
INTRODUCTION TO THE NEW REVISED EDITION: GO BEYOND GDP

Gross output [GO] is the natural measure of the production sector, while net output [GDP] is appropriate as a measure of welfare. Both are required in a complete system of accounts.—Dale W. Jorgenson, J. Steven Landefeld, and William D. Nordhaus, *A New Architecture for the U.S. National Accounts*

Gross Output, long advocated by Mark Skousen, will have a profound and manifestly positive impact on economic policy and politics.—Steve Forbes, “New, Revolutionary Way to Measure the Economy Is Coming—Believe Me, This Is a Big Deal”

On April 25, 2014, the Bureau of Economic Analysis (BEA) at the U.S. Department of Commerce announced a new data series as part of the U.S. national income accounts, and the BEA began reporting “Gross Output by Industry.”¹ It wouldn’t be long before other countries followed suit. For example, in late 2014, the United Kingdom began publishing annual “Total Output” statistics in their input-output tables.

It took nearly a quarter of a century for the federal government to recognize the critical importance of Gross Output (GO). Starting with my work in this book in 1990 and in *Economics on Trial* in 1991, I introduced the concept of GO as a macroeconomic tool, not to replace Gross Domestic Product (GDP), but to supplement it as a broader measure of total economic activity (see chapter 6, this volume). In these works, and later in my own textbook, *Economic Logic* (first published in 2008), I made the case that we needed a statistic that went beyond GDP, a new statistic that would measure spending throughout the entire production process, not just final output, and that the statistic would need to be updated regularly. GO is a move in that direction.

I view the BEA's adoption of this measure as a personal triumph twenty-five years in the making, and it prompted the publication of this new revised edition of *The Structure of Production*.

What is Gross Output? It is an attempt to measure total sales volume at all stages of production, what we might call the “make” economy. Most importantly, it includes all business-to-business (B2B) transactions that GDP leaves out. In the third quarter of 2014, GO hit \$31.3 trillion, almost twice the size of GDP, which was \$17.6 trillion.

GDP is the standard yardstick for measuring the value of final goods and services purchased by consumers, businesses, and government in a year, what we call the “use” economy. While GDP measures the “use” economy, now with GO we have a way to measure the “make” economy every quarter too. Finally, we have a full picture of the economy. As Steven Landefeld, the BEA director who spearheaded the new “Gross Output by Industry” data series, declared at a press conference, GO offers a “unique perspective” and a “powerful new set of tools of analysis.”

The BEA initiative prompted a serious reexamination of my thesis and a series of articles and interviews in the media and the academic community. In anticipation of the BEA's new series, *Forbes* magazine ran my article “Beyond GDP: Get Ready for a New Way to Measure the Economy” (Skousen 2013). Steve Forbes editorialized about GO in the April 14, 2014, edition of *Forbes* magazine, calling it a “big deal” and “a great leap forward” (Forbes 2014). I wrote the lead editorial, entitled “At Last, a Better Economic Measure,” in the April 23, 2014, *Wall Street Journal's* European and Asian editions (Skousen 2014a). Gene Epstein, economics editor at *Barron's*, ran a story on GO, “A New Way to Gauge the U.S. Economy,” in the April 28, 2014, issue. Professor Steve Hanke of Johns Hopkins University also wrote a column on GO for *Global Asia* magazine (Hanke 2014). And David Colander of Middlebury College endorsed the benefits of GO in the *Eastern Economic Journal* (Colander 2014), followed by my rejoinder (Skousen 2015). Since then, I've been approached by foreign press about the possibility of GO's being reported in foreign countries, which, as mentioned above, has already begun in the UK. I'm also now working with several academic economists to analyze further the implications of GO as well as the creation of a new measure, the Skousen B2B Index, a measure of B2B or business spending every quarter. The textbooks are starting to include GO in their new editions. The first one to do so is the 18th edition of *Economics Today* by Roger LeRoy Miller (Miller 2015:180–81). I've also appeared regularly on CNBC, on the financial news program, with Rick Santelli, their bond expert, to discuss the latest quarterly GO and B2B data.

WHAT REALLY DRIVES THE ECONOMY: CONSUMER SPENDING, GOVERNMENT STIMULUS, OR BUSINESS INVESTMENT?

Based on my research, GO is a better indicator of the business cycle than other measures are, and it is the indicator that is most consistent with economic growth theory. Let's review these arguments.

While GDP is a decent measure of national economic performance, it has a major flaw: in ignoring most B2B sales, GDP downplays the size and importance of the “make” economy, that is, the supply chain and intermediate stages of production needed to produce all those finished goods and services. GDP is comprised of consumer spending, government spending, investment, and net exports, with the first two of these being the biggest contributors.

The narrow focus on GDP has created much mischief in the media, government policy, and boardroom decision making. For example, the media naively conclude that any slowdown in retail sales or government stimulus is necessarily bad for the economy. Journalists are constantly overemphasizing consumer and government spending as the driving force behind the economy, and they ignore the supply-side benefits of saving, business investment, and technological advances.

So, for example, the *Wall Street Journal* reported, “Household spending generates more than two-thirds of total economic output, so sturdy spending gains should translate into economic growth” (Heubsdorf 2014). Or take the *New York Times*: “Consumer spending makes up more than 70 percent of the economy, and it usually drives growth during economic recoveries” (Rampell 2010).

In short, by focusing only on final output (GDP), reporters underappreciate the significant role businesses and entrepreneurs play in raising capital and moving the intermediate products along the production process toward final use. If we look only at GDP, the manufacturers and shippers and designers aren't fully acknowledged in their contribution to overall growth or decline.

THE MANY BENEFITS OF GO

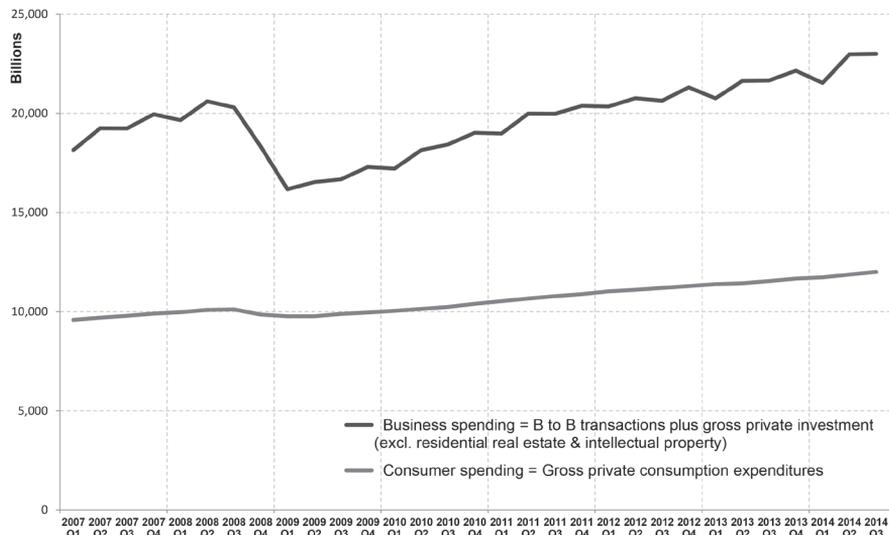
Gross Output exposes these misconceptions. In my own research, I've discovered many benefits of GO statistics. First, compared to GDP, GO provides a more accurate picture of what drives the economy. In the latest U.S. data on GDP, valued at \$17.6 trillion, consumer spending accounts for \$12 trillion, or 68 percent of GDP, followed by government spending at \$3.2 trillion, or 18 percent. Private investment comes in third at \$2.9 trillion, or 16 percent. (Net exports make up

the difference at -2 percent.) But if you use GO as a more comprehensive indicator of economic activity, spending by consumers turns out to represent less than 40 percent of total yearly sales (\$31.3 trillion), not 68 to 70 percent as is commonly reported. Spending by business (private investment plus business-to-business sales at the intermediate level) is substantially larger, hitting \$16.6 trillion, or more than 50 percent of economic activity. That's more consistent with economic growth theory, which emphasizes productive saving and investment in technology on the producer side as the drivers of economic growth. *Consumer spending is largely the effect, not the cause, of prosperity.*

Drawing from the quarterly GO data, I estimate total business spending (B2B activity) to be over \$23 trillion in 2014. Figure I demonstrates how business spending is substantially larger than consumer spending in the economy.

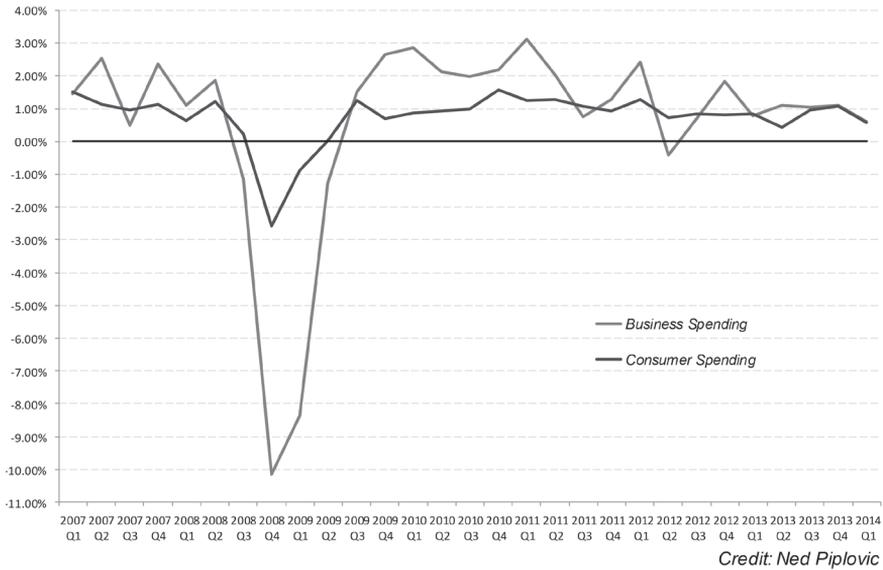
Second, GO and B2B activity are significantly more sensitive to the business cycle than GDP is. During the Great Recession of 2008–2009, nominal GDP fell only 2 percent (due largely to countercyclical increases in government), but GO fell by 6 percent and B2B spending collapsed by 10 percent. From 2009 to 2014, consumer spending increased less than 2 percent a year, but B2B activity advanced by more than 4 percent a year. (See figures I and II.)

Figure I. U.S. Business Spending (Skousen B2B Index) versus Consumer Spending, (2007–2014), Nominal Value in Billions of Dollars



Credit: Ned Piplovic

Figure II. Quarterly Changes in U.S. Business Spending vs. Consumer Spending, 2007–2014



I believe that Gross Output fills in a big piece of the macroeconomic puzzle. It establishes the proper balance between production and consumption, between the “make” and the “use” economies, between aggregate supply and aggregate demand. In fact, I would argue that Gross Output is a more comprehensive measure than GDP of what Keynes called “Aggregate Effective Demand.” As Jeremy Siegel, professor of finance at the Wharton School, puts it, “Gross output is truly a measure of the aggregate demand for money.”² Finally GO is more consistent with growth theory than GDP is.

SOME DEFECTS IN BEA’S DEFINITION OF GROSS OUTPUT

Since writing *The Structure of Production*, I discovered that the BEA’s measure of GO does not include all sales at the wholesale and retail level. Wholesale and retail trade figures are included in GO only as “net” or value added. David Wasshausen, a BEA staff researcher, offers this rationale: since “there is no further transformation of these goods . . . to the production process, they are excluded from wholesale/retail trade output” (Wasshausen 2014).

This is a serious omission, in my judgment, amounting to more than \$7 trillion dollars in business spending in 2014. To measure all economic activity, including the cost of distributing finished goods, we need to include gross wholesale and retail trade figures. They are legitimate B2B transactions that deserve to be counted.

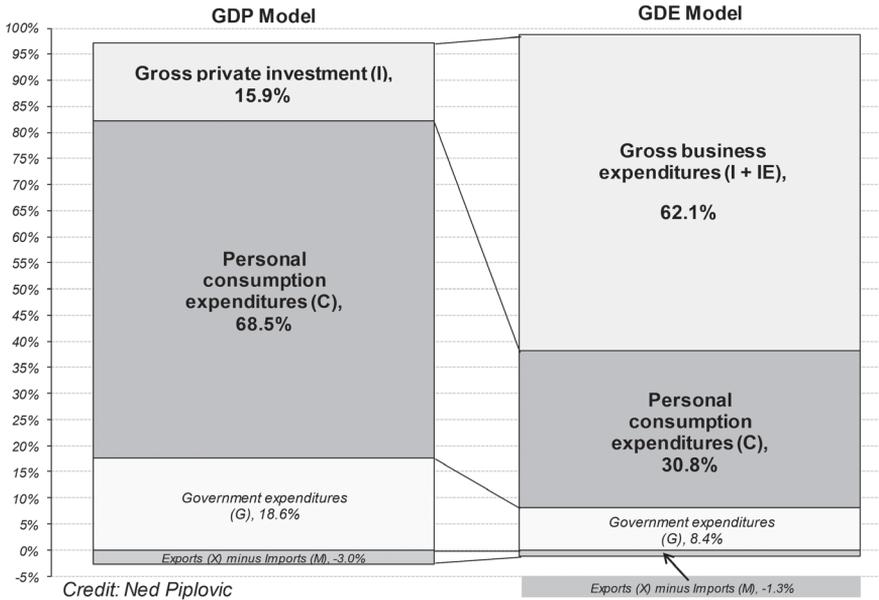
Therefore, in the paperback edition of *The Structure of Production*, published in 2007, I created my own aggregate statistic, Gross Domestic Expenditures (GDE), which includes gross sales at the wholesale and retail level and is therefore significantly larger (more than double GDP). I estimate GDE in 2014 at over \$37.5 trillion, 25 percent higher than GO and 120 percent more than GDP.

Using GDE as a measure of total new economic activity, we come to the startling conclusion that consumer spending actually represents only about 31 percent of the U.S. economy. This is consistent with leading economic indicator statistics and also employment data. As I demonstrated in chapter 9 of *this book* and in the Introduction to the Previous Edition, virtually all the leading economic indicators are measured in the earlier stages of production. Even the much publicized “Consumer Confidence Index” has recently been changed to “Average Consumer Expectations for Business Conditions” (emphasis added).³ The structure of employment also fits better with GO data than with other measures. Only about 20 percent of the work force is involved in the retail and leisure industries. The vast majority of workers are employed in the mining, manufacturing, and professional services attached to the business community.⁴

AN ADVANCE IN SUPPLY-SIDE AND AUSTRIAN ECONOMICS

I consider the adoption of Gross Output on equal footing with GDP as perhaps the most significant advance in national income accounting since World War II. Steve Hanke says GO is a reflection of Say’s law, a supply-side statistic, while GDP is a symbol of Keynes’s law, a demand-side number (Hanke 2014). The difference is stark. If you use supply-side GO as the proper measure of economic activity, business investment is the most important sector. But if you rely on Keynesian GDP, consumer spending and government stimulus are the most important factors. (See figure III.) The rise of GO may also signify a second round of debates between Hayek and Keynes, with GO representing the Austrian perspective (the stages of production), and GDP representing the Keynesian perspective (final effective demand). My

Figure III. Relative Size of Consumer Spending, Business Investment, and Government Using Two Models (GDP and GDE), 2013



Source: Bureau of Economic Analysis, author's data for GDE.

own preliminary work, with the assistance of Sean Flynn of Scripps College at Clermont, shows that industries in the earlier stages of production are more volatile in GO (using both the quantity and price indexes) than are industries involved in later stages of production. This confirms figure F in the Introduction to the Previous Edition.

In a sense the Keynesians, Austrians, and supply-siders can all claim victory, since both numbers are now being used by government to determine the direction of the economy. GO is a measure of the “make” economy, while GDP represents the “use” economy. Both are essential to understanding how the economy works. As Steve Landefeld, former director of the BEA, and co-editors Dale Jorgenson and William Nordhaus state in their work, *A New Architecture for the U. S. National Accounts* “Gross output [GO] is the natural measure of the production sector, while net output [GDP] is appropriate as a measure of welfare. Both are required in a complete system of accounts” (Jorgenson, Landefeld, and Nordhaus 2006: 5).

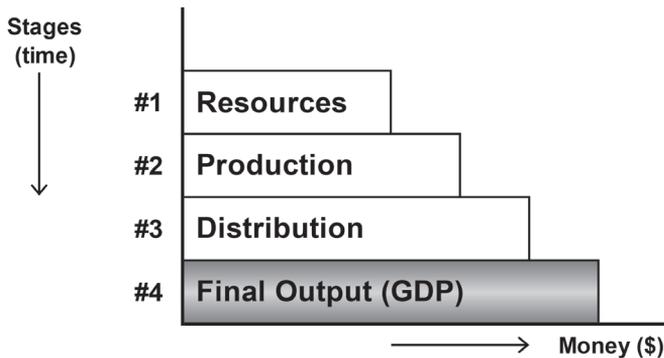
HISTORICAL BACKGROUND

The history of these two economic statistics goes back to several pioneers. Two of these economists in particular, Simon Kuznets and Wassily Leontief, had much in common—they were both Russian Americans who taught at Harvard University and won the Nobel Prize. Kuznets did breakthrough work on GDP statistics in the 1930s. Following the Bretton Woods Agreement in 1946, GDP became the standard measure of economic growth. Unfortunately, Kuznets, under the influence of Keynes, made the mistake of focusing on measuring “final” effective demand (GDP) rather than aggregate effective demand at all stages of production. A few years later, Wassily Leontief developed the first input-output (I-O) tables, which he regarded as a better measure of the whole economy than GDP is. I-O accounts require examining the “intervening steps” between inputs and outputs in the production process, “a complex series of transactions . . . among real people” (Leontief 1986: 4–5). I-O data created the first estimates of Gross Output. However, Leontief’s work did not emphasize GO as an important macroeconomic tool. He focused on the inner workings between industries, not on the aggregate GO.

A GENERAL MODEL OF THE ECONOMY

In my own work, *The Structure of Production*, I created a universal four-stage model of the economy (see the upgraded diagram below) demonstrating the

Figure IV. A Universal Four-Stage Model of the Economy



relationship between total spending in the economy and final output. (I also use it extensively in my textbook, *Economic Logic*, which is now in its fourth edition.) In chapter 6 of *The Structure of Production*, I made the point that GDP is not a complete picture of economic activity, and I compared it to GO for the first time, contending that GO is more comprehensive than GDP and that business investment is far bigger in the economy than consumption is. In 1990, I called the new measure Gross National Output (GNO).

CONTROVERSIES OVER THIS NEW STATISTIC

Over the years, several objections to the use of GO and GDE have been made. Economists are especially fixated over the perceived problem of “double counting” with GO and GDE. I am the first to acknowledge that GO and GDE involve double counting when a commodity is sold repeatedly as it goes through the resource, production, wholesale, and retail stages. Economists ask, Why not just measure the value added at each stage rather than double or triple count? This is what GDP does; it eliminates double counting and measures only the value added at each stage. But that does not mean double counting is somehow superfluous and can be dismissed as unessential to the economic system.

There are reasons why double or triple counting is actually a necessary feature in the production process. First, the raw commodity or resource usually changes its nature at each stage of production. Examples: iron ore becomes steel; raw coffee beans are roasted and ground; cowhide becomes leather and then shoes. Second, a business cannot operate or expand on the basis of value added or profits only. The business must raise the capital necessary to cover the gross expenses of the company—wages and salaries, rents, interest, capital tools and equipment, supplies, and goods-in-process. B2B transactions are the critical steps in moving the production process along the supply chain toward final use. GO and GDE reflect this vital business-decision-making process at each stage of production. Can publicly traded firms ignore the top line of sales/revenues and focus only on the bottom line of earnings when they release their quarterly reports? Wall Street would rightly object to such a narrow focus. Aggregate sales/revenues are important measures for an individual firm and cannot be ignored in national income accounting either. Earnings are the result of a company’s productive activities, but sales create the earnings. In a real sense, GO (or, more accurately, GDE) is the top line of national accounting, and GDP is the bottom line. Now finally, in the twenty-first century, they are treated as equals.

GO data appear to better reflect the severity of the business cycle than GDP data do. In my own research, I find it significant that GO and GDE are far more volatile than GDP during the business cycle. As noted in figure II, sales/revenues rise faster than GDP during an expansion, and collapse more quickly during a contraction (for example, wholesale trade fell 20 percent in 2009; retail trade dropped over 7 percent). Economists need to explore the meaning of this cyclical behavior in order to make accurate forecasts and policy recommendations. In short, double counting matters.

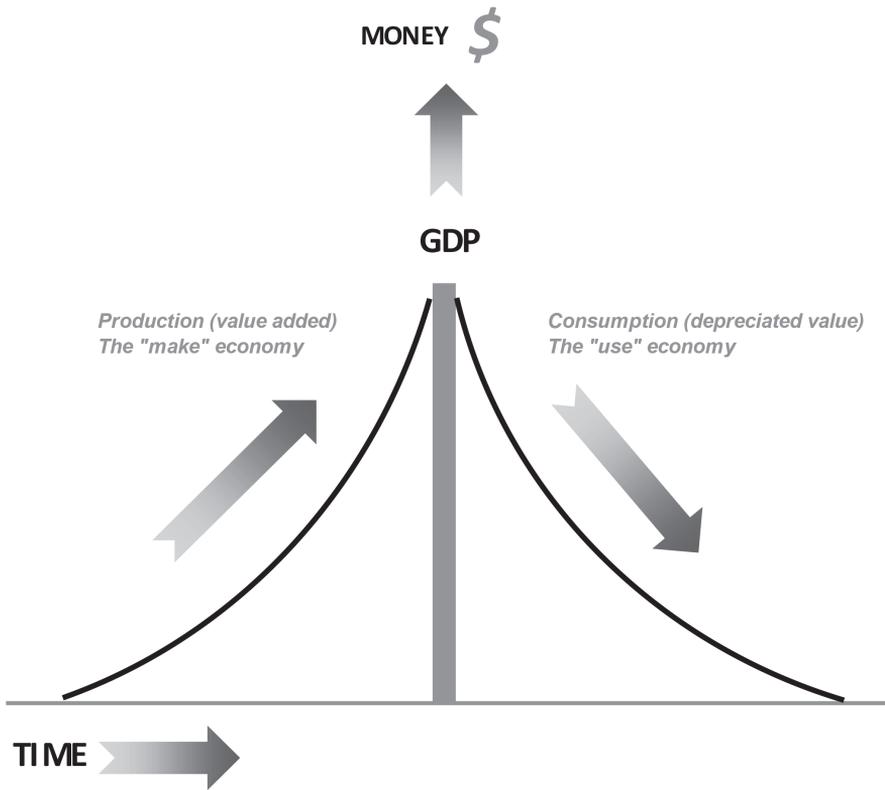
Another objection involves outsourcing and merger/acquisitions. Companies that start outsourcing their products will cause an increase in GO or GDE, while companies that merge with another company will show a sudden decrease, even though there may be no change in final output, or GDP. But then again, perhaps there would be a change in the size and composition of final output if the outsourcing or merger/acquisitions activity caused a change in productivity. Clearly these dynamic changes in the economy should be factored into the data.

GO isn't the only macroeconomic data dealing with the dynamics of creative destruction. Similar issues occur with GDP. For example, when a homeowner marries his maid, the maid may no longer be paid and therefore her services may no longer be included in GDP. Black market activities also often fail to show up in GDP data. Certainly if a significant trend develops in outsourcing or merger/acquisition activity, it will be reflected in GO or GDE statistics, but not necessarily in GDP. This is bears further investigation to see how serious it is. No aggregate statistic is perfect, but GO and GDE offer forecasters an improved macro picture of the economy.

A GENERAL MODEL OF THE ECONOMY

In conclusion, GO or GDE should be the starting point for measuring aggregate spending in the economy, as these statistics measure both the “make” economy (intermediate production) and the “use” economy (final output). They complement GDP and can easily be incorporated in standard national income accounting and macroeconomic analysis. To see how, take a look at the fourth edition of my textbook, *Economic Logic* (Skousen 2014b). In chapter 3 of the textbook, I created the following diagram to describe the production (“make”) and the consumption (“use”) side of the economy, with GDP measuring final output. The “make” side adds value during the production process, and the “use” side involves the using up of the finished product or service.

Figure V. The Production Process, GDP, and Consumption in the Economy



A NEW WAY TO LOOK AT THE ECONOMY

In many ways, the adoption of Gross Output is part of a whole new way of analyzing the economy, a *Weltanschauung* developed throughout *The Structure of Production*.

- Instead of focusing solely on final output (GDP), economists and the media should analyze the whole production process (GO or GDE), from raw commodities to finished retail products.
- We should count B2B transactions, not just B2C (business-to-consumer) or B2G (business-to-government) sales.
- Journalists should incorporate business expectations, not just consumer expectations, in their analysis of the economy.

- The consumer price index isn't the only price index worth noting, but analysts should take into account relative prices, which are the relationship between commodity, producer, and consumer prices.
- Reporters should look beyond “the” unemployment rate, and see what is happening to the structure and growth of employment and unemployment in various sectors.
- Good financial experts don't just take note of “the” interest rate (usually the ten-year Treasury rate), but also the yield curve, which is the difference between short-term and long-term rates.
- Security analysts should look at trends in various sectors of the stock market and not just at the Dow Jones Industrial Average.

In sum, the structure of the economy matters.

—January 2015

NOTES

1. To review the data, going back to 2005 on an annual basis and 2011 on a quarterly basis, go to www.bea.gov, click on “Quarterly GDP by Industry,” then click on “Interactive Tables: GDP by Industry,” begin using data, and click on “Gross Output by Industry.”
2. Personal communication, 2014.
3. Terminology of the Bureau of Economic Analysis. For more information, go to www.conference-board.org.
4. For more information, go to http://www.bls.gov/emp/ep_table_201.htm.

REFERENCES

- Bureau of Economic Analysis, U.S. Department of Commerce. 2014. “New Quarterly Statistics Detail Industries’ Economic Performance” (April 25). News release. <http://www.bea.gov/newsreleases/industry/gdpindustry/2014/gdpind413.htm>.
- Colander, David. 2014. “Gross Output.” *Eastern Economic Journal* 40:451–55.
- Epstein, Gene. 2014. “A New Way to Gauge the U.S. Economy,” *Barron's* (April 28). http://online.barrons.com/news/articles/SB50001424053111903409104579515671290511580?mod=BOL_columnist_latest_col_art.
- Forbes, Steve. 2014. “New, Revolutionary Way to Measure the Economy Is Coming—Believe Me, This Is a Big Deal,” *Forbes* (April 14). <http://www.forbes.com/sites/steveforbes/2014/03/26/this-may-save-the-economoy-from-keynesians-and-spend-happy-pols/>.
- Hanke, Steve. 2014. “GO: Keynes vs. Say.” *Global Asia* (July). <http://origin.library.constantcontact.com/download/get/file/1117426113940-15/GO+J.M.+Keynes+versus+J.-B.+Say,+July+2014.pdf>.

- Heubsdorf, Ben. 2014. "Consumer Spending Rises and Inflation Slow," *Wall Street Journal* (September 30).
- Jorgenson, Dale W., J. Steven Landefeld, and William D. Nordhaus, eds. 2006. *A New Architecture for the U.S. National Accounts*. Chicago: University of Chicago Press.
- Leontief, Wassily. 1986 [1966]. *Input-Output Economics*. 2nd ed. New York: Oxford University Press.
- Miller, Roger LeRoy. 2015. *Economics Today*, 18th ed. (New York: Prentice-Hall).
- Rampell, Catherine. 2010. "Consumers Give Boost to Economy," *New York Times* (May 1). <http://query.nytimes.com/gst/fullpage.html?res=9C0CE6DC123DF932A35756C0A9669D8B63>.
- Skousen, Mark. 2013. "Beyond GDP: Get Ready for a New Way to Measure the Economy," *Forbes* (December 16). <http://www.forbes.com/sites/realspin/2013/11/29/beyond-gdp-get-ready-for-a-new-way-to-measure-the-economy/>.
- Skousen, Mark. 2014a. "At Last, a Better Economic Measure," *Wall Street Journal* (April 23). <http://on.wsj.com/PsdoLM>.
- Skousen, Mark. 2014b. *Economic Logic*. 4th ed. Washington: Capital Press.
- Skousen, Mark. 2015. "On the Go: De-Mystifying Gross Output." *Eastern Economic Journal* 42.
- Wasshausen, David. 2014. Private email to Mark Skousen.