here is what I wrote about Coase's visit to Chicago in my book *The Armchair Economist*:

> Coase's seminar has become legendary among economists. It drew the most brilliant and intellectually relentless audience imaginable. George Stigler, one of the four future Nobel laureates in the room, recalled the audience as a "simply superb" collection of theorists and the occasion as one of the most exciting intellectual events of his life. Before the talk, a vote was taken. There were 20 votes for Arthur Pigou [the architect of the generally accepted theory] and one for Ronald Coase. Stigler later commented that "If Ronald had not been allowed to vote it would have been even more one-sided."
>
> Stigler's recollection continues: "As usual, Milton did much of the talking... My recollection is that Ronald didn't persuade us. But he

---

[23] If your third cigarette brings you 5 cents worth of pleasure (net of what you paid for it) and causes me 3 cents worth of distress, then an impartial cost-benefit analysis says it's a good thing for you to smoke that cigarette, because 5 is greater than 3. If your fourth cigarette brings you an additional 4 cents worth of pleasure and causes me 6 cents worth of distress, then the same impartial cost benefit analysis says it's a bad thing.

[24] The key to that novel analysis is to recognize that your smoking imposes a cost on me, my attempts to restrain your smoking impose a cost on you, and that a well-designed policy should aim to minimize the total of all such costs.

> refused to yield to all our erroneous arguments. Milton would hit him from one side, then from another. Then, to our horror, Milton missed him and hit us. At the end of the evening the vote had changed. There were 21 votes for Ronald and no votes for Pigou." Soon the entire profession had been won over, and eventually Coase was awarded a well-deserved Nobel prize for ushering in a new era in the economic analysis of law.

It should perhaps be added that Stigler's reference to "the end of the evening" is a bit of a euphemism. According to the recollections of some who were there, the seminar began in mid-afternoon and wrapped up at around 3 a.m., following a change of venue from the classroom to the living room of Aaron Director (a Chicago law professor and Milton Friedman's brother-in-law). The Chicago style—the Friedman style—was to never close the door on a subject until you'd nailed down every detail.

To that end, Friedman introduced a new kind of seminar: Each week in his "money workshop," an invited speaker would submit in advance a written account of some research project he was currently working on. All participants were expected to read this paper carefully in advance. When the seminar met, the speaker was given a few minutes to introduce himself before the action got under way. Then Friedman asked, "Are there any comments on page 1?" If those comments, and the disputes they generated, did not fill the allotted 90 minutes, he would then ask, "Are there any comments on page 2?" Speakers typically left feeling simultaneously chastised and inspired, and revamped their research agendas for the better, frequently including profuse thanks to Friedman and his crew in the final versions of their papers.

Emboldened by the successes of Chicago Price Theory, its practitioners soon sought to extend its scope by applying their methods to issues previously thought to be beyond the scope of economics. Friedman's brilliant disciple Gary Becker encroached deeply into the field of sociology, using price theory to analyze the causes and effects of racial discrimination, criminal behavior, family sizes, power struggles in interpersonal relationships, and divorce rates. Harry Markowitz and Eugene Fama used price theory to understand portfolio investment decisions and thereby revolutionized the theory of finance. Robert

Fogel employed price theory to illuminate the persistence of slavery in the American south. Everybody mentioned in this paragraph was directly inspired by Friedman, and every one of them was eventually awarded a Nobel Prize.

Friedman's disciples also garnered another form of glory through the illustrious contributions of their own students and their students' students and so on through the generations, with no end in sight. After many decades, Chicago Price Theory—Milton Friedman's Chicago Price Theory—remains one of the most successful disciplines in intellectual history.

Chapter 7

Capitalism and Freedom

In 1962, Milton Friedman burst forth from the academy into the public square with *Capitalism and Freedom*, subsequently ranked number 16 on *Time* Magazine's list of the most influential books written in English in the years 1923–2011.[25] More than half a century later, it remains in print in over a dozen languages and ranks near the very top of Amazon's list of bestsellers in economic theory.

The book's central thesis is that economic freedom is a prerequisite for personal and political freedom. Here *economic freedom* refers to a system of free markets and private ownership that operates with limited interference from the government. *Political and personal freedom* encompasses free elections, minority representation, freedom of expression, and the option to choose an unorthodox lifestyle. If you want that kind of freedom, you must also have free markets. Writing in 1962, Friedman said he knew of no example, in any time or in any place, of a society that had offered substantial political freedom without also offering substantial economic freedom.

In the intervening half-century, no example has arisen. The Fraser Institute compiles meticulous rankings of personal and economic freedom in 159 countries, using 79 distinct indicators within each country; the methods are spelled out in detail on the Institute's website. Of the 20 countries that rank highest in personal freedom, all but one are also in the top 25 percent for economic freedom, and even the one exception (Iceland) is still comfortably above the median.

[25] The seemingly arbitrary date range is because Time Magazine was founded in 1923 and the list was compiled in 2011.

Alas, this works in only one direction. Friedman observed, and the Fraser Institute data confirm, that economic freedom is no *guarantee* of personal freedom. The United Arab Emirates is the 9th most economically free country in the world, but ranks a bleak 149th out of 159 in personal freedom. Seven other countries in the economically free top-20 fail to make the top 25 percent for personal freedom.

Although such data are suggestive, Friedman was quick to point out that they don't actually prove anything about what might be possible in the future. So the next step is to understand *why* and *how* political freedom is always and everywhere undermined by socialism.[26]

So take an example: A big part of both political and personal freedom is the right to oppose your government's policies. To do that effectively, you might want to hold rallies, or film documentaries, or publish books, or advertise your blog. For that, you need resources. Where will you get them?

In a capitalist society, you can turn to anyone who's willing to fund you. You can appeal to the grass roots, but that in turn might require some funds to get you started. It might be more effective to approach a wealthy donor—and if you're turned away, you can approach another. You don't even need a wealthy donor who believes in your cause; you only need one who believes there's money to be made by selling your books and videos or by promoting your website. You might not succeed, but you've got a lot of options. And indeed, capitalist societies, including the United States, have always been rife with anti-capitalist propaganda financed by wealthy capitalists.

Of course, even after you've raised funds, you might have trouble booking airtime on a broadcast or cable network, because the owners might be hostile to your cause. But you have at least two recourses still available. One is to approach a different network. Another is to offer a higher price.

Under socialism, you've got a much bigger problem. If the government owns the meeting halls, the recording studios, and the Internet providers, or if it heavily regulates their owners, then you've got to approach the government—and if they turn you away, there's no place else to turn.

---

26 Following Friedman, I will use the words *capitalism* and *socialism* to mean the presence and the absence of economic freedom. Socialism can include government ownership of productive resources or government control over the decisions made by private owners.

This is a problem *even if* your government is run by idealists who are dedicated to the principle that everyone has a right to be heard. The problem with that principle is that it's not clear what "everyone" means. Resources are limited, the demand for those resources is effectively unlimited, and that means someone has to get turned away. As long as one entity controls all the resources, those who are turned away are left with no alternatives. Capitalism doesn't guarantee you an audience, but it does give you an unlimited number of opportunities to try.

It remains the case that if there are 20 meeting halls and 30 groups that want to hold a rally, 20 will succeed and 10 will fail. But under socialism, the 20 who succeed have all succeeded by appealing to the same group of officials, while under capitalism the 20 who succeed will do so by appealing to a highly diverse group of donors and entrepreneurs—so a wider diversity of opinions will be heard. And as a bonus, under capitalism, there's a strong incentive for someone to build a 21st meeting hall.

Lest you think this is all abstract theorizing, consider the case of Winston Churchill, who spent most of the 1930s trying desperately to convince the British public to take a firm stand against Adolf Hitler and the remilitarization of Germany. Although Churchill was a leading citizen, a current member of parliament and a past cabinet minister, the radio and television networks—all owned by the British government—ruled that his views were too far out of the mainstream and refused to sell him airtime.

Had there been private broadcast networks, free to sell airtime as they pleased, Churchill would surely have reached a far larger audience. Might he have thereby changed public opinion and the course of history? Of course we can't know. But we do know that socialism denied him the freedom even to *try*.

The reason capitalist societies have a chance of achieving political freedom is that in capitalist societies, economic power is *dispersed*. There's always someone else to appeal to.

We've been talking about political speech, but the same lesson applies more broadly. Do you want to seek an audience for your unorthodox views on childrearing, or the ethical treatment of animals, or the reconciliation of science with religion? Freedom of speech requires capitalism because speech often requires either airtime or a recording studio or a meeting hall or a web

presence. If I won't provide those because I don't like your views, you can shop elsewhere (or perhaps make me an offer that tempts me to shelve my principles). But if one entity controls all the networks, recording studios, meeting halls, and hosting services, and if that organization disapproves of your message, you're out of luck.

Freedom of occupational choice also requires capitalism because an occupation often requires an employer. If I won't hire you because I don't like your lifestyle or your ethnicity, you can offer to work for someone else. But if one entity controls all the hiring, and disapproves of your lifestyle or your ethnicity, you're out of luck. The freedom to eat at a restaurant requires capitalism because somebody has to serve you. If I won't serve you, you can find someone else who will. But if one entity controls all the restaurants, and if that entity decides you won't be served, then you won't be served.

Lest you think this is all abstract theorizing, consider the history of the American south in the hundred years following the Civil War, where the so-called "Jim Crow" laws made it difficult and often impossible for black citizens to find jobs, to be served in restaurants, to ride buses, and to start businesses. Why were these regulations thought necessary? Because it was widely recognized that in their absence, black customers and black workers who were turned away at one location would find themselves welcomed at another. In order to deny black Americans their personal and political freedoms, politicians needed to constrain the operation of the free market.

Indeed, Friedman makes the point that capitalism is particularly hostile territory for racial, religious and political discrimination precisely because it disperses economic activity so widely that you usually know absolutely nothing about the race, religion, or politics of the people you're trading with. When you buy a car in a capitalist country, you have no idea whether the wheels were attached by a Republican, a communist, a pagan, a Hindu, a lesbian, a polyamorist, or a person with skin that's lighter or darker than yours. That makes it essentially impossible for customers to discriminate against any of those groups. By contrast, if the car companies were all controlled by the government, it would be much easier for a group of bigoted customers to lobby for discriminatory hiring practices.

Most economic activity requires coordinating the activity of vast numbers of people. New Yorkers have bread on their tables thanks to the coordinated activity of farmers, bakers, truckers, the producers of fertilizers, pesticides, and tractors, the mechanics who maintain the tractors and the delivery trucks, and literally thousands of others. There are only two ways to organize that activity: Through the anonymous market place, where individuals respond to price signals (so that an increase in the demand for bread leads ultimately to an increase in demand for tractor maintenance, leading mechanics to voluntarily work overtime), or through top-down direction—in other words, coercion. In the latter case, we are all subject to the whims and the prejudices of the directors. That leaves the market as the only economic system conducive to freedom.

Beyond all this, there's a separate avenue by which capitalism fosters personal freedom: It makes people richer, and the richer you are, the more freedom you can afford. Does your offbeat religion require you to make a pilgrimage to San Francisco once a year? Do your idiosyncratic sexual tastes require you to travel in search of a compatible mate? Does your love of nature compel you to take four weeks off every summer and travel to exotic locales? Those things are part of your personal freedom. They're also expensive. In general, the richer you are, the freer you are.

Of course it remains to be proven that the vast majority of people are richer under capitalism than under socialism. To make that case in detail here would take us far afield, but I hope it will suffice to note that virtually all economists agree on this, and that their agreement is based on a confluence of evidence from a great many sources. One example: It's easy to find towns on both sides of the US/Mexico border that are nearly identical in climate, population, and natural resources—but the towns on the US side are systematically much richer for reasons that can easily be traced to policies that are more socialistic south of the border and more capitalistic to the north. And of course the Americans in those towns, having the resources to travel more widely, shop more widely, and take longer vacations, are in several very important senses freer than their Mexican counterparts. The past several decades have also provided some more dramatic examples, such as East versus West Germany and North versus South Korea.

This, then, is the main message of *Capitalism and Freedom*: Capitalism is not guaranteed to make you free, but for multiple reasons, the absence of capitalism is guaranteed to make you unfree. The next step is to translate this generality into specific policy proposals, which is where Friedman turned next—and so shall we.

Chapter 8

Policy Analysis

Having drawn the connection between free markets and free people, Friedman moved on to specifics. The later chapters of *Capitalism and Freedom* make the case for limiting the role of government in education, labour markets, corporate governance, housing, old age insurance, the alleviation of poverty, and more.

Each of these chapters is short, engaging, and easily available, so you don't need me to repeat all their contents. Instead, I'll try to convey their flavour by summarizing just one chapter—on occupational licensing—with some of the examples updated for the twenty-first century.[27]

If you live in New York State and you want to be a barber, you'll need to sign up for 53 days of training and then pass an exam. (If that's too onerous, you might consider becoming an Emergency Medical Technician, which requires only 27 training days.) That will qualify you to cut hair in a shop owned by someone else. If you want to open your own shop, the licensing process is far more complex, expensive, and burdensome.

Once you get your license, I hope you never find yourself wanting to move to another state, where you'll have to start all over again. People in state-licensed occupations are 36 percent less likely to move across state boundaries than their demographic counterparts in other occupations. To put that another way, for every 1000 non-licensed workers who move to another state for better weather, a spouse's job, or to be closer to their families, there are 640 licensed workers who move—and another 360 who wanted to move but didn't because of licensing issues.[28]

---

[27] Occupational licensing was a lifelong interest of Friedman's; it was the subject of his doctoral dissertation.

[28] J. Johnson and M. Kleiner (2017), *Is Occupational Licensing a Barrier to Interstate Migration?* NBER Working Paper number 24107, National Bureau of Economic Research.

The good news is that once you jump through those hoops and accept those restrictions, you're rewarded with a license that not only lets you cut hair; it also artificially boosts your wages by virtue of its scarcity. Every time someone balks at the licensing requirements, you've got one less competitor to worry about. Recent studies find that licensing requirements tend to boost wages by about 15 to 18 percent. This, of course, is good for barbers.

Who is it bad for? First, and most obviously, everyone who wants to cut hair but is unwilling to pay thousands of dollars to sit in a classroom for 53 days. Second, and a bit less obviously, everyone who ever pays for a haircut—in other words, almost everyone.

How can a requirement that hurts almost everyone survive in a democracy? Why do the voters stand for it? The answer is that the average voter doesn't care very much. An 18 percent premium for a haircut is an annoyance, but probably not enough of an annoyance to change your vote. Barbers, though, care very much about that 18 percent premium and they make sure that their legislators are aware of that.

And so it goes in a great many other licensed occupations: welders, roofers, ticket takers (seriously!), surveyors, salespeople, pharmacists, pipelayers, all matter of medical personnel, engineers, massage therapists, manicurists, lawyers, librarians, loan officers, morticians, bill collectors, boilermakers, cab drivers, architects, and hundreds more. You might not much mind paying an extra 18 percent for the occasional haircut, but if you're paying, on average, an extra 18 percent for *all* of those services, you can bet it adds up. Still, it's not worth your while to fight against any one of these license requirements, whereas the welders, roofers, and ticket takers will all be doing what it takes to maintain their own.

Defenders of licensing claim that it helps to insure quality: A trained and licensed barber or welder is likely to perform better than a professor of economics who decides on a whim to leave the classroom and start cutting hair. But Friedman argues that this is, at best, an argument for *certification*, not mandatory *licensing*. Barbers who complete 53 days of training can display their certificates; barbers who are untrained will have no certificates to display, and customers can decide for themselves who to patronize.

A thinker less rigorous than Friedman might have gone on to make light of the notion that you ever needed the government to protect you from a bad haircut in the first place. But, characteristically, Friedman forgoes the easy path and redirects our attention to what most people will consider the hardest case, namely, medical licensing. Would we really be better off in a world where any fool could practice medicine?

In such a world, there would be many more doctors, and some of them would be much less good at their jobs than the doctors we have today. That's not obviously a bad thing. We don't require every car to be as good as a Lexus, and we don't require every restaurant to earn three stars from Michelin, so why should we need every doctor to attend four years of medical school followed by an internship and a residency, while severely limiting the number of medical schools and training hospitals? Friedman, with remarkable prescience, envisioned possibilities that were largely unthinkable in 1962, but have become commonplace today, including group practices with multiple professionals of different skill levels (we now call them nurse-practitioners and physicians' assistants) authorized to provide care at different levels. But even today, all of those professionals are still licensed, and to become licensed, they must attend training academies that are themselves licensed. This not only restricts the number of medical practices; it also limits experimentation with alternative organizational structures that might be as difficult for us to imagine as group practices were before Friedman's day. What if we abolished the licensing requirements altogether? Would medicine be overrun by quacks?

Part of the answer is that people today routinely consult Consumer Reports before buying a dishwasher and Angie's List before hiring a roofer. In a world with more medical options, there would be no lack of trusted reviewers.

But perhaps a better answer is that we've got some evidence on this. In the US, the requirements for a dental license vary substantially from state to state. By examining the dental health of incoming military recruits from all over the country, economists have found that more stringent licensing requirements have *no measurable effect on quality*, though they do raise the price of dental care.[29]

---

[29] M. Kleiner and R. Kudrle (2000), Does Regulation Affect Economic Outcomes? The Case of Dentistry, Journal of Law and Economics 43.

It is historically rare for an intellectual to have a direct and immediate effect on even one matter of public policy, let alone several. Milton Friedman was surely one of those rarities. As we've seen, he left a lasting influence on monetary policy and in the minds of many is almost single-handedly responsible for the fact that the mistakes of the Great Depression have never been repeated. In the chapters to come, we'll investigate his direct influence in several other areas, including educational choice, exchange rate regimes, and the end of military conscription in the United States.

More commonly, intellectuals wield their influence a bit more indirectly, by expanding what political scientists call the *Overton Window*—the range of policy ideas that the public is willing to take seriously. In this too, Friedman was extraordinary. He appears to have been the first major public intellectual to advocate for the then-radical notion that you don't need six years of medical training to lance a boil; that expansion of the Overton Window played a role in making the idea of a physicians' assistant at first thinkable and ultimately commonplace. As we'll see in the next chapter, occupational licensing is only one of many issues where the Overton Window was breached by the strength and persistence of Friedman's arguments.

Despite those successes, the role of government in developed countries has grown substantially since Friedman's day. In the United States, a rough measure is the size of the Federal Register, the annual publication that lists all the new, revised, and proposed regulations imposed on businesses by the US government. In 1962, when *Capitalism and Freedom* appeared, the Federal Register filled 13,226 pages. By 2016, at 97,110 pages, it was over six times as long.

This suggests that the message of *Capitalism and Freedom* is as urgent now as it has ever been. Fortunately, it's still in print, still available in over a dozen languages, and consistently near the top of the charts in Amazon's "Economic Theory", "Free Enterprise" and "Political Ideologies" categories.

The celebrity he gained from *Capitalism and Freedom* launched not just Friedman's second career as a public intellectual (after his first career as an academic) but a third and closely related career as an activist in the cause of freedom. We'll turn to that next.

Chapter 9

Activism

After the success of *Capitalism and Freedom*, Milton Friedman became the world's most widely recognized advocate for economic freedom. His op-ed columns in *Newsweek*, appearing every three weeks for 18 years, reached a direct audience of about three million subscribers and were widely quoted in other media. Soon his face and his voice were familiar to many millions more, through his frequent congressional testimony, public speeches, and media appearances.

Friedman wielded his celebrity and his rhetorical skills as powerful weapons not just in the battle of ideas, but also in the arena of practical policymaking. Here were some of the causes with which he was most clearly identified:

The volunteer military

Throughout the 1960s, American society was torn apart by bitter controversy over military conscription. The pro-conscription case rested largely on the fallacious assertion that low-paid draftees are somehow less costly to society than higher-paid volunteers. In reality, the social cost of converting Carl the Carpenter into Sam the Soldier is equal to the forgone value of Carl's carpentry services, regardless of what Carl is paid. If Carl is conscripted, he bears much of the cost himself; if he's induced to volunteer via a market wage, the cost is transferred to taxpayers. But the cost is the same either way.

So a conscripted army is exactly as costly as a hypothetical volunteer army with exactly the same personnel. But a *real* volunteer army is always cheaper because instead of having the same personnel it tends to attract recruits with less valuable alternatives. If Carlos is a less productive carpenter than Carl, then Carlos is more likely than Carl to volunteer. When Steve Jobs was

on the verge of inventing the modern personal computer in his garage, there was never a threat that he might give it all up to join the army. By contrast, a selective service board—with no way to distinguish Jobs from a host of far less inspired and industrious tinkerers—could easily have made the monstrously costly mistake of drafting him.

The draft, then, was as much an affront to economic common sense as it was to personal freedom, and on both accounts it naturally attracted Friedman's attention. In 1966, he participated in a now legendary conference at the University of Chicago, organized by the anthropologist Sol Tax. By all accounts, the shining star of that conference was Friedman's former student (and my own former colleague) Walter Oi, who estimated the full cost of conscription in brilliant detail. Before Oi's presentation, a poll of the 74 attendees found two-thirds in favour of the draft; afterwards, a follow-up poll found two-thirds opposed.

Three years later, President Richard Nixon appointed Friedman to a special commission to make recommendations regarding the future of the draft. The 15 members were deliberately chosen to represent a diversity of views: Friedman was one of five who vocally opposed the draft; another five vocally supported it; and the remaining five were declared agnostics. After extensive debates and meetings, Oi and Friedman won over every one of the draft's supporters and agnostics, and the commission delivered a unanimous report to the president recommending that the draft be abolished. Shortly thereafter, it was.

Educational choice

Should there be public schools, and if so why? It's not enough to argue that schooling is valuable, because many things (including food and shelter) are valuable, but most people don't think those things should be provided by the government. What makes schooling different? One possible answer: The food you buy benefits your own family, whereas the education you buy benefits your entire community because literacy and other basic skills are needed to maintain a stable democracy. Therefore, unless you're extraordinarily community-minded, if you had to provide for your children's education yourself, you might choose to under-educate them.

But even that is at best an argument for public *funding* of education, not an argument for public *provision* of education. Those are very different things, and you can have one without the other. In a 1955 essay, Milton Friedman proposed exactly that: A system of educational vouchers, where governments require a minimal level of schooling and provide parents with vouchers redeemable for that schooling at any certified institution of the parents' choice. Those who want to purchase education beyond the minimum would of course be free to do so, at their own expense.

A voucher system would meet the goal of providing education for all in a way that minimizes the role of government and maximizes the opportunity for parental choice. It brings all the benefits of competition, with schools given the incentive to attract students by maintaining quality. It means, too, that if you're very poor, you have a chance of sending your kids to a pretty good school without having to uproot your family and find a way to move across town to another school district.

The alternative is essentially a government monopoly. As Friedman wrote, "You cannot make a monopolistic supplier of a service pay much attention to what its customers want, especially when it does not even get its funds directly from its customers." As a general rule, people are frugal when they spend their own money, and they demand good value when they spend money on themselves. But for the most part, school administrators are spending other people's money on other people's children, which is a recipe for both profligacy and carelessness. Between 1970 and 1982, US school spending increased fivefold, but measures of quality declined.

Friedman's essay on school choice was first written for an audience of economists, but he included an updated version as a chapter in *Capitalism and Freedom*, introducing the idea of vouchers to the public at large. (As Friedman pointed out, the idea was not without precedent—it was partly inspired by the GI Bill, whereby soldiers returning from World War II were presented with educational vouchers as a reward for their service.) From there, the idea entered the policy mainstream.

For the rest of their lives, Milton and Rose Friedman served as crusaders in the cause of educational choice, making their case in print and in media appearances, lobbying decisionmakers, raising funds to support

political initiatives and referenda, and creating the Milton and Rose Friedman Foundation (now renamed edChoice) which carries on the Friedmans' work, along with sponsoring research and educating parents about the choices that are now available.

Today educational vouchers are a reality in 15 of the 50 United States, plus the District of Columbia. Another 6 states facilitate educational choice through systems of educational savings accounts, 18 through tax-credit scholarship programs, and 8 through tax credits and deductions. Over 3 million children in 44 states attend charter schools, which Friedman characterized as a "step in the right direction," though a limited one, as they are still part of the government system. In almost every case, the political will to institute these reforms can be traced back directly to the work of the Friedmans.

Regulation

Counterproductive regulation is a recurring theme in *Capitalism and Freedom*, but one regulatory agency that goes unmentioned is the US Food and Drug Administration, which, among other things, prohibits the sale of any new drug that has not met the FDA's standards for safety and efficacy.

Perhaps that was because even Milton Friedman, in 1962, had no way of knowing how much damage the FDA had wrought. In 1973, Friedman's student Sam Peltzman filled that gap with a blockbuster paper comparing the (considerable) number of lives the FDA had saved by keeping bad drugs off the market with the even greater number of lives that had been lost because of good drugs that the FDA had failed to make available.[30] Friedman immediately took notice and publicized Peltzman's results in a widely quoted *Newsweek* column calling for the abolition of the FDA.

In retrospect, said Friedman, Peltzman's results are exactly what we should have expected. As long as there is an FDA, it will occasionally make mistakes in both directions, approving some drugs that turn out to be harmful and

[30] The FDA's regulatory powers were suddenly and dramatically increased in 1962. Immediately thereafter, there was a sharp, lasting, and unprecedented decrease in the rate at which new drugs entered the marketplace. By 1973, Peltzman had enough data—including data on differences between new drug introductions in the US versus other countries—to argue that the decline had in fact been caused by the FDA, and to estimate the number of lives lost as a consequence.

rejecting or delaying others that might have saved lives. The first kind of mistake makes headlines: "**Mother of three dies after taking FDA-approved drug**."

The second kind of mistake is invisible; nobody ever sees a headline that says: "**Father of two dies of heart attack that could have been prevented if FDA regulations had not made it prohibitively expensive to develop the drug that would have saved him**."

Given that asymmetry, the FDA far prefers making the second kind of mistake and therefore errs far too much in that direction. To those who continued to call for reform instead of abolition, Friedman followed up with another column entitled "Barking Cats":

> What would you think of someone who said I would like to have a cat, provided that it barked? Yet your statement that you favor an FDA provided it behaved as you believe desirable is precisely equivalent... The way the FDA now behaves, and the adverse consequences, are not an accident, not a result of an easily corrected human mistake, but a consequence of its constitution in precisely the same way that a meow is related to the constitution of a cat.

The FDA is still around, and still, according to many contemporary researchers, causing a great deal of harm both by delaying the introduction of some new drugs and deterring the development of others. But thanks largely to Friedman's insistence on keeping this issue in the public eye, it has—contrary to Friedman's most pessimistic expectations—been at least partially reined in. Since 1992, pharmaceutical firms have been allowed to fund drug investigations that substantially speed up the FDA approval process. Doctors routinely prescribe FDA-approved drugs for nonFDA-approved purposes. The FDA has accelerated approvals during public health crises, particularly at the height of the AIDS epidemic.

Exchange rate policy

Prior to 1971, much of the world operated on a system of fixed exchange rates. A United States dollar could be bought (or sold) for 360 Japanese yen, or 4.373 Swiss francs, or 26 Austrian schillings, or 1.23 grams of gold. Under a system

of international agreements, monetary authorities around the world agreed to maintain these exchange rates by adjusting their money supplies if necessary. If, say, the yen appeared to be rising in value, then the Japanese authorities increased the supply of yen to counteract the rise. If traders started offering less than 1.23 grams of gold for a dollar, the US authorities reduced the supply of dollars to restore their value. Beginning in 1950, Milton Friedman was a vocal critic of this system, arguing (among other things) that, like any attempt to control prices, it was inimical to freedom, it burdened the monetary authorities with obligations that prevented them from doing their jobs properly, and it was in any event doomed to fail as domestic pressures frequently prevented the authorities from fulfilling their nominal obligations. Those periodic failures were a significant source of just the kind of uncertainty and instability that the system was supposed to prevent.

For decades, Friedman was the intellectual leader of a (very) small band of advocates for flexible exchange rates, and produced a series of memoranda detailing exactly how such a system could be made to work. These memoranda proved invaluable in 1971 when the United States announced that it would, for the first time, allow the US dollar to float freely with respect to gold, and the entire system of international agreements came tumbling down overnight. A new system of flexible rates was smoothly ushered into place, largely following the guidelines that Friedman had developed. Had those guidelines not been available, the world might have moved in the opposite direction, toward more extensive and unwieldy capital and exchange controls, likely necessitating new and oppressive restrictions on international trade.

Friedman later wrote that this lesson illustrates the way economists exert influence: “I have long believed that we do not influence the course of events by persuading people that we are right when we make what they regard as radical proposals. Rather, we exert influence by keeping options available when something has to be done at a time of crisis.”

That seems right. The crisis of the Vietnam War brought the issue of the military draft to a head; the crisis in America’s public schools inspired an urgent search for alternatives; the crisis of the AIDS epidemic inspired the FDA, for the first time, to liberalize its drug approval process. In each case, the transition to a new policy required a lot of intellectual groundwork, laid down

over many years, both as a detailed guide for policymakers and to win support from the general public.

Laying that kind of groundwork was the role Friedman was born for, by virtue both of his intellectual heft—about which we've said much—and his extraordinary skill as a communicator, about we will next say more.

Chapter 10

Civil Discourse

In 1980, Milton and Rose Friedman collaborated with the visionary television producer Bob Chitester to create a television series called *Free to Choose*. The series aired originally on the Public Broadcasting System in the United States, where, with about three million viewers per episode, it was one of the most popular programs in PBS history. A companion volume with the same title, written by the Friedmans, was near the top of the year's bestseller lists.

A decade later, *Free to Choose* served as a major inspiration for the leaders of several formerly communist countries that were reinventing themselves after the collapse of the Soviet Union. Mart Laar, the first prime minister of the newly independent Estonia, explicitly named *Free to Choose* as his primary source for economic policy guidance. Following a series of reforms modeled on the Friedmans' recommendations, Estonia spent several years as the fastest-growing economy in Europe. Today, according to the human freedom rankings in the Cato Institute–Fraser Institute–Friedrich Naumann Institute *Human Freedom Index*, Estonia is a freer country than the United States of America.

Each episode of *Free to Choose* begins with a brief documentary highlighting the successes of capitalism and/or the failures of socialism, followed by an extended discussion between Milton Friedman and an ideologically diverse panel of experts. As the series was being developed, Friedman embarked on a lecture tour of colleges and universities, where he engaged at length with audiences, answering their questions and addressing their comments. Many of these lectures were filmed by the *Free to Choose* production crew and still draw a steady audience on the Internet.

Readers of *Capitalism and Freedom* and readers of *Newsweek* were already familiar with many of Friedman's ideas and arguments. But *Free to*

Choose revealed another and equally remarkable facet of Milton Friedman. In the battle of ideas, he managed always and everywhere to be, all at once, both purely relentless and perfectly respectful. I know of no other public figure who has ever been able to pull off this combination so deftly.

The videos—both the episodes of *Free to Choose* and the lecture tour videos—reveal Friedman as a master communicator, skewering the substance of ill-considered arguments without cheap shots and without resorting to personal disparagement. His famously infectious smile manages to convey satisfaction at having set the record straight with no hint of gloating or personal triumph. It seems clear that he likes the people he's engaging with, even when he deplores their errors.

As a good economist, Friedman surely recognized the benefits of specialization. Most carpenters are not good economists for the same reason that most economists are not good carpenters, and there's nothing disreputable about any of that. Many economists lose sight of this truism and let themselves become exasperated by economic ignorance. Friedman, by contrast, always reveled in human diversity. When a carpenter, a beautician, or a chemist spouted economic nonsense, Friedman was quick to point out that "I've thought about this stuff and you haven't," but scrupulously avoided the implication that he was castigating them. When he debated with leaders of the radical Students for a Democratic Society, Friedman always stressed that he and they sought the same things—individual freedom, pluralism, and prosperity for the masses. "The only difference between us," he said with a smile, "is that I know how to achieve those things and you don't."

With professional colleagues and others who *could* be expected to have thought things through, Friedman was famously sharp-tongued, but he saved his sardonic wit for targets his own size. Friedman's lifelong friend Charles Brunie recalls a cocktail party where a young man asked him a question in an exceedingly rude manner again and again. Milton's response was very gracious. The next morning Milton was debating James Tobin, another Nobel laureate. Tobin asked almost exactly the same question as had the young man the prior evening, but he did it very politely. Milton went at him hammer and tongs. Later, Brunie asked Milton why he was so polite to the young man and so aggressive with Tobin. Friedman replied, "The young chap didn't know what he was talking

about. Conversely, James did—it was an ambush question, and I wasn't going to let him get away with it."

The same sharp tongue was in evidence during Congressional testimony about the military draft. Friedman was called to testify along with General William Westmoreland, the top commander of US forces in the Vietnam War. Westmoreland, an opponent of the volunteer army, said that he preferred not to command an army of mercenaries. Friedman immediately responded by asking Westmoreland whether he preferred to command an army of slaves. He went on to observe that if volunteer soldiers are mercenaries, then so is everyone else who is paid to do a job, including Westmoreland, Friedman, and every physician, lawyer and butcher in the country.

For some, no degree of civility or fairness could compensate for Friedman's infuriating refusal to accept their poorly supported prejudices. The storyteller Leo Rosten, in his book on *People I Have Loved, Known or Admired*, changed Friedman's name to Fenwick but otherwise painted a portrait that was instantly recognizable to all who knew him:

> He is an exceedingly lovable little man. His disposition is so sunny, his character so open, that even the Most Hardened Cynics, of whom my wife is International Chairman, call Fenwick "utterly adorable."

Yet, says Rosten, many people can't stand him:

> Fenwick is a man who goes around being logical. He even uses reason at cocktail parties... The basic problem is that Fenwick, who is very intelligent, assumes that other people are very intelligent too. And that, believe it or not, is the way he talks to them. This makes people uneasy, for nothing is more unsettling than to be treated as if you are extremely intelligent—especially by someone you hardly know. To avoid disillusioning such a man requires that you maintain a constant state of alert, and think before you speak... It even makes you examine the partly packaged platitudes you have always employed instead of thinking.

> In ordinary conversation, Fenwick is a fellow-traveler. He follows every chug in your train of thought—indeed, he leaps right on the train with you. And you have barely begun to pick up steam before Fenwick excitedly demonstrates that (a) you have taken the wrong train; or (b) it doesn't stop where you want to go; or (c) the tracks don't lead from your premise to your expectations; or (d) you had better jump off while the jumping's good or you'll land in the swamp of mushy ideas you never suspected your position rests upon.
>
> Oscar Wilde … once quipped: "I can stand brute force, but brute reason is quite unbearable... It is hitting below the intellect." Fenwick, a beamish fellow, never hits below the intellect. He is always kind, fair, patient, moderate—which greatly increases his unpopularity. Do you follow me? Fenwick is so fair in discussions that people can't even accuse him of using unfair tactics, than which nothing is more aggravating when you are wrong.

It is a truth universally acknowledged among those who knew Milton Friedman personally that Rosten's portrait of the kind, fair, patient, moderate, and infuriatingly logical Fenwick is close to a perfect likeness. The maintenance of that fair and even disposition even in the face of extreme hostility is an accomplishment as rare and as praiseworthy as the permanent income hypothesis or the quantity theory of money.

It is a testament to his personality that Friedman was beloved by almost all who knew him. I spoke with him at length on a total of four or five occasions. Each time he was gracious and kind beyond measure, even when we sharply disagreed. We once clashed over the Drug War, to which we were both opposed for the same reasons, though we differed over which reasons were most important. He believed the biggest issue was the cost of enforcement, including the cost of incarceration, not just to the taxpayers but to the families of those who were incarcerated. I agreed this was big, but thought it still might be small compared to the costs imposed on recreational drug users who overpaid for the product and in many cases were deterred from using it entirely. Rather than argue, we pulled out a scrap of paper and made some quick estimates.

Our calculations showed that to some reasonable approximation, the costs of enforcement and the costs to consumers were equal. As soon as we realized this, Friedman laughed in evident delight. I'm still not sure exactly what he found so delightful, but I think it had a lot to do with the sheer joy of being reminded once again that disagreements are best settled with logic, evidence, and an honest respect for the truth.

Friedman's extraordinary warmth and kindness manifested itself too in the strength of his marriage, which was much remarked upon. When Milton and Rose were in a room together, the love between them was tangible. You saw it when they were near each other, and you felt it even when they were on opposite sides of the room, communicating in ways too subtle to describe and too powerful to miss. This was evident even to strangers, who, remarkably often, inquired afterward whether anyone else had noticed this exceptional bond. Yes, they had. I'm honored and thankful to have known Milton Friedman, and to live in a world that was much improved by his presence.

Notes on the chapters including further readings

The Hoover Institution at Stanford University maintains a website titled *The Collected Works of Milton Friedman* <https://miltonfriedman.hoover.org/collections>. Most of the works by Friedman cited below can be found on that website.

Chapter 1

Academic tradition dictates that pathbreaking ideas are presented first in journal articles and only later in books. Friedman broke with this tradition when he introduced his permanent income hypothesis (along with 230 pages of supporting theory and evidence) in a book. That book, *A Theory of the Consumption Function*, was published by Princeton University Press in 1959.

Chapters 2 and 3

Robert Solow's remark contrasting Milton Friedman's obsessions with his own appears in his contribution to a book of essays called *Guidelines, Informal Controls, and the Marketplace*, edited by George Shultz and Robert Aliber, and published by the University of Chicago Press in 1966.

Friedman's analysis of the demand and supply for money, together with the conclusion that "inflation is always and everywhere a monetary phenomenon" and the implications for monetary policy, is spread out over many of Friedman's articles and essays, many of which are collected in a volume called *The Optimum Quantity of Money and Other Essays*, published in 1969 by Aldine. Many of these essays are fairly technical, but Friedman provided a good and

largely non-technical overview in a 14-page essay titled *The Counter-Revolution in Monetary Theory*, published in 1970 by the Institute for Economic Affairs.

Chapter 4

Milton Friedman and Anna Schwartz's blockbuster *Monetary History of the United States: 1867-1960* was published in 1963 by the Princeton University Press. For readers particularly interested in the onset of the catastrophe of the 1930s, the relevant chapter is Chapter 7, "The Great Contraction: 1929-1933." This chapter was republished two years later as a stand-alone paperback from the same publisher.

Chapter 5

William Phillips first drew his curves relating inflation and unemployment rates in a paper entitled "The Relation Between Unemployment and the Rate of Change of Money Wage Rates in the United Kingdom, 1861-1957," published in *Economica* in November 1958.

Friedman presented his radical reinterpretation of the data in his 1967 presidential address to the American Economic Association.

The future Nobelist Edmund Phelps proposed a similar analysis in an *Economica* article entitled "Phillips Curves, Expectations of Inflation and Optimal Unemployment over Time," also in 1967. Friedman's presidential address was published as an article titled "The Role of Monetary Policy" in the *Journal of Political Economy* the following year. Friedman returned to the same themes in another big public lecture, his 1976 Nobel Prize acceptance speech, titled "Inflation and Unemployment."

Chapter 6

The lecture notes from Friedman's price theory course were published as the book *Price Theory*, published first in 1962 by Taylor and Francis and then again in 2017 by Routledge. Other classic textbooks in the Chicago Price Theory tradition include *Theory of Price* by George Stigler and *Economic Theory* by Gary Becker.

Ronald Coase's theory of externalities was published as "The Problem of Social Cost," in the *Journal of Law and Economics*, 1960.

Additional works of central importance in the Chicago Price Theory tradition include:

- Gary Becker, *The Economic Approach to Human Behavior*, University of Chicago Press, 1978.
- Gary Becker, *The Economics of Discrimination*, University of Chicago Press, 1971.
- Gary Becker, *A Treatise on the Family*, Harvard University Press, enlarged edition 1993.
- Harry Markowitz, *Portfolio Selection*, Yale University Press, 1959.
- Eugene Fama, *Foundations of Finance*, Basic Books, 1976.
- Robert Fogel and Stanley Engerman, *Time on the Cross: The Economics of American Negro Slavery*, Little Brown, 1974.

Chapter 7

Capitalism and Freedom was published by the University of Chicago Press in 1962, then reissued in 1982 and 2002 with additional material.

The Human Freedom Index, a joint publication of the Fraser Institute, the Cato Institute, and the Friedrich Naumann Foundation for Freedom is available on the web at: <https://www.fraserinstitute.org/sites/default/files/human-freedom-index-2018.pdf>.

Chapter 8

As mentioned in the text, Friedman's interest in occupational licensing grew out of his doctoral research. This research was eventually published by the National Bureau for Economic Research (NBER for short)—but not immediately, due to concerns about Friedman's incendiary conclusion that medical licensure was devised primarily as a barrier to entry in order to help maintain higher incomes for doctors.

The dissertation itself was about 600 pages long, and is still widely viewed as a tour de force. It formed the foundation for two of the major themes in modern labour economics. First, Friedman (along with his dissertation advisor, the Nobel laureate Simon Kuznets) was the first to carefully compute the returns to human capital investments (that is, the acquisition of skills), foreshadowing the revolution in human capital theory that drove much of the

pioneering work in labour economics for the next two decades. Second, they pioneered the theory of compensating wage differentials (that is, the wage premiums people earn for doing relatively undesirable work). This, too, mushroomed into a major theme in modern labour economics.

The NBER book, listing Friedman and Kuznets as authors, was published in 1945 under the title *Income from Independent Professions*.

Chapter 9

Friedman's *Newsweek* columns were collected in a number of hard cover volumes, but are all available on line at the Hoover Institution's website: <https://miltonfriedman.hoover.org/collections>.

Regarding the volunteer military: The participants in the 1966 Sol Tax conference at Chicago produced a volume entitled *The Draft: A Handbook of Facts and Alternatives* which was published that year by the University of Chicago Press. This volume contains the text of Walter Oi's historic presentation, under the title "The Costs and Implications of an All-Volunteer Force." Oi expanded on this material in "The Economic Cost of the Draft" in the *American Economic Review* (1967). Friedman followed up with the brief essay "Why Not a Voluntary Army?" in the *New Individualist Review* in 1967.

Regarding educational choice: Friedman's 1955 essay proposing vouchers, "The Role of Government in Education," is included in *Economics and the Public Interest*, edited by Robert Solo and published by the Rutgers University Press.

Regarding regulation: The Sam Peltzman article on the FDA, "An Evaluation of Consumer Protection Legislation: The 1962 Drug Amendments," was published in 1973 in the *Journal of Political Economy*.

Regarding exchange rates: Friedman first broached the issue in an essay entitled "The Case for Flexible Exchange Rates," written and circulated in 1950 but published in 1953 as a chapter in Friedman's book *Essays in Positive Economics* from the University of Chicago Press.

Chapter 10

Free to Choose by Milton and Rose Friedman was published by Houghton Mifflin in 1990. Leo Rosten's *People I Have Loved, Known or Admired* was published by McGraw-Hill in 1970.

Publishing information

Distribution These publications are available from <http://www.fraserinstitute.org> in Portable Document Format (PDF) and can be read with Adobe Acrobat® or Adobe Reader®, versions 7 or later. Adobe Reader® X, the most recent version, is available free of charge from Adobe Systems Inc. at <http://get.adobe.com/reader/>. Readers who have trouble viewing or printing our PDF files using applications from other manufacturers (e.g., Apple's Preview) should use Reader® or Acrobat®.

Ordering publications For information about ordering Fraser Institute printed publications, please e-mail: sales@fraserinstitute.org or telephone 604.688.0221 ext. 580 or, toll free, 1.800.665.3558 ext. 580

Media For media enquiries, please contact our Communications Department at (1) 604.714.4582 or e-mail: communications@fraserinstitute.org.

Copyright © 2019 by the Fraser Institute. All rights reserved. No part of this publication may be reproduced in any manner whatsoever without written permission except in the case of brief passages quoted in critical articles and reviews.

ISBN 978-0-88975-542-0 — Printed and bound in Canada.

Citation Landsburg, Steven E. (2019). *The Essential Milton Friedman*. Fraser Institute.

Cover design and artwork Bill C. Ray

About the author

Steven E. Landsburg is a professor of economics at the University of Rochester. He is the author of *Can You Outsmart an Economist?*, *The Big Questions*, *More Sex is Safer Sex*, *Fair Play*, *The Armchair Economist*, two textbooks on economics, and over 30 journal articles in mathematics, economics and philosophy. He has written regularly for *Forbes* and *Slate* and occasionally for *The Wall Street Journal*, *The New York Times*, and other publications.

Publisher's acknowledgments

The Fraser Institute would like to express its gratitude to the Lotte and John Hecht Memorial Foundation for its support for *Essential Hayek* (2015) and *Essential Adam Smith* (2018), which established the foundation for the extended Essential Scholars series. We would also like to thank the John Templeton Foundation, along with the Lotte and John Hecht Memorial Foundation, for their support of this specific volume, *Essential Milton Friedman*, the third book in the Essential Scholars series.

Supporting the Fraser Institute

To learn how to support the Fraser Institute, please contact:

- Development Department, Fraser Institute,
  Fourth Floor, 1770 Burrard Street,
  Vancouver, British Columbia, V6J 3G7 Canada
- telephone, toll-free: 1.800.665.3558 ext. 586
- e-mail: development@fraserinstitute.org.

Purpose, funding, and independence

The Fraser Institute provides a useful public service. We report objective information about the economic and social effects of current public policies, and we offer evidence-based research and education about policy options that can improve the quality of life.

The Institute is a non-profit organization. Our activities are funded by charitable donations, unrestricted grants, ticket sales, and sponsorships from events, the licensing of products for public distribution, and the sale of publications.

All research is subject to rigorous review by external experts, and is conducted and published separately from the Institute's Board of Trustees and its donors.

The opinions expressed by the authors are those of the individuals themselves, and do not necessarily reflect those of the Institute, its Board of Trustees, its donors and supporters, or its staff. This publication in no way implies that the Fraser Institute, its trustees, or staff are in favour of, or oppose the passage of, any bill; or that they support or oppose any particular political party or candidate.

As a healthy part of public discussion among fellow citizens who desire to improve the lives of people through better public policy, the Institute welcomes evidence-focused scrutiny of the research we publish, including verification of data sources, replication of analytical methods, and intelligent debate about the practical effects of policy recommendations.

About the Fraser Institute

Our vision is a free and prosperous world where individuals benefit from greater choice, competitive markets, and personal responsibility. Our mission is to measure, study, and communicate the impact of competitive markets and government interventions on the welfare of individuals.

Founded in 1974, we are an independent Canadian research and educational organization with locations throughout North America and international partners in over 85 countries. Our work is financed by tax-deductible contributions from thousands of individuals, organizations, and foundations. In order to protect its independence, the Institute does not accept grants from government or contracts for research.

Nous envisageons un monde libre et prospère, où chaque personne bénéficie d'un plus grand choix, de marchés concurrentiels et de responsabilités individuelles. Notre mission consiste à mesurer, à étudier et à communiquer l'effet des marchés concurrentiels et des interventions gouvernementales sur le bien-être des individus.

Peer review—validating the accuracy of our research

The Fraser Institute maintains a rigorous peer review process for its research. New research, major research projects, and substantively modified research conducted by the Fraser Institute are reviewed by a minimum of one internal expert and two external experts. Reviewers are expected to have a recognized expertise in the topic area being addressed. Whenever possible, external review is a blind process.

Commentaries and conference papers are reviewed by internal experts. Updates to previously reviewed research or new editions of previously reviewed research are not reviewed unless the update includes substantive or material changes in the methodology.

The review process is overseen by the directors of the Institute's research departments who are responsible for ensuring all research published by the Institute passes through the appropriate peer review. If a dispute about the recommendations of the reviewers should arise during the Institute's peer review process, the Institute has an Editorial Advisory Board, a panel of scholars from Canada, the United States, and Europe to whom it can turn for help in resolving the dispute.

Editorial Advisory Board

Members

Prof. Terry L. Anderson

Prof. Robert Barro

Prof. Jean-Pierre Centi

Prof. John Chant

Prof. Bev Dahlby

Prof. Erwin Diewert

Prof. Stephen Easton

Prof. J.C. Herbert Emery

Prof. Jack L. Granatstein

Prof. Herbert G. Grubel

Prof. James Gwartney

Prof. Ronald W. Jones

Dr. Jerry Jordan

Prof. Ross McKitrick

Prof. Michael Parkin

Prof. Friedrich Schneider

Prof. Lawrence B. Smith

Dr. Vito Tanzi

Past members

Prof. Armen Alchian*

Prof. Michael Bliss

Prof. James M. Buchanan* †

Prof. Friedrich A. Hayek* †

Prof. H.G. Johnson*

Prof. F.G. Pennance*

Prof. George Stigler* †

Sir Alan Walters*

Prof. Edwin G. West*

* deceased; † Nobel Laureate