

EVERYDAY ECONOMIC STATISTICS

MC	22 118%	+4	Tolson	1.3Ee	699	267%	+7%
Graw	22 22%	-14	Rosen	1.3Ee	678	547%	+7%
Hill	22 22%	-14	Telegraph	1.3Ee	678	547%	+7%
	22 22%	-14	Argo	2.15e	678	547%	+7%
	22 22%	-14	S&P	2.48e	497	39%	+7%
	22 22%	-14	Telefax	1.84e	154	137%	+7%
	22 22%	-14	Telefax	80f	231	83	
	22 22%	-14			237		

Inc. by tele rate systems	End-of-the-day
30-day Markets interest rate index:	Overnight \$1.4375-5.5625
5.537	1 month \$5.5625-5.825
Prime Rate: 8.50	3 months \$6.875-7.5
Discount Rate: 5.00	6 months \$8.125-8.875
Broker call loan rate: 7.25	1 year \$9.625-10.1875
Federal funds market rate:	London Interbank Offered Rate
High 5.50 Low 5.50 Last 5.50	3 months 5.81
Discount commercial paper:	6 months 5.94
30-180 day \$8-8.58	1 year 6.19
Commercial paper by maturity	Treasury Bill auction results
30-270 day \$1-5.50	average discount rate
	3-month as of June 9 4.9
	6-month as of June 9 5.0

FOURTH EDITION

A GUIDE TO

EVERYDAY ECONOMIC STATISTICS

Gary E. Clayton

Northern Kentucky University

Martin Gerhard Giesbrecht

Northern Kentucky University



**Irwin
McGraw-Hill**

Boston, Massachusetts Burr Ridge, Illinois Dubuque, Iowa
Madison, Wisconsin New York, New York
San Francisco, California St. Louis, Missouri

Irwin/McGraw-Hill

A Division of The McGraw-Hill Companies

A GUIDE TO EVERYDAY ECONOMIC STATISTICS

Copyright © 1997, 1995, 1992, 1990 by The McGraw-Hill Companies, Inc. All rights reserved. Printed in the United States of America. Except as permitted under the United States Copyright Act of 1976, no part of this publication may be reproduced or distributed in any form or by any means, or stored in a data base or retrieval system, without the prior written permission of the publisher.

This book is printed on acid-free paper.

3 4 5 6 7 8 9 0 DOC DOC 0 0

ISBN 0-07-109308-7

Publisher: Gary Burke

Sponsoring editor: Lucille Sutton

Production supervisor: Louis Swaim

Printer: R. R. Donnelley & Sons, Crawfordsville

<http://www.mhhe.com>

Dedication

It is traditional for authors to dedicate their work to their mentors, colleagues, and especially the family members and loved ones who endured daily sacrifices while the authors dallied at the keyboard. Well, we've done all of the above—and we certainly appreciate the support of our families and loved ones—but once again there is a special group we would like to acknowledge.

Specifically, we would like to dedicate this book to the many public servants in the Bureau of Economic Analysis, the Bureau of Labor Statistics, and the Bureau of the Census who are dedicated to making the statistics on the United States economy as good as they can possibly be.

We owe a special debt of thanks to numerous individuals—including Richard Bahr, Susan Behrmann, Aaron Catlin, Sharon Cohany, Jeff Crawford, Pauline Cypert, Patrick Duck, Kevin Ellis, Erica Filipek, John Glaser, Greg Key, Patrick Jackman, Everette P. Johnson, Clint McCully, John Martin, Deborah McMillian, Jeff Newman, Nick Orsini, Kenneth Petrick, James Rankin, Steve Rawlings,* Mary Lee Seifert, Chris Singleton, John Stinson, David Sullivan, Leeto Tlou, Brenda Yates, and Mary Young—who have cheerfully answered questions, supplied data, and recommended sources, all of which helped to make this and previous editions possible.

Indeed, in a world where government bureaucracy is becoming increasingly unpopular, we can report that there are still agencies that are a pleasure to work with. We'd like our readers to know that they are doing a great job. We'd like our colleagues in government to know that their efforts are sincerely appreciated.

No dedication would be complete without acknowledging the many contributions made by Phil Yannarella, our government documents librarian who can still find *anything*. Finally, we would like to acknowledge the editorial skills of Kimberly P. Clayton who read several drafts of this manuscript. Of course, whatever errors and oversights remain are entirely our own, but we freely acknowledge that we could not have come this far without the help of these many fine individuals.

About the Authors

Gary E. Clayton teaches economics and finance at Northern Kentucky University. He received his Ph.D. in Economics from the University of Utah, has taught economics and finance at several universities, and has authored a number of books and articles in educational, professional, and technical journals. Dr. Clayton has appeared on a number of radio and television programs and, along with his colleague, Dr. Martin Giesbrecht, has appeared as a guest commentator for “Marketplace,” which is broadcast on Public Radio International and originates at the University of Southern California.

Dr. Clayton has a long-standing interest in economic education. He has participated in and directed numerous economic education workshops, received an Outstanding Citizen Certificate of Recognition from the state of Arkansas for his work in economic education, and was a national award winner in the college division of the International Paper Company competition which is sponsored by EconomicsAmerica, the National Council on Economic Education. He also writes for the high school market and currently authors the best-selling principles of economics textbook in the country.

Martin Gerhard Giesbrecht teaches economics at Northern Kentucky University. He has taught and/or done research at Stanford University, the University of Chicago, Harvard University, Indiana University, National Chengchi University (Taiwan), Rutgers University, and Wilmington College. His doctoral degree (cum laude) was earned at the University of Munich, Germany, where he attended on a Fulbright Grant. Making economics accessible, intellectually enlightening, and even entertaining is the mission of Martin Giesbrecht’s professional life. All of his ten books, including this one, and his many shorter articles, some of which have also appeared in German and Chinese, are dedicated to that end, as is his weekly commentary on WNKU.

Because he writes and speaks in a way that people can understand, the Society of Professional Journalism bestowed the Award for Excellence on him in 1993. He has also won awards from the German-American Chamber of Commerce, the National Aeronautics and Space Administration (NASA), the American Society for Engineering Education, the National Science Foundation, The General Electric Foundation, the Ford Foundation, the U.S. Small Business Administration, and the National Endowment for the Humanities, among others. The ΦΒΑ (Future Business Leaders) Fraternity voted him their favorite professor on the NKU campus.

Preface

Economic statistics, like so many other statistics, might seem as dry as an old bus schedule. A closer look, however, reveals them to be fascinating.

There are two reasons for this. One, economic statistics hit us where we can feel it: in the breadbasket, in our wallets, in our standards of living, and in our careers. And, two, they are themselves the product of one of the more extraordinary human endeavors of our modern age.

Statistics tell us a great deal about ourselves and our economy. Studying economics without paying attention to the statistics would be like a tourist ignoring a road map. But this book is neither a statistics lecture nor an economics textbook. Nor does it need to be read consecutively from beginning to end, although that is OK too. It is a handy little guide that can be consulted for clarification whenever any of the statistical series dealt with herein are encountered.

This book takes a closer look at the economic statistics that describe the world in which we live. It examines how the statistics are constructed and how we may use them effectively. Of course, we've had a lot of help along the way. This fourth edition has benefited not only from the suggestions of colleagues, students, and business decision makers, but also from the many members of the business news media.

Use it well, and use it often.

Gary E. Clayton
Martin Gerhard Giesbrecht

Table of Contents

CHAPTER 1: INTRODUCTION

How the Statistics in This Book Were Chosen	1
A Frame of Reference	2
The Many Faces of Economic Statistics	5
Abusing Economic Statistics	7
Using Economic Statistics	9
And Beware of Forecasts!	11
A Final Word	13

CHAPTER 2: TOTAL OUTPUT, PRODUCTION, AND GROWTH

Gross Domestic Product	15
The Index of Industrial Production	24
Index of Leading Indicators	28
Purchasing Managers' Index	34
Labor Productivity	38
Capacity Utilization	41

CHAPTER 3: INVESTMENT AND CAPITAL EXPENDITURES

Gross Private Nonresidential Fixed Investment	43
Building Permits and Housing Starts	48
Business Inventories	52
Durable Goods Orders	56

CHAPTER 4: EMPLOYMENT, EARNINGS, AND PROFITS

The Unemployment Rate	59
New Jobless Claims	66
Help-Wanted Advertising	68
Personal and Disposable Personal Income	70
Corporate Profits	75

CHAPTER 5: SPENDING, SALES, AND EXPECTATIONS

Consumer Spending	77
Retail Sales	80
Auto Sales	82
Consumer Confidence and Expectations	86

CHAPTER 6: PRICES, MONEY, AND INTEREST RATES

The Consumer Price Index	89
The Producer Price Index	94
The Money Supply	96
The Prime Rate	99
The Discount Rate	102
The Fed Funds Rate	104
The Treasury Bill Rate	107

CHAPTER 7: FINANCIAL MARKETS, INTERNATIONAL TRADE, AND FOREIGN EXCHANGE

The Dow Jones Industrial Average	109
Standard & Poor's 500	114
The Trade Deficit	117
Foreign Exchange	121
The Value of the Dollar	123

APPENDIX A: THE ECONOMIC BULLETIN BOARD

Logging On	125
The Data Files	127
Fees and Billing	127

APPENDIX B: CHAIN WEIGHTING 129

INDEX 133

Chapter 1

INTRODUCTION

How the Statistics in This Book Were Chosen

We need economic statistics to know how we are doing, and we need to know how we are doing in order to figure out how to get where we want to go. Decision making requires knowledge, and knowledge is the only logical basis of action. That is why we need economic statistics.

There are literally millions of statistical series! At the personal level, each of us could probably generate a dozen series from our grocery receipts, odometer readings, telephone bills, and electricity bills. Every business, town, city, county, and industry could do and often does the same in its own field of operation.

Even the broad-based measures of economic statistics, those that deal with whole states, regions, and nations, number into the thousands. A glance at any statistical yearbook or almanac or at the annual *Statistical Abstract of the United States*¹ will make this point.

Yet, only 35 series of economic statistics are dealt with in this book. Why?

First and most obvious, there is such a thing as too much information. It can prevent us from seeing the forest for all the trees.

Second, many statistical series, like one detailing our own personal electric consumption, are not interesting to everyone.

¹ Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Third, many statistical series are compiled and published too late to be of much more than historical interest.

Finally, many statistical series are not reported regularly in the press and broadcast media. The 35 series dealt with in this book are those with extremely high profiles. Some, like the Dow Jones Industrial Average, are reported daily—on television, radio, and in national and local newspapers. Others, like the prime rate, are mentioned less frequently, but receive prominent attention when they change.

If we want to know how we are doing or where we are headed, even just these 35 are usually more than enough. They include most of the major economic indicators that are important all of the time. Gross domestic product (GDP), the consumer price index, and the unemployment rate would certainly be in the top half-dozen of anyone's list of key economic statistics. Many others are important most of the time, and the rest are important at least some of the time.

We may not have selected everyone's favorite statistical series—and for that we apologize—but we are driven by a positive philosophy of wanting to describe “what is” rather than a normative one of “what should be.” Many statistics are neglected when they should not be, while others are widely reported when there is less reason to do so. However, the objective here is to provide a guide to those series that *do* receive attention rather than to the ones that *should*.

A Frame of Reference

The main measure of overall economic and business activity is gross domestic product, whose fluctuations are the most important gauge of good times or bad times that we have. In this context, as in virtually all others, GDP is to be understood as a final, bottom-line accounting measure, an economic result, rather than as an indicator of things to come.

Many of the statistics reviewed in this book measure either the whole or parts of GDP. Other statistics, the index of leading indicators preeminent among them, serve better as signals of things to come. There are also the more specialized series, such as new

housing starts and Standard & Poor's 500 (S&P 500), that serve both as general indicators of future economic activity and as first-order indicators for their own industries. Finally, we have other series such as domestic auto sales that provide important information for their respective industries, but have almost no value as indicators of future economic activity.

As we peruse the formal world of economic statistics, bear in mind that they cannot be evaluated in a vacuum. Statistical series need a background, or a frame of reference, so that they can be put in proper perspective. This the book attempts to do. Sometimes the frame of reference is discussed in terms of the historical development and evolution of the series. Or, the perspective may take the form of a detailed discussion of the way the statistic is measured and compiled. The frame of reference may also be the way the particular indicator or statistic relates to other developments in the economy. In the end, our goal is to provide a perspective that allows for proper interpretation and application of the particular series.

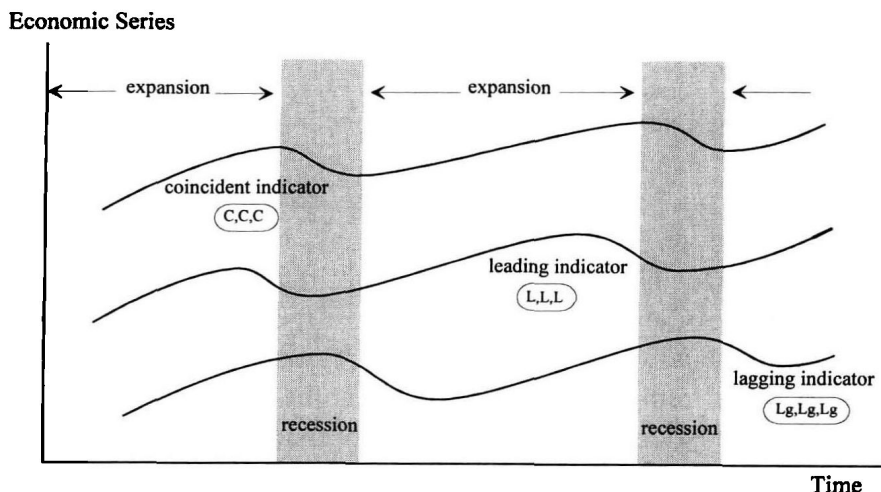
Of particular interest in Figure 1-1 are the three types of indicators: leading, lagging, and coincident. The name given to each refers to the way the series moves in relation to changes in overall economic activity. For example, the series marked "leading indicator" turns down before the economy enters a recession (the shaded area in the figure) and turns up before the expansion begins.

The "lagging indicator" series behaves just the opposite—it turns down after the economy enters a recession, and up sometime after the recovery is underway. A coincident indicator neither leads nor lags. Instead, its timing is such that it turns down when the economy turns down, and up when the economy turns up.

The three codes in the oval key for each indicator show how the changes in the individual series compare to changes in the overall economy. The coding, also shown in Figure 1-2, is the same as that used by the Bureau of Economic Analysis (BEA) in the Department of Commerce to classify the economic indicators reported in the monthly *Survey of Current Business*.

Sometimes a series leads both peaks and troughs in the economy to make it an overall leading indicator. At other times,

Figure 1-1
Leading, Coincident, and Lagging Indicators



Economists use the convention of shading recessionary periods to distinguish them from periods of expansion. Statistical series are classified as leading, coincident, or lagging indicators depending on how their turning points compare to changes in the overall economy.

it may lead peaks and lag troughs to earn an overall rating of "unclassified." Other series play no role as indicators of overall economic activity, and so no codes are shown.

Whenever possible, the economic series examined in this book are plotted against the historical background of recessions and expansions. As will be seen, many series behave like those in Figure 1-1, although the timing of the turning points will vary considerably. Others will appear to have little, if any, relationship to changes in the overall economy. Even so, we feel that the presentation is important if you are to make your own judgments about the behavior of the series.

We have also listed convenient sources of data. Sometimes the source is in the form of easily accessible publications, and sometimes it is in the form of a telephone hotline. There is also an appendix at the end of this book describing an electronic bulletin board available

Figure 1-2
Leading, Coincident, and Lagging Indicator Codes

(L,Lg,U)

The series leads the peaks in the economy; it turns down *before* the economy turns down (L = leads).

The series lags the economic recovery; it turns up *after* the economy turns up (Lg = lags).

Overall, the series is unclassified; it is neither a leading nor a lagging indicator on a consistent basis (U = unclassified).

(Lg,C,Lg)

The series turns down *after* the economy peaks (Lg = lags).

The series recovers *just as* the economy recovers (C = coincident).

Overall, the series lags (Lg = lags) as an economic indicator.

(C,L,L)

The series turns down *just as* the economy turns down (C = coincident).

The series turns up *before* the economy turns up (L = leads).

Overall, the series is classified as a leading indicator (L = leads) even though the timing of the series is coincident for peaks.

The first code in the oval stands for the timing of the series with respect to peaks in the economy, or when the expansion ends and the recession begins. The second stands for the timing of the series with respect to troughs in the economy, or when the recession ends and the recovery begins. The last code indicates the overall classification of the indicator.

at the U.S. Department of Commerce to anyone with a personal computer and modem. Each of these sources will help you keep abreast of your own favorite series.

The Many Faces of Economic Statistics

The task of interpretation might seem to be a simple one: just take the numbers and describe how they have changed. Unfortunately, it's not always that easy. The task of interpretation is also made difficult because most statistical series can be reported in a number of ways.

To illustrate, consider a hypothetical report stating that total sales increased by 5 percent from \$900 billion to \$945 billion over a recent 12-month period. If the report is in terms of current prices, and

many initial reports are released this way, then it stands to reason that some of the \$45 billion increase is due to inflation.

To compensate for inflation, sales can be measured in terms of chain weighted dollars—also known as real dollars—using prices that prevailed in an earlier year.² If 1992 is used as the base year, and assuming that prices are approximately 20 percent higher now than they were in that base year, the same report could be worded like this: “In terms of chained (1992) dollars, total sales increased from \$720 billion to \$738 billion for the most recent year.” This time the increase of \$18 billion is only a 2.5 percent gain, so half of the increase measured using current dollars was due to inflation, the other half was real growth.

Most series that are susceptible to the distortions of inflation are reported in both current (nominal) and real (chained) dollar amounts, with 1992 being the most recent base year adopted by the U.S. Department of Commerce. Both kinds of information are valuable—if used correctly—although the availability of both means that sales statistics can be reported in a number of different ways:

- the final *current* or *nominal* dollar value of total sales (\$945 billion)
- the change in the *current* or *nominal* dollar value of total sales (\$45 billion)
- the final *chained*, or *real* dollar value, of total sales (\$738 billion)
- the change in the *chained*, or *real* dollar value, of total sales (\$18 billion)
- the percentage change in the *current* or *nominal* dollar sales (5.0 percent, or \$45 billion/\$900 billion)
- the percentage change in *chain-weighted* or *real* dollar sales (2.5 percent, or \$18 billion/\$720 billion)

We have the same type of problem when numbers are converted to an index, such as the consumer price index, the producer

² In January of 1996, the U.S. Department of Commerce switched from a system of base-year fixed prices to a system using chain-weighted geometric averages with 1992 as the reference year. This technique is described more fully in the Appendix on page 129.

price index, or any other index. For example, suppose that the index under consideration has a base year of 1977 = 100 and currently stands at 145. If the index goes to 146 in the next month, there is an increase of 1 over the base period activity, or a 0.69 percent increase in the index over the previous month ($1/145 = 0.0069$). If the index were to grow at the same rate for each of the next 11 months, the annualized rate would be 8.6 percent.³

Using the numbers in the paragraph above, we can see that the change in any index can be reported in several different ways:

- the *absolute level* of the index (145)
- the *absolute change* in the level or the index from period to period (1)
- the *relative percentage change* from the previous period (0.69 percent)
- an *annualized projection* of the current period percentage change (8.6 percent)

In general, the relative percentage change is the most useful, with the annualized version coming in next. However, the reader should be advised that even these lists are not exclusive. For example, sometimes the change in the level of the index is compared to a period 12 months earlier. If the new level of 146 is 10 points higher than it was 12 months ago, then we could also say that the annual increase was closer to 7.35 percent.

Abusing Economic Statistics

The governments of the modern, industrialized nations of the free world—the United States among the best of them—enjoy a remarkable reputation for producing honest statistics. Surprisingly (since they bear less responsibility to the citizenry), so do many

³ The series is compounding monthly, and so the correct computation is to use the following formula:

$$\begin{aligned}\text{Annualized growth} &= (1 + \text{monthly percentage change})^{12} - 1 \\ &= (1 + 0.0069)^{12} - 1 = 0.086\end{aligned}$$

Because of compounding, you *cannot* multiply the monthly percentage change of 0.0069 by 12 to get an annualized rate, although some people often make this mistake!

nongovernmental agencies in these countries that produce statistical series, some of which are included in this book. In some nations however, statistics are exaggerated, underreported, or simply faked for political or ideological reasons. When this happens, the usefulness of the statistics is radically reduced. Whether they know it or not, it is also a tragic loss to those nations that support this type of activity.

In the United States, it has been hinted that the release of new statistical figures is sometimes delayed for a few hours in order to prevent some political or commercial embarrassment. But even such temporary mischief has not been widely confirmed. Quite to the contrary, what no politician or business leader in America will deny is that statistics tend to be brutally honest.

Perhaps the most common abuse of economic statistics is to apply them to situations for which they were never intended. For example, some series with little, if any, relationship to movements of the overall economy are often treated as if they are significant predictors of future changes in GDP. Personal income in current dollars, discussed in detail in Chapter 4, is one such example. The historical record shows that personal income almost always goes up, even when the economy is in recession.⁴ Even so, increases in personal income are dutifully reported and widely heralded by the press each time they are released.

Other series are treated as indicators of future overall economic activity when, in fact, they consistently lag developments in the economy. Interest rates can be cited in this context. For the most part, interest rates tend to follow, rather than lead, changes in the overall economy. Declining interest rates may benefit some sectors of the economy, especially housing, automobiles, and to some extent stock prices, but lower interest rates are of little use in predicting future changes in the overall economy.

Yet a third abuse is to focus on nominal dollar values when the real, or inflation-adjusted, figures give a better picture of the

⁴ The most recent recession in the U.S. economy began in July 1990. During the nine recessionary months that followed, personal income in current dollars increased seven times and declined only twice! In terms of real (chain-weighted) dollars, there were five monthly decreases and four increases.

underlying changes. Unfortunately, the various government agencies contribute to this problem because the nominal dollar data and the price deflators needed to adjust the data are not available at the same time. When the U.S. Department of Commerce releases its *Advance Monthly Retail Sales* report⁵ during the second week of every month, the data are adjusted for seasonal, holiday, and trading day differences, but not for inflation. By the time inflation-adjusted figures are available, the initial change in retail sales has already been reported and the new figures are of little interest to the media.

Finally, we should note that the media sometimes report on new government figures without giving us enough information to evaluate the significance of the numbers. It is not at all unusual to hear that a particular index has gone up, say, 4 points, without any mention of the overall level of the index. Four points on a basis of 40 is one thing, but 4 points on an index with a value of 400 may be quite another.

Using Economic Statistics

Decision making often requires an understanding of regional or industry-specific economic conditions. Even if the data you need are not described in these chapters (most of the statistics in this book pertain to the national economy), you should be able to use the methodology described here to make your own decisions or even build your own set of economic indicators.

If you do, remember that every statistical series has its own distinct personality. If you want to use a series, study it carefully and try to see how it relates to your own situation. For example, are series measured in real, rather than nominal, dollars better for your application? Also, you might examine the series to see if changes in the series are more important than the absolute level of the series. And what about the timing of the series? If it lags, then it may not be of much help. If it leads, then you may have to spend more time trying to anticipate its movements. If you need regional or industry-specific data, don't forget to look for other sources of data generated

⁵ A brief monthly report available on a subscription basis from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.